"SERVITIZATION STRATEGIES IN REAL ESTATE DEVELOPMENT?: EVIDENCE FROM JORDAN"

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Copyright statement

Abstract

Servitization strategy has become more popular recently within academic literature. Achieving sustainable competitive advantage, based upon services provision, is claimed to be a viable proposition for modern businesses. A strategic view emerging from the literature is that offering services enables closer and longer-term customer relationships. This relationship directs organizations' marketing offerings toward customers' needs, and promotes a prompt response to dynamic changes in the business environment. There has, however, been little evidence captured on the application of aspects of servitization within real estate development. Prompted by the expected outcome of a servitization strategy, this research is conducted to investigate servitization in the context of the Jordanian real estate development to identify the prospects and challenges of servitization for the real estate development industry, and to examine the role of servitization as a source of competitive advantage through the lens of the Resource-Based View Theory. A qualitative case study research is adopted, and the principles of the Delphi study have been applied. The research examines eight real estate development companies managing multiple building projects in Jordan. Data was collected from the case studies in incremental multiple stages. The primary data was collected using a series of open-ended questions based on three rounds of Delphi: 42 interviews were carried out in the first round, followed by 23 interviews in the second round and 11 interviews in the third round.

The findings indicate that service provision has become an essential element of the real estate development project. The output of the real estate development industry becomes systems of both project components and added services. These systems are the result of servitization strategies in the real estate development industry that shifts its focus from only designing and selling a physical output to delivering systems of services integrated to the project, which together are capable of adding more customer value. The research identifies several types of services, which are used to develop the four categories of servitization in the real estate development industry. These categories are referred to as project-oriented, product-oriented, customer-oriented and service-oriented. The research develops the value chain of servitization strategy and it was found that offering services in real estate development is an incremental process (e.g. based upon circular, iterative and on-going development). Offering basic services such as project-orientated services and product-orientated services adds more value for customers and makes the project more valuable. Providing these basic services has become one of the project performance dimensions to fulfil the market "order qualifier" criteria. However, offering basic services will not ensure competitive success. More advanced services such as customer-orientated-services need to be provided to enhance the project's competitive advantage. Offering advanced services tailors the project toward customer needs and enhances customer satisfaction. These advanced services are considered the base of "order-winner" criteria to win the contract. Still, real estate development projects need to consider the long-term life of a project's outcomes. This long-term nature of projects requires service provision that supports project functionality and assures product stability. Offering after-sale services builds customer trust, inspires customer confidence and assures customers of reliable long-term support. It is these system solutions that shape the order-winning criteria. Realizing the important role of services, this research develops a model to put servitization strategy into action in the context of the real estate development industry.

The research supports the application of the Resource-based View Theory. Offering services develops distinct capabilities necessary to achieve competitive advantage. This competitive advantage is achieved by adopting three main aspects; i. offering a comprehensive approach of project-service systems; ii. linking the strategic decisions of service provision to project operations management, and iii. collecting data and information that provide the organization with unique market insights. This research extends existing literature on servitization and its implication for building projects and providing insights to support future decision-makers in providing services in real estate development. Also, the research provides a comprehensive review of servitization strategy in the building sector and a platform base on which more in-depth research into more focused topics of the servitization phenomenon could be carried out. Furthermore, the research has potential to contribute to other project-based businesses and develops cross-industry knowledge.

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Chapter 1: Research Introduction

1.1 Introduction

Globalization, deregulation, commoditization and advanced technology erode organizational competitive advantage and intensify business competition (David, 2013). Recently, scholars have argued that achieving competitive advantage, based on services provision, is vital for business. They argue that in order to survive in the future, maintain customers and sustain competitive advantage, businesses have to create more value for their customers by offering integrated product and service systems (Baines et al., 2009a; Neely et al., 2011a; Gebauer et al., 2012b). This alteration to the corporate business model is conceptualized as servitization (Vandermerwe & Rada, 1988). Servitization is evolving as a new and alternative strategy of competitive advantage. The strategy is showing a strong growth opportunity, with a number of companies exploiting servitization to develop a competitive advantage. The interplay between product and services are already coming together in a way that is re-shaping the future of businesses (Baines, 2013). To date, there has been little evidence captured for servitization in the context of the real estate development sector. This research, therefore, seeks to extend the knowledge of servitization through in-depth investigating the servitization strategy in the Jordanian real estate development sector. The primary purpose of this study is to improve the competitiveness of Jordanian real estate development by developing a practical model that supports the successful adoption of the servitization strategy.

1.2 Study Background

The real estate development is one of the strategic industries and an important part of the economy, particularly, in developing countries (Hastjarjo, 2015; Apanavičienė et al., 2015). The sector is considered as the pillar of society and environment, the engine of economic development and the heart of economic sustainability (Kongela, 2013). The sector produces the required infrastructure for community and businesses to prosper (Haila, 2000; Geltner et al., 2001; Maennig, 2012). It produces buildings and facilities that provide accommodation for a wide variety of activities, and the infrastructure that connects these facilities into networks (Horta et al., 2013). The real estate industry accounts for 20% of economic activity and job opportunities (EPRA, 2012). The industry makes up almost 9% of the world's GDP. Nevertheless, the importance of the real estate development industry is not only related to the industry size but also to the role of such an industry in economic development (Horta et al., 2013). According to the statistics provided by PwC (2014), by

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2025, over 60% of all construction activities will take place in emerging markets. The expected foreign investment is likely to grow to US$70 trillion by 2030 in developing countries (PwC, 2014).

Jordan is a developing country in the Middle East with a population of 6.5 million people in 2013. Jordan is politically stable and holds a moderate position among the Middle Eastern countries i.e. it is viewed as one of the most stable countries in the Middle East (Aldehayyat, 2015). The Jordanian market is expected to show great economic potential (CCG, 2014). In spite of the global financial crisis and conflict within the region, the Jordanian economy is steadily growing (ETF, 2013). The Jordanian real estate development industry is considered one of the most important components of the Jordanian economy. The sector represents 11.9% of the Jordanian gross domestic product (Amman Chamber of Commerce, 2014). Additionally, the sector drives more than 90 industries and economic activities in Jordan (Kilani, 2015).

1.2.1 The Nature of the Real Estate Development Industry

Service and manufacturing are two different processes. Manufacturing process converts materials into products that have a physical form. The outputs from manufacturing process can be produced and stored in anticipation of future demand (Krajewski et al., 2012).

Real estate development refers to the activities of converting raw land into housing, commercial or industrial buildings (Galaty, 2014). The sector transforms open spaces into properties (Gehner, 2008). These properties are classified into commercial properties and residential properties (Christudason, 2004). The real estate industry has major similarities to manufacturing processes, which convert materials into goods that have a physical form. These goods are durable and can be stored or inventoried (Krajewski et al., 2012). Like a manufacturing process, the real estate industry produces tangible, durable and inventoried outputs (Galera-Zarco et al., 2014). The outputs of real estate development projects are developed infrastructure, commercial properties, modern housing and industrial properties (Galaty, 2014). These outputs are tangible and durable. They can be produced and stored in anticipation of future demand (Ezimuo et al., 2014). According to the Krajewski et al., (2012) model, real estate development projects are more similar to manufacturing processes than service processes.

Even though real estate development has many similarities with manufacturing, it is also a project-based business (Gehner, 2008). The industry focuses their efforts on project

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delivery within strict time, cost and performance guidelines (Galera-Zarco et al., 2014). Each project is unique, with specific objectives, a definite scope and limited resources. Each project consists of temporary activities that require high coordination. These activities have programmed start and end times (Ratcliffe et al., 2004). Moreover, realty projects are heterogeneous that produce unique long-life assets (Boon, 2005; Coiacetto, 2006).The industry involves multiple processes, multiple stages (Hastjarjo, 2015), multi-functions (Ratcliffe et al., 2004), multi-disciplinary fields (Galuppo & Worzala, 2004) and highly social interactions (Bertelsen, 2003). It is a fragmented industry where several parties are involved in fulfilling a project (Ankrah & Langford, 2005). Ambiguity and complexity are the main characteristics of real estate development projects (Gehner, 2008).

1.2.2 The Current Trend of Jordanian Real Estate Development Sector

In Jordan, there are three main construction activities, those are public civil projects, specialist trades projects and house building projects. These projects serve a wide variety of people's needs. Usually, the real estate development industry operates based on the traditional operational model Design-Build-Market-Sell, where, the strategic decision of real estate development projects is usually developed based on ideas and decisions of real estate developers and involves considerations of the project location, project cost and quality. The real estate developer's view is what guides the strategic vision and future direction of building projects (Hendrickson & Au, 2000; Horta et al., 2013). Secondly, the industry focuses primarily on cost reduction. As well as, the value of a building project is centred on the delivery phase (Galera-Zarco et al., 2014). Most of these real estate development firms do not offer any kind of services during the project execution or after project delivery, whereby each project ends after delivery (Jweinat, 2008). Finally, Jordan is a developing country. To data, there are still several technological gaps between developed and developing countries in terms of developing building projects. These include technological inertia, the lack of capacity of the construction sector, an uncertain economic environment, lack of accurate data, and the lack of integrated research. These technological gaps give real estate developers from the developed countries a competitive advantage over local firms (du Plessis, 2002). In summary, four main characteristics describe the Jordanian real estate development industry:

- The industry is project-oriented based on developer-led, design, build, and sell.
- The industry focuses primarily on cost reduction.
- The project outcome is limited to project delivery, i.e. the developers' responsibilities end once the project is delivered.

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- The project scope does not include any type of services during the project life cycle, or after project delivery.

1.3 Problem Statement and Study Motivation

Worldwide, real estate development industry is a rewarding business (Galaty, 2014). The industry is highly competitive, it is no longer merely a local industry, as several real estate developers, particularly from developed countries are expanding into the global market. This is happening especially in the Middle East, which has lower running costs and more growth opportunities (Horta et al., 2013). The expected foreign investment of the property sector in developing countries is likely to witness a global investment worth $45 trillion by 2020, as the expected investment is likely to increase by 55% in 2020. In 2030, it expected to grow further to US$70 trillion (PwC, 2014).

In the last decade, the Jordanian government took huge steps towards economic liberalization, through privatization and deregulation, which opened the door wider for foreign investment and intensified market competition. Jordan today is recognised as one of the "freest economies in the Middle East" (Aldehayyat, 2015). Among other Jordanian industrial sectors, the Jordanian real estate sector is considered the most attractive industry in the Jordanian economy (Global Investment House- Jordan, 2008). According to the export report by the Swedish Trade Council (2009), in spite of the worldwide financial crisis, several new projects are taking place in Jordan. The sector is steadily growing and it remains the most attractive sector for Swedish businesses to invest in. Still, it is a highly competitive sector, and organizations need to be highly competitive. Recently, CCG (2014, p27), announced for US companies that, "There are a number of opportunities in the areas of engineering services and construction of major infrastructure projects."

The Jordanian real estate sector continues its upward growth trend. The number of property projects increased during 2014 by 11.5%, and the trading value of the real estate sector in 2013 reached 8.5 billion US Dollars, which represents a 77% increase from the previous year and reached 10 billion at the end of 2014 (Kilani, 2015). However, despite the expected growth in the real estate industry, Jordanian property businesses are facing significant challenges from international competition. According to the head of Jordanian housing sector association, the number of companies registered and operating in the Jordanian real estate development sector during 2013 was 2845 companies. During the last year, 145 local property firms left the market compared with only 20 companies in the previous year. An expected 250 companies will leave the market in the current year, with

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many Jordanian companies moving their activities to other countries. This comes at a time when market growth was 19% (Saif, 2015; Aldbesh, 2015).

In spite of the growth in the construction sector, competitiveness is a major issue for local companies as witnessed by the decline in their number. Efforts to support competitiveness of Jordanian real estate firms are required (Aldbesh, 2015). This has been confirmed by The Jordanian construction contractors association (2015), as they affirm that Jordanian real estate development firms need more support to ensure their continuity in the real estate market. Efforts to reinforce the real estate development sector are central for the health of society and the strength of economy (DeLisle et al., 2013; Deloitte, 2013). This study is aimed to offer the Jordanian real estate development organizations a new way to compete and improve the industry operational practices by incorporating customer focus along with other competitive priorities. Recently, servitization has become one of the successful strategies in helping organizations improve competitiveness and ensure maintainable growth by creating more value for customer through a combination of product and service systems. Given the benefits held out by servitization (as will be discussed in chapter two), this study is developed to capture the application of aspects of servitization within the Jordanian real estate development industry. The primary purpose of this study is to improve the competitiveness of Jordanian real estate development by developing a practical model supporting the successful adoption of the servitization strategy.

1.4 The Industry Need and Research Gap

There is a significant need to study the competitiveness of the real estate development industry (Flanagan et al., 2007). The dynamic business environment increases uncertainty, by which the property business becomes more challenging, complex, risky, and highly competitive (Ratcliffe et al., 2004; Wood & Gidado, 2008). In addition, customers' needs are dramatically changing, they have become more conscious, exacting and more ambulant (Ratcliffe et al., 2004). This leads to property businesses facing two dichotomies: meeting customers' dynamic needs and requirements, and fulfilling projects within resource boundaries and within a specific time and low cost (Weeks & du Plessis, 2011). They are increasingly compelled to improve their competitiveness to survive this dynamic business environment and outperform competitors, whilst increasing customer value at the same time (Haila, 2000; Geltner et al., 2001; Maennig, 2012; Hastjarjo, 2015). Therefore, a "New strategic thinking, as well as advanced approaches and practices need to be adopted" to deal with these changes (Apanavičienė et al., 2015, p6498).

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Recently, achieving competitive advantage, based on services provision, is often claimed to be a viable route for businesses (Baines et al., 2009a; Gebauer et al., 2012b; Neely et al., 2014). Businesses have to develop a service business as a core of their operation, to secure long-term business prosperity and to sustain competitive advantage (Neely et al., 2014). Providing services enable close and long-term customer relationships to develop (Schmenner, 2009). This close customer relationship contributes significantly to the organization's survival, through steering marketing offerings to meet customers' needs, promotes a prompt response to dynamic changes of the business environment (Baines et al., 2009a; Neely et al., 2011a; Gebauer et al., 2012a; Wallin et al., 2015). It becomes a necessary strategic decision for businesses (Roos, 2015). Although scholars contributed conceptually and empirically to the knowledge and practice of how organizations deployed servitization, both conceptual and empirical research gaps remain (Gebauer et al., 2012a). There are knowledge shortfalls in designing and managing servitization strategies (Neely et al., 2014). Few researchers have studied servitization strategy within the context of the real estate development industry. Likewise, few researchers have investigated the servitization strategy in developing countries.

Servitization is a general concept, and different industries have different approaches to servitizing (Benedettini & Neely, 2012; Rajala et al., 2013; Lay, 2014). "The Servitization process could take many different routes reflecting various properties of the manufacturing firm and its business contexts" (Kim et al., 2015, p180). "More research is needed to study service strategies in an even wider range of industries … only limited knowledge is available about the phenomenon in developing countries" (Gebauer et al., 2012b, p123). Recently, Turunen & Finne, (2014, p 605), echoed the call for in-depth exploration of servitization as they argue, "we see it compelling to ask whether servitization can be seen as an advisable strategy for manufacturers throughout developed (post-industrial) economies. Also, it would be interesting to see how the differences in operational environment between countries and industries influence the possibilities to servitize."

Consequently, in order to close these research gaps, this research will investigate the servitization strategy in the real estate development sector based on collecting empirical evidence from Jordan.

1.5 Theoretical Background

The nature and sources of competitive advantage are changing over time (Forrester, 2015). Nowadays, servitization strategy is considered the new source of competitive advantage

based on capabilities innovation (Baines et al., 2009a). Johnson et al., (2013), defines competitive advantage as the unique characteristics distinguishing a business organization from competitors in a marketplace, where sustainable competitive advantage is a long-lived competitive advantage that it is more difficult to be neutralized or not easily to be imitated or exceed by competitors. According to Vinayan et al., (2012), this long-term competitive advantage is a key critical success factor for every organization. In order to gain competitive advantage over competitors, there are three competition strategies available at business strategic decision level. These strategies are cost leadership, product differentiation and focus strategy. Cost leadership strategy involves offering product at the lowest market price of competitors and within the market standard for quality. The differentiation strategy is concerned with distinguishing an organization's products from competitors' products through high product quality. The focus strategy refers to the low cost or differentiation strategic decisions directed toward a particular market segment (Porter, 1985). However, the dynamism of the environment increases pressure on businesses. Businesses were struggling to develop a distinct and a long-standing competitive advantage (Al-Zu'bi, 2014). The competitive advantage decision moved forward from business unit level to become a more directorial decision that covers the strategic scope of the whole organization and refocuses the entire business' activities based on firms' strategic orientation. Strategic orientation is a broad strategic decision reflecting a holistic approach and strategic directions adopted to create sustainable competitive advantage over competitors (Narver & Slater, 1990; Gatignon & Xuereb, 1997; Bing & Zhengping, 2011; Al-Zu'bi, 2014). There are three broad strategic orientations: competitor orientation, product orientation and customer orientation. Competitor orientation covers organizational activities of analysing, evaluating, and reacting toward competitors' actions. Customer orientation places customers, customer' satisfaction, and customer needs at the core of business decisions. Product orientation refers to the innovation of product enhancement and development or developing new products thorough adopting new operational technology (Gatignon & Xuereb, 1997; Noble et al., 2002).

Nevertheless, the search for developing more sustainable competitive advantage is enduring. Businesses have to be more flexible, adaptive, responsive to changes and proactive rather than reactive (Nadkarni & Narayanan, 2007). The strategic decision therefore, has shifted back to the operational strategic level (Brown et al., 2013). Where, operations management is considered a key determinant of organizational survival., The sources of organizational competitive advantage are inextricably linked to the operations strategy through resource management and a sharp focusing on customers' needs (Hayes

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et al., 2005; Forrester, 2015). Consequently, scholars are studying the development of organizational competitive advantage based on organizational capabilities and strategic operations management, such as mass customization, lean production, agile manufacturing, and customer centric provision (Brown et al., 2013). By which, the Resource Based View Theory dominates operations management research (Slack et al., 2013). According to David (2013), The Resource-Based View theory contends that internal resources are the sources of organizational competitive advantage. It relates to understanding how organizational superior performance is driven from capabilities, and how an organization develop and position those capabilities to gain sustainable competitive advantage (Slack et al., 2013).

Recently, scholars argue that offering service integrated with the product makes the organizational resources valuable, and develops sustainable organizational competitive advantage based on a firm's core competences and development of capabilities (Oliva & Kallenberg, 2003; Gebauer, 2008; Baines et al., 2009a). The Resource-based View Theory provides the predominant basis for the majority of servitization literature and researches (Eloranta & Turunen, 2015). The theory argues that the tangible and the intangible resources are the main source of organizational competitive advantage and organizations are heterogeneous in terms of the strategic resources that they own and control (Wernerfelt, 1984; Barney, 1991). Thus, different categories of organizations require different operational processes (Peteraf, 1993). Accordingly, the lens of Resource Based View Theory will be adopted. This perspective is adopted to clarify how the difference in operational processes and organizational capabilities among different countries influence the adoption of a servitization strategy, and how offering service evolves organizational resources the sources of competitive advantage.

1.6 Research Programme

As discussed earlier, the central focus of this research is extending servitization knowledge into real estate development to bring about competitive advantage.

1.6.1 Research Aim

The aim of this research is to in-depth investigating the servitization strategy in the real estate development industry using case studies from Jordan. The study aims to cover the core issues of a servitization strategy; identifying prospects and challenges of servitization for the real estate development industry, by investigating the strengths and limitations of such a strategy; and constructing a reliable model to put servitization strategy into action.

1.6.2 Research Objectives

The study is looking to support the successful adoption of a servitization strategy in the real estate development sector by identifying the strategic formulation, implementation and evaluation processes that make up a successful servitization strategy. This main objective has been divided into six minor objectives:

1. To critically analyse the currently available literature on servitization, to develop a holistic understanding of servitization strategy.
2. To identify the drivers motivating servitization in real estate development industry.
3. To explore the range and extent of servitization in real estate projects and examines the role of services in developing a competitive advantage.
4. To examine the challenges of servitization in real estate development, and develop an understanding of how these challenges could be managed.
5. To develop a framework that assists Jordanian real estate development firms to enable effective and efficient adoption of a servitization strategy, investigating the detailed practices and processes needed to deliver an integrated project-service system that creates a competitive advantage.
6. To determine the critical success factors for adopting servitization strategy in Jordanian real estate development organizations.

1.7 Research Questions

In terms of research questions, this study will be approached by posing five main questions to capture the potential of adopting a servitization strategy in the real estate development industry:

1. What are the motivations for the Jordanian real estate development sector when considering servitization strategy?
2. To what extent are real estate development firms servitizing, and how viable is the servitization in influencing Jordanian real estate development organizational competitiveness?
3. What are the challenges that the Jordanian real estate development firms have to overcome to become servitized organizations?
4. How can the servitization strategy be designed, implemented and evaluated to enhance organizational competitiveness within the context of real estate development industry?
5. What are the critical success factors required for ensuring the success of a servitization strategy in real estate development organizations?

1.8 Research Methodology

The purpose of this study is to advance the knowledge and the support methodology of adopting servitization strategy in Jordanian real estate development organizations. This research is designed based on a qualitative research approach using a number of inter-connected stages and techniques of data collection and analysis to produce a more complete understanding of servitization strategy. The selected research design is driven by the nature of the study and the inductive approach of theory building. The qualitative approach is a valid methodology to explore servitization strategy (Gebauer et al., 2008a&b), and the case-based research is an appropriate method for dealing with 'how' type questions (Voss et al., 2002), and a valid method to contribute to the body of knowledge through developing in-depth understandings of a particular phenomenon (Yin, 2013).

Nevertheless, the servitization as a research phenomenon is complex and not well identified (Baines & Shi, 2015). As a research topic, servitization is not easy to examine, it is complex and multifaceted (Baines et al., 2009a). According to Gebauer et al., (2012b), a traditional research strategy would not produce sufficient knowledge of how offering services influences businesses. In fact, not only servitization is a multifaceted, but also, the real estate development is a multidisciplinary and a fragmented industry, where several parties are involved in fulfilling a project (Ankrah & Langford, 2005; Gehner, 2008). Therefore, this study is carried out based on an incremental data collection strategy that included the principles of Delphi study, which include multiple stages of data collection, analysing, and the refining cycle. The Delphi technique attempted to achieve three main objectives as follows:

1- To systematically collect empirical data of a phenomenon that lacks comprehensive historical data in a new research context.
2- To reach categories saturation covering all aspects of servitization in real estate development and to ensure that these aspects are well-developed.
3- To develop consensus knowledge and achieve a convergence of opinion on the servitization in the real estate development industry.

The organizations that have been investigated are real estate development companies. The primary source of data involves eight companies that manage various property projects in Jordan. These companies are working under the umbrella of a huge holding company, wherein the researcher has full data access. These companies are addressing different market segments, in different geographical areas and based on different visions and missions. These projects varied between residential housing, private resorts, public housing,

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industrial cities and commercial properties. The data collection involved secondary and primary data based on incremental data collection and analysis approach. The data were collected based on the principles of the Delphi method, where the process starts from a longitudinal analysis of organizational secondary data, to inform the design as the first round of Delphi, which involved data collection and collation of 42 participants via email interviews. The second round is more focused, data being drawn from 23 participants via online interviews. The third round is designed as a verification and validation round concerned with building the models right, data being drawn from 11 participants via online interviews. Post round and the reality matrix were the main techniques used to develop consensus knowledge and data validation. Finally, several recommendations of quality criteria have been applied in this research to ensure research trustworthiness.

1.9 Research Outcome and Expected Contributions

By answering the aforementioned research questions, this research will contribute to knowledge and practice, through exploring the impact of servitization strategy on real estate development and analysing the role of offering service to develop a sustainable competitive advantage. The study collective contributions are driven from the special characteristic of this study. This study is one of a few studies that address servitization strategy within the context of the real estate sector and in the context of developing countries. The outcomes and deliverables of this research could be summarised as follows:

- The outcome of the conceptual and empirical parts of this thesis extends the competitiveness of real estate development literature. It extends existing literature on servitization and its implications for realty projects. The study has also a potential to contribute to other project-based businesses and develops cross-industrial knowledge.

- The empirical part of this thesis seeks to offer evidence on the economic consequences of adopting servitization strategy for real estate development businesses. The study will provide a framework that will help real estate development firms to design an effective and efficient service provision strategy.

- From a theoretical viewpoint, the existing literature of servitization referred to different management theories to explain the sources of servitization competitive advantage such as Market-Based Theory, Dynamic capabilities Theory, Service-Dominant Logic and Value co-creation approach, Organizational Learning Theory, Network-Based View, Knowledge-Based View and Resource-Based View Theory. This

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research adopted the lenses of The Resource-based View Theory to identify the sources of servitization competitive advantage, by demonstrating that offering services stimulate organizational competences to develop a competitive advantage.

1.10 Research Structure and Layout

This study is conducted to capture the aspects of servitization in Jordanian real estate development sector and contribute to servitization knowledge. This research is divided into six chapters. The current chapter is the research introductory sections, where the rationale of the study, the background of the investigation, the research gaps, aim and objectives are presented. The second chapter is a critical review of related literature. The chapter highlights different perspectives available on servitization strategy that emerged from different research groups. The initial idea from this chapter is to construct a comprehensive view of servitization phenomenon from a business perspective to deliver more in-depth understanding of servitization strategy. The chapter ends with a conceptual framework that captures the process of servitization based on a strategic management process. The third chapter provides an overall framework of the research process. The chapter presents the scientific procedures used in this research project to support the rationale behind choosing particular research methodology and methods. The chapter is divided into three sections; the research design, the research process and the research quality. Next, the study findings are presented by employing different data analysis tools. Finally, the results of this analysis are summarised and discussed, and conclusions are drawn. Chapter five then provides a concluding discussion of findings in relation to the research aim, objectives and questions. The discussion is arranged based on the research conceptual framework developed at the end of chapter two. Finally, the conclusion chapter summarizes the key findings, answers the research questions and presents the main conclusions of the study.

1.11 Chapter Summary

This study focuses on investigating the servitization strategy in real estate development. This chapter introduce the servitization concept. The industry need, research gaps, research aim and objectives were identified. In summary, the real estate development industry has traditionally focused their efforts on project delivery and cost reduction. It may have been sufficient to incorporate the views of customers and insure that customers are getting more value. Real estate development firms need to continuously improve the value of their projects by offering services. Previous research neglected the role of servitization in the real estate development industry. The primary purpose of this study is to improve the

competitiveness of Jordanian real estate development by developing a practical model that supports the successful adoption of the servitization strategy. This will be achieved by employing a qualitative case-based research approach. The expected outcome of this research will benefit the real estate industry and extend the existing literature on servitization phenomenon. Finally, the study structure is presented. In the next chapter, the literature on servitization is reviewed. The chapter seeks to capture the application of aspects of servitization.

Chapter 2: Servitization Literature Review

2.1 Introduction

During the last decade, the servitization strategy has been studied by different scholars based on several disciplines. Still, there is no overall picture of servitization or universal code or definitions. This chapter therefore reviews the literature related to the servitization phenomenon and highlights the different perspectives available to servitization strategy that have emerged from different research groups. The initial idea of this chapter is to construct a comprehensive view of servitization strategy to deliver more in-depth understanding of the research phenomenon.

The chapter consists of seven main sections. Section 2.2 introduces the servitization strategy. Section 2.3 describes the strategic formulation process of servitization. Section 2.4 describes the implementation process of servitization. Section 2.5 involves the evaluation process of servitization, where section 2.6 identifies different routes of servitization strategy. Section 2.7 identifies the sources of servitization competitive advantage. The last section (2.8) demonstrates formalizing the transition process for the service business model into an initial conceptual model. The following section defines servitization. The section aims to reveal the ambiguity around servitization by presenting the origin of servitization, reporting different labels used to address the servitization strategy and describing the works of different research groups investigating servitization.

2.2 Servitization Strategy

"The new industry revolution" this is how Mudambi (2008) described the shift of value offering from tangible assets to intangible ones. Competition in business is becoming more aggressive and more intense (Gebauer et al., 2005; Brad & Murar, 2015). Servitization strategy supports organizations' product competitive advantage and enhances organizational market positioning (Biggemann et al., 2013). Gradually, servitization strategy has reached the attention of academic scholars and business policy makers (Min et al., 2015). Offering service has become a significant strategic decision for business (Roos, 2015). Almost all European manufacturers offer services to some extent (Biege et al., 2012). Third of USA large manufacturing firms have moved to offer services integrated to their product (Neely, 2008). Nowadays, the strategy of adding service to product becomes a significant element of businesses (Fang el al., 2008). Schmenner (2009) argues that the trend for offering services integrated to the product could be traced back at least 150 years,

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where the whole value chain, which includes service elements, was managed by product suppliers.

2.2.1 The Definition of Servitization

Service provision could be found under multiple terms; still, "servitization" is being the most common and broadest one (Eloranta & Turunen, 2015; Opresnik & Taisch, 2015). Vandermerwe & Rada, (1988) are the first to use of the term servitization to describe the process of adding value to the company's core business through offering integrated packages of products, services, support, self-service, and knowledge. Generally, servitization is a customer driven strategy (Turunen & Neely, 2012). It is described as an organizational changing map, facilitating movement to offering a product-service system (Martinez et al., 2010). It represents a shift from product manufacturing process to being a service provider (Oliva & Kallenberg, 2003).

Several disciplines participated in forming the servitization strategy (Baines et al., 2009a). Still, there are no universal agreed codes or particular definition or description of servitization (Lay et al., 2009; Servadio & Nordin, 2012). Different labels and terms are found in the literature, such as the industrialization of service , service factory , customer-service orientation, integrated services, service-led , service infusion, tartarisation , the provision of service,   integrated solutions, service transition , service dominant logic, product-service system , service maneuvers, value-added solutions, servicizing, servicisation, service-centric, high value manufacturers and advanced manufacturing (Wilkinson et al., 2009). These numerous tags of servitization indicate the importance of servitization as a new business phenomenon (Baines et al., 2009a; Lightfoot et al., 2013).

Several definitions are used to describe servitization (Opresnik & Taisch, 2015) (see table 2-1). Still, these various terms and definitions of servitization share the similar themes and trends of adding value to product through service features to meet customers' need and enhance customers' satisfaction (Tukker, 2004).

Table 2-1: Definitions of Servitization Strategy

Definition	Source
"Market packages or 'bundles' of customer-focussed combinations of goods, services, support, self-service and knowledge"	Vandermerwe & Rada, 1988, p. 314
"A marketable set of products and services capable of jointly fulfilling a user's need."	Goedkoop et al., 1999, p3
"a system of products, services, supporting networks and infrastructure that is designed to be: competitive, satisfy customer needs and have a lower environmental impact than traditional business models"	Mont, 2002, p239
Servitization shifts business organization away from the goods-dominant logic to the service-dominant logic	Vargo & Lusch, 2004
"Extending the service business leads to a step-wise transition from products to services"	Gebauer et al., 2005, p.14
"A product-service system is an integrated product and service offering that delivers value in use. A PSS offers the opportunity to decouple economic success from material consumption and hence reduce the environmental impact of economic activity. The PSS logic is premised on utilizing the knowledge of the designer manufacturer to both increase value as an output and decrease material and other costs as an input to a system."	Baines at el., 2007, p.3
Moving up the value chain, seeking to innovate and create more sophisticated products and services so that businesses do not have compete on the basis of cost alone.	
"Change process wherein manufacturing companies embrace service orientation and/or develop more and better services, with the aim to satisfy customers' needs, achieve competitive advantages and enhance firm performance"	Ren et al., 2007
"Move up the value chain, innovating and creating ever more sophisticated products and services"	Neely, 2008, p. 103
"Servitization is the move away from selling traditional product to selling a wide range of product/service bundle combinations, contributing to firm sustainability and profitability and hence the competitiveness of nations"	Vendrell-Herrero et al., 2014, p 279

Baines et al., (2009a p. 555) synthesised those definitions and develop a comprehensive one based on a systematic literature review capturing the state of the art of servitization. Whereby, servitization is defined as "The innovation of an organisations capabilities and processes to better create mutual value through a shift from selling product to selling product-service systems."

2.2.2 The Prominence of Servitization

Traditionally, the potential strategic decision is enforced by the surrounding business environment (Hitt et al., 1998). In the 1980's, business environments were best

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characterized as customer driven, intensely competitive and service-dominated (Levitt, 1976; Vandermerwe & Rada, 1988). The rationale for offering service proceeds for several reasons. First, customers are the most central elements and fulfilling customers' needs are considered the key success factor for any business (Nagel & Cilliers, 1990). The characteristics of service are viewed as a vital source of customer attraction, loyalty and intimacy (Alam & Perry, 2002; Hartline et al., 2000; Baines et al., 2009a; Kujala et al., 2013). Offering services therefore is driven by customer needs (Vandermerwe & Rada, 1988)

Secondly, business strategy could be designed by different approaches. Mainly, there are two basic models for strategic design. The first model is the deliberate design of strategy referring to the strategic choice that is developed through careful planning and based on examining an organization's internal and external environment. The second model is the emergent strategy referring to the incremental strategy development, which evolves based on an adaptive manner rather than rational choice and strategic planning (Mintzberg & Waters, 1985). Voss (1995) studied the alternative paradigms for manufacturing strategy. He stresses on the fit between the external business environment and internal organizational environment for organizational strategic design based on three different strategic models. The first strategic paradigm is a proactive oriented model where the strategic position is attained by linking an organization's unique competence with the different requirements arising from the external business environment. Reactive oriented is the second paradigm, where businesses react to anticipate the current situation within the external business environment. Finally, the benchmarking oriented model, when a business is seeking on-going development based on following and simulating best practice within the industry. However, the dynamics of the business environment reduces the organizational ability to collect and analyse vital strategic data. Accordingly, the reactive strategic paradigm increases whilst the proactive strategic orientation decreases (Hailin, 2009). The role of organizational learning therefore increases as a critical process for businesses to choose the best strategic decisions that fit with the dynamics of the business environment (Voss, 2005). Organizational learning becomes a critical success factor. It allows businesses to benefit from the unavoidable changes to the business environment and helps them to make quick adjustments to the new business conditions. This comes from gaining experience over time (Bennett, 1999). Adopting a servitization strategy stimulates organizational learning and improves businesses response to market competition and dynamics of the modern business environment (Oliva & Kallenberg, 2003; Gebauer et al., 2007; Baines et al., 2009a; Gebauer et al., 2012a).

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Thirdly, the growing of advanced technology, globalisation and commoditization, creates new forms of competition (David, 2013). Technology is reshaping businesses, changing the competition landscape, lowering market entry barriers and developing new rivals (Porter & Millar, 1985; Hitt et al., 1998). Globalization not only increased the competition but also changed competitive strategies (Gavusgil, 1993). Commoditization increases the high similarity of products within the market place; the uniqueness of high quality products are difficult to maintain, customers became more sensitive to product price (Reimann et al., 2010), whereby, organizations are required to be more innovative and to compete within a multi-dimensional perspective by producing different value-added options (Gavusgil, 1993). Baines et al., 2009a (p. 547) argue, in order to create a competitive advantage, offering service is "distinctive, long-lived and easier to defend from competition" .

As well as, the decreasing product profit margin forces manufacturers to search for new alternatives (Martinez et al., 2010). Service has higher profit margins than goods and selling services generates a constant revenue stream compared to selling tangible products (Mathieu, 2001a). Additionally, offering service creates profit growth opportunity for expansion and growth in saturated product markets (Wise & Baumgartner, 1990). Moreover, servitization stimulates and facilitates business innovation (Laine et al., 2012). Service innovation significantly affects the whole organization positively in terms of cost reduction, increased sales and superior performance. This is based on integrating business knowledge with, customers and employees (Salunke et al., 2013). While products innovation is a complex process, services innovation is easier and less costly (Neely, 2008; Visnjic et al., 2013), and puts a strong emphasis on value co-creations and learning from customers (Tether & Bascavusoglu-Moreau, 2012b). Finally, services were added to protect manufacturing industry. After the Second World War, the services sector dominated economies (Regan, 1963). Services shape a larger part of the economy (Levitt, 1976). The phenomenon of de-industrialization affected the manufacturing sector adversely. It was considered a growth barrier to manufacturing industry (Cornwall, 1980; Crafts, 1996). The shift from offering just product to offering service and a product system was viewed as an essential manoeuvre to protect manufacturing industry. According to Lin & Vassar, (1992, p. 18), "Service has emerged as a crucial strategic weapon in the manufacturing environment."

Nowadays, servitization becomes a necessary strategic decision for businesses (Roos, 2015). According to Jones (2013), the business environment is becoming complex, dynamic yet poorer than ever, as many factors that are changing rapidly over time, influence the

business environment based on complex interrelations. This leads business strategic decisions to be surrounded with high ambiguity and uncertainty. This increasing environmental concern magnifies the importance of a servitization strategy (Brad & Murar, 2015). The perspective to engage with offering service to learn more about the surrounding environment and trace the outcome of business actions becomes highly visible (Viljakainen & Toivonen, 2014). In project-based businesses, offering services enhances market offerings (Wikström et al., 2009). Whereby, a business model based on offering services is becoming a compulsory to survival (Kujala et al., 2013). Recently, there has been a growing interest in studying servitization strategy. This interested from various research groups and numerous tags of servitization indicate the importance of servitization as a new business phenomenon (Baines et al., 2009a; Lightfoot et al., 2013). Figure (2-1) demonstrates the notable increase in the numbers of published works related to servitization after the year 1999. Interestingly, the study of servitization strategy increased rapidly after 2003 reaching a peak in 2010 (Hou & Neely, 2013). These several studies indicate the importance of servitization as a new business strategy (Lightfoot et al., 2013).

Figure 2-1: Research elated to servitization strategy adopted from the work of (Baines et al., 2009a).
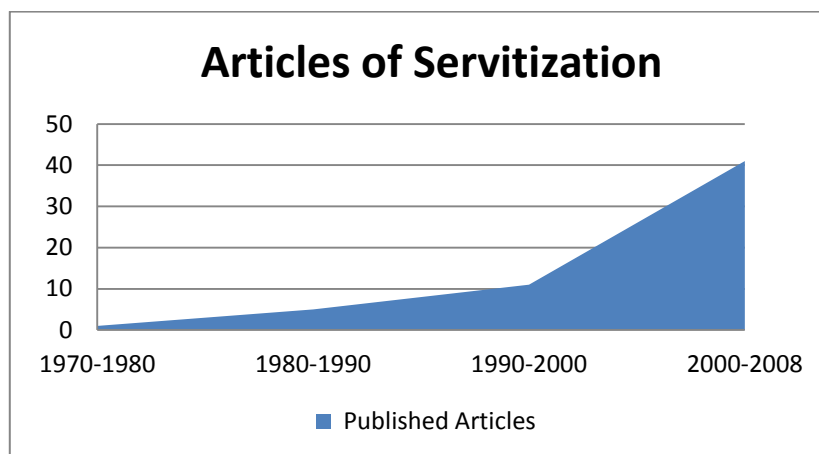
2.2.3 Research Groups Addressing Servitization

Traditionally, organizations were already offering services to some extent (Araujo & Spring, 2006). Nowadays, servitization attracts the interest of different disciplines. As a field of research, several research groups investigated servitization based on different perspectives such as the strategic perspective, the environmental perspective, the marketing base, the service science, and operational research (Pawar et al., 2009; Baines et al., 2009b;

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Lightfoot et al., 2013). These research groups and their perspectives are presented in Table (2-2) below.

Table 2-2: Research Groups Studying Servitization Strategy

Research community	Research Perspective	Source
Strategic management	Growth Strategy	Vandermerwe & Rada, (1989); Quinn et al., 1990; Wise & Baumgartner, (1999)
Product-service systems	Environmental Sustainability	Manzini, & Vezzoli (2003); Van Halen et al. 2005.
Service science	Service Dominant Logic	Chase, 2010; Ahamed et al. 2013b and Ohvanainen, & Hakala 2014.
Marketing Management	Customer Orientation	Alam, & Perry, 2002; Vargo, & Lusch, 2004; Ulaga, & Reinartz, 2011; Kohtamäki et al. 2013 and Kindström, & Kowalkowski, 2014.
Operations management	developing services operations activities and efficiency improvements	Thoben, et al. 2001 ; Neely, 2008;Baines, et al. 2009a and Pawar , et al. 2009

Strategic management scholars address servitization as a growth strategy. Their works emphasise the financial value of offering services to compensate for decreasing profit margins of traditional products (Pawar et al., 2009). The strategic management research group focused on financial sustainability, by developing new profitable business models that direct the organizations activities to the upstream and downstream supply chain (Wise & Baumgartner, 1999). Scholars from an environmental research group developed the product-service system concept as a result of innovation design, driven by the enthusiasm for reducing the environmental impact of the production process (Baines et al., 2007). The product-service system research community is studying the roles of service in improving social, economic, and green environment sustainability (Baines et al., 2009b). Their studies addressed the best utilization of resources and the eco-efficiency the market offers (Van Halen et al., 2005). The service science scholars address service strategy as a complete system, emphasising in the future roles of service in the business world (Paton & Mclaughlin, 2008). Where service is viewed as a whole system of networking that involves business organization, technology and people (Raddats & Burton, 2011; Ohvanainen & Hakala, 2014). The service science community is studying the service dominant logic that

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engages with product manufacturing models in a services atmosphere (Lightfoot et al., 2013). They are studying the positive impact of moving to product utilization rather than product consuming by offering services (Baines et al., 2009b). The marketing researchers emphasise the usefulness of servitization climate to meet customer needs, and orientate the organization to becoming more customer centric (Vargo & Lusch, 2004). The marketing research community is studying the roles of services in satisfying customers based on relationship marketing rather than product exchange (Kohtamäki et al., 2013). According to marketing research group, services are added as a means of customer interaction to facilitate value co-creation (Pawar et al., 2009). Finally, researchers from operations management are studying servitization as a new source of competitive advantage (Baines et al., 2009b). This research community is studying the service operations management focusing on the operations efficiency of product and services (Lightfoot et al., 2013). Their focus is toward offering value utilization to customers rather than a single product by adding services that support product functions (Thoben et al., 2001). Also, they study the transition process based on adding service to manufacture and the capabilities required for process implementation (Smith et al., 2014).

2.2.4 Servitization Strategic Approaches

Services are not easy to define. A service is an economic activity that creates value and provides benefits for customers at specific times and places. It is an act or performance offered by one party to another (Lovelock & Wright, 2001). The primary differences between products and services are the properties of intangibility, heterogeneity, perishability, simultaneity and high customer involvement (Hoffman & Bateson, 2011). Servitization is an integrated system of offering both product and service that delivers value in use (Baines et al., 2007).

Various classifications of servitization have been described in literature. According to Sakao et al., (2009) a successful service offering should encompass three crucial dimensions: the customer, the offering, and the provider. The customer dimension covers the requirements and the needs of the product-service systems potential users. The offering dimension includes both the product and the service by the system life cycle. The supplier dimension covers the process of developing a successful product-service system based on customer needs and organizational capabilities to develop that system (Sakao et al., 2009; Sakao & Lindahl, 2009).

2.2.4.1 Offering Service Categories

Service is vague, wide, complicated and hard to characterize (Slack, 2005). According to Baines et al., (2009a), there is a variety of forms of servitization with different features. The strategy involves different category levels and types of services (Oliva & Kallenberg, 2003; Tukker, 2004). In general, businesses engaged with servitization strategy by adding services related to an organization's products or customer activities or none of them, based on organizational intensity of offering service (Mathieu, 2001a&b). Oliva & Kallenberg, (2003) developed the service continuum moving from offering pure product to offering basic services, by advanced services to reach the offer of system solutions. Baines & Lightfoot, (2013a) differently categorized these services into base services, intermediate services and advanced services, where the advanced service involves capability and performance delivery.

Nevertheless, the common classification of offering a service based on servitization strategy is developed built on different levels of integration and different combinations mechanism of product and service systems, the product-oriented, the use–oriented and the result-oriented (Neely, 2008). According to Baines et al., 2009a, the product– oriented approach, adds basic services to the product, where the product is the main part of the marketing offer and services are the add-on element. Here, producing goods is the key stream of competitive advantage creation, services such as after sales service, maintenance service, and customers training services are added as additional elements to support product sales and to assure product stability and effective function. The second integration is the use–oriented approach, as organizations are shifting from focusing on product proper functioning to focus more on customer interaction and supporting customer activities. Firms are providing a mix of both product and service such as products customization services, consulting and co-investment services. This mix is the main part of the marketing offerings. Finally, the result–oriented approach reflects the uppermost class of product-service system, where the supplier–customer relationship moves from product transaction to being relationship-based. Here, the offering will be relying on selling systems capabilities and solutions rather than mere products. In this scenario service becomes the main part of the marketing offerings and the main source of organizational competitive advantage and revenue stream. Where, the product becomes the platform to deliver services (Baines et al., 2009a).

Tukker (2004) extended these three traditional categorizes of product- service systems into eight sub-categorizes, based on different economic characteristics of offering services as

shown in figure (2-2) below. Within these eight categories, the added services vary from basic services, to advanced services and then the sophisticated services based on the incremental process of servitization by moving from offering a mere product to offering a full system solution.

Figure 2-2: Product-service system categories and subcategories (Tukker, 2004).

Value mainly in product content	Product-service system			Value mainly in service content
	Product content (tangible) — Service content (intangible)			
Pure Product	**A: Product oriented**	**B: Use oriented**	**C: Result oriented**	Pure service
	1. Product related 2. Advice and consultancy	3. Product lease 4. Product renting/sharing 5. Product pooling	6. Activity management 7. Pay per service unit 8. Functional result	

Likewise, Neely (2008) inflated the main three categories of servitization by adding two new options into the continuum. The first one is the integration-oriented option, whereby a business is integrating vertically to provide a downstream service in addition to the product offering elements such as product delivery, customer training and consulting. The second category is the service-oriented option, services are integrated into the product itself and include such things as product functionality monitoring and system intelligence, and both services and products are the main added value elements in the offer (Neely, 2008).

2.2.4.2 Types of Services Offering

Traditionally, manufacturing organizations sell services to some extent but not as a main part of value creation (Baines et al., 2010). Neely (2008) identified twelve general categories of services that could be offered based on type of industrial sectors. These services include design and development services; consulting services; transportation and trucking services ; financial services; installation and implementation services; outsourcing and operating services; procurement services; retail and distribution services; maintenance and support services ; property and real estate services ; leasing services; and systems and solutions services. Baines et al., (2010) added training services, monitoring services, spare parts re-manufacturing services and customer service desks. Recently, Santamaría et al., (2012) added product check and product insurance coverage as services provided by manufacturers. In construction management, build, operate and transfer is the common service provided by construction companies (Johnstone et al., 2008; Govette et al., 2013).

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Recently, Cook et al., (2012) added other services such as power saving building, heat preservation and sunlight utilization, which have been added to gain greater environmental performance.

Baines et al., (2010) categorized these different types of services into two main approaches. These are protective services and proactive services. The protective services are the services that make the product eligible to be bought by the customer; it shapes the minimum market requirement, whereas, the proactive services are those that distinguish the product from those of competitors; it is much more sophisticated and shapes organizational competitive advantage (Baines, et al., 2010). From different perspective, Frambach et al., (1997) identified three time-periods for offering services and these are; offering services before sales, offering services during the sale process and offering after sale services. Artto et al., (2008) identified three types of services based on project business firms; offering service before project design, offering services during project execution and offering services after project delivery. Voss (1992) identified three areas of the business value chain where services could be produced and added. The first area is the distribution chain where manufacturing firms could offer different types of services such as a logistics service, customer training and user-friendly assistance. The after sales chain is the second area, where manufacturing firms might also offer different types of services such as product maintenance and product support services. Thirdly, the service factory, in which, service characteristics are considered the dominant factor in the operational process. In the third scenario, the whole value chain is service oriented as the firm focuses in delivering performance for internal and external customers with different types and levels of services. Sawhney et al., (2003) added the chain of customer activities that extends beyond after sales chain, and refers to the performance and product utilization that customers buy the product for. This chain consists of different levels and different types of activities.

Javan & Touri, (2012) developed a service classification matrix (see table 2-3) that classified the service offers into six distinct types. These are based on two dimensions i.e. the time-period of offering the service and the purpose of offering the service.

Table 2-3: Offering Servcie Martix (Javan & Touri,2012)

	Before sale services	During sale services	After sale services
Customer related services	Customer's service offered before sale	Customer's service offered during sale	Customer's service offered after sale
Product related services	Product's service offered before sale	Product's service offered during sale	Product's service offered after sale

Pre-sales services include offering service related to the product such as a stocking service, and offering services related to customers such as consulting and design services. During sale services includes offering services related to products such as training, preparation, and product installation services and other services related to customers such as co-development and co-investment services. Finally, after sale service includes offering services related to product such as product maintenance and delivery services, and offering services related to customers such as leasing, sharing and customer training services (Javan & Touri, 2012).

2.2.4.3 Sources of Services Innovation

The term service is comprehensive, and services have different features from one industry to another or even from one company to another in the same industry (Rajala et al., 2013; Lay, 2014). However, the sources of ideas and information for new services development are usually garnered mainly from organization's customers, research and development department, organizational staff and employees, suppliers, competitors, or specialized events (Biege et al., 2012). Still, these sources deliver different features and levels of service. Some services will be offered based on customer–buyer long-term relationship and other will be based on short-term relationships. This means, that some service will be basic, simple and in standard form, while, other services will be sophisticated, more customized and divergent (Van der Valk et al., 2005).

2.2.5 The Strategic level of Servitization Decisions

Commonly, three strategic levels have been presented in strategic management studies, the corporate level, the business unit level, and the operational level (Hunger, & Wheelen, 2010 and Johnson et al., 2013). Each strategic level implicates different strategic goals, requirements and outcomes (Thompson & Martin, 2010; Johnson et al., 2013). The corporate level strategy is the highest level of strategy. It designates the long-term direction and scope for the whole organization and directs business development and its evolution. The business level strategy is primarily concerned with how a particular business unit could gain a competitive advantage over its competitors. Operational level strategy refers to the set of plans and actions aimed at the best use and allocation of the organization resources to support the business unit strategy and corporate level strategy (Johnson et al., 2013). The strategic decisions within this level are designated to support the strategic decisions of the higher levels (Barnes, 2008).

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According to Boyt & Harvey, (1997), the more important the service element the higher the strategic level and designated servitization becomes as a dominant corporate strategy that has to be supported at both business and operational level. Table (2-4) summarizes the factors that determine the importance of the service element.

Table 2-4: Factors Influence Servitizing Decision (Boyt & Harvey, 1997).

• The importance of service to the organization, to the customers, and to the market segment
• The inevitability of services to support product functionality and product selling
• The consequent influences of offering unsuccessful services on customers' behaviour, and the degree of customer reactions toward the organization failure to offer the service
• The complicated and sophisticated advanced service, and the process needed to produce this service
• The importance of provider occurrence during the transaction process of the service transaction
• The level of gained competitive advantage based on offering the service

Although previous research demonstrates the importance of a service element, (for example see Baines et al., 2009a). Still, the level of servitization strategic decision is not obvious yet (Oliva & Kallenberg, 2003). Scholars differently viewed servitization at corporate strategic level, business unit level and functional strategic level. Table (2-5) presents these different views.

Table 2-5 : The Strategic Level of the Servitizing Decision

Classification	Strategic Decision	Strategic Decision Characteristics	Sources
Corporate Strategic Level	Market Position	Directional Strategy	Fang et al., 2008; Visnjic et al. 2009; Kindström & Kowalkowski, 2009; Kowalkowski, 2011; Turunen & Toivonen, 2011 ; Nuutinen & Lappalainen, 2012; Ohvanainen, & Hakala, 2014
Business Strategic Level	Competitive Strategy	Separate Business Unit	Neu & Brown, 2005; Auguste et al. 2006; Gebauer et al., 2005; Matthyssens & Vandenbempt, 2008; Gebauer et al., 2010b; Heikkilä & Brax, 2010; Belal et al., 2012; Kinnunen, & Turunen, 2012
Operational Strategic Level	Operational Strategy	Production Efficiency and Effectiveness	Chase, 1991; Van Halen et al., 2005; Sakao et al., 2009

Competing strategically through servitization directs the organization toward service dominant-logic approach and customer orientation (Smith et al., 2014). Nuutinen & Lappalainen, (2012) argue that servitization works as a predominant strategy that redirects the organization's market position, shifting from product orientation to service orientation. This is where, the service factor becomes the core element of the production process (Lin & Vassar, 1992), and a service-dominant logic is the business strategic orientation (Kowalkowski, 2010), for which full support is required from the whole organization (Kowalkowski, 2011). This view is attributed to the process of synchronization needed between multiple activities within the organization when offering services (Johnson & Mena, 2008). Businesses need to integrate organizational responsibilities and foster intra-organizational collaboration to support a servitization strategy (Neu & Brown, 2005). The activities of offering services affect the whole process of operations and alter the whole organization's design (Baines et al., 2012; Mathieu 2001a). Besides, customer interaction is an essential success factor of servitization that ensures continuation of information essential not only to the sales team but also to the production and back office teams (Turunen & Toivonen, 2011).

However, Kinnunen & Turunen, (2012) argue that offering services decision needs support and commitment from all business units, functions and departments. Still, shifting the entire organization from product orientation to service orientation and developing a customer focus approach are challenging processes. This shift could lead to strong change resistance and produce organizational conflict. Moreover, at the beginning of servitization strategy implementation, the services element will not aim to offer a system solution. On the contrary, services will be integrated to the product as an add-on element. Therefore, there is no need for the entire organization to adapt the service approach and develop service capabilities at the expense of product capabilities. Accordingly, servitization should be pursued at the business strategic level and offered through a separate business unit (Oliva & Kallenberg, 2003; Gebauer et al., 2006) the separation between product and service businesses mitigates the organizational risk of offering services and moving outside existing capabilities (Sawhney et al., 2003).

Nevertheless, the third view categorized servitization as a functional strategy (Sakao et al., 2009). Where, the production process efficiency and effectiveness is the main goal of servitization, and where servitization is described as an innovation strategy that create more value with fewer resources (Van Halen et al., 2005). Here, offering service is considered an important aspect of order-qualifier criteria (Voss, 1992), and the service

element is a vital outcome of the production process and should be added as a performance dimension integrated to the cost, quality, time, and flexibility dimensions (Chase, 1991).

2.2.6 Relevant Factors Influencing the Adoption of Servitization Strategy

Usually, the business environment has a significant influence on the strategic decision development (Johnson et al., 2013).The strategic decision process is about spotting market opportunities and threats based on scanning both macro and micro factors of the external environment and how these factors influence organizational decisions in light of its internal weaknesses and strengths (Hunger & Wheelen, 2003). Still, the business environment is multi-dimensional and considered a contingent factor in making strategic decisions. Generally, a wide range of factors influences the organizational strategic decision-making process. These factors include both the external environment and internal business factors. The external environment factors could be classified as the far external factors that affect an entire economy, and the close external factors that directly affect business decision-making in a particular industry .On the other hand, the internal factors related to organizational strengths and weaknesses could be exhibited in terms of specific strategic decisions (Johnson et al., 2013). Accordingly, there are two main approaches to make organizational strategic decisions: the industrial organization approach, where external factors are more important than internal factors for achieving a competitive advantage. The second approach is the organizational capability approach, where organizational competences are the source of the competitive advantage (David, 2013).

Today, servitization strategy represents an increasingly popular strategy among scholars and policy makers (Lightfoot et al., 2013). Literature did not identify the influence of different operational environments on the adoption of servitization strategy (Turunen & Finne, 2014). The literature only focused on organizational capabilities as the most influential factors affecting the adoption of a servitization strategy (Oliva & Kallenberg, 2003; Baines et al., 2009a; Gebauer et al., 2012a). According to Gebauer et al., (2012a) organizational capabilities are the only significant factors affecting the development of a servitization strategy. Those capabilities are related to the organization's ability to sense business opportunities, transforming organization from product-oriented to customer-oriented to sustain the operating service and product system operations process. Baines et al., (2010) argue that businesses offer services to some extent. These services used to be considered in organizational business models (Kujala et al., 2011). Still, these services are viewed as additional part of the market strategy and not as a source of value creation

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(Baines et al., 2009a). According to Gadrey et al., (1995) offering services is considered a problem solving approach by greater integration of organizational capabilities and competencies. Only entrepreneurship is needed to give up the traditional thinking patterns of doing business and adopting a servitization strategy (Manzini & Vezzoli, 2003; Ettlie & Rosenthal, 2012). The other capabilities needed to offer advanced services would be gradually gained using an incremental process of servitization through organizational expertise and learning capacity (Brady & Davies, 2004).

According to Turunen & Finne, (2014) servitization is considered a valid strategy across all organizations regardless of the economic situation, industrial sector or operational environment. Strategy has been studied based on different operational processes, different industrial sectors, different business environments and different research groups (Visnjic et al., 2013; Lay, 2014). Table (2-6) below presents several examples of these studies.

Table 2-6 : Studies of Servitization

Study Nature	Source
Different Operational Processes	
Large manufacturing	Baines et al., 2009b; Visnjic, & Looy 2011
Small and medium sized enterprise	Gebauer et al., 2012
Project based business	Artto et al., 2008; Kujala et al., 2010; 2011; Galera-Zarco et al. 2014
Different Industrial Sectors	
Microfluidic Industry	Panikowska et al., 2011
Music industry	Myrthianos et al., 2014
Electronic game industry	Shi et al., 2014
Recruitments services sector	Hertog & Jong, 2007
Legal services sector	Balthu et al., 2013
Healthcare devices industry	Velikanov et al., 2013
Telecommunication industry	Elfving & Urquhart, 2013
Diamond industry	Amadi-Echendu & Ulaya, 2014
Fitness equipment industry	Hsu et al., 2013
Aerospace industry	Wallin, 2013
Information system	Wang et al., 2014
Security business	Rajala et al., 2013
Construction industry	Brady et al., 2005; Cook et al., 2012;Govette et al., 2013
Different Countries	
Basque countries	Kamp & Alcalde, 2014
European countries	Lay et al., 2010
Italian companies	Manzini & Vezzoli, 2003
Danish companies	Slepniov et al., 2010
Spain companies	Santamaría et al., 2012
United Kingdome companies	Baines et al., 2012
Sweden companies	Lodefalk, 2013
Japan companies	Ahamed et al., 2013a
Taiwan companies	Lin et al., 2014
China companies	Fang al., 2014
Thai companies	Lertsakthanakun et al., 2012
Singapore companies	Ang et al., 2010
South Africa companies	Benade & Weeks, 2010

Nevertheless, different environmental conditions encourage the adoption of servitization such as advance technology (Neely, 2008), which empowers the innovation of new and different business models (Van Halen et al., 2005). In addition, globalization encourages the development of new business and services ideas (Brentani, 2001).

2.2.7 Section Summary

The above section introduced servitization as the new business strategy that evolved to respond to a dynamic business environment, where the competitive advantage is rooted into customers' vision. Offering services is not an optional any more, but an imperative strategy. The strategy emphasizes the fundamental principle of creating more value to customers by having a better understanding of their needs by adding services, which leads

to a better configuration of organizational competences. Different forms and levels of servitization strategy turn a business model based on adding service element, which required new internal organizational design. Where, the more important service element raises the need of servitization as a directional strategic decision, where, only organizational internal factors and competences influence the decision to adopt a servitization strategy. In the next section, the process of designing an effective servitization strategy will be reviewed.

2.3 Designing Servitization Strategy

Strategy formulation refers to the strategic management process that involves the planning and decision making that leads to the establishment of the organization's goals and objectives of a specific strategic plan (David, 2013).

Servitization is much more than offering services (Gebauer et al., 2004 and Gebauer & Friedli, 2005). It emphasises the role of value co-creation in business prosperity (Kowalkowski, 2010). Customers' needs drive the development of what organizations market to their customers (Wallin et al., 2015). According to Tukker & Tischner, (2006) servitization certainly has potential to develop a sustainable competitive advantage, yet this potential is only realized by a careful strategic design. As discussed earlier the servitization strategy involves different categories, levels and dimensions (Oliva & Kallenberg, 2003; Tukker, 2004). Each dimension has its own strategic deliverables, arrangements, requirements, and challenges (Martinez et al., 2010). Business needs to select the optimal level of offering services (Mathieu, 2001a), develop new strategic view, allocate resources, estimate costs and revenues, select the optimal combination of product and services and evaluate the market entrance route, (Hanski et al., 2012). Also, the decision should include the numbers and types of product and service to be supplied and develop the value creation model (Cohen et al., 2006). They then need to decide whether to buy or make services (Hanski et al., 2012). Moreover, organizations have also to maintain a constant flow of services development and process innovation (Ahamed et al., 2013a), for which a solid strategic design is an imperative success factor (Ohvanainen & Hakala, 2014).

2.3.1 The Motivations for Providing Services

The strategic purpose is an explicit objective describing the organizational intended activities in pursuit of certain outcomes (Todeva & Knoke, 2005). Recognizing the purpose of strategy determines the available marketing opportunities and the level of capabilities

required to address these opportunities (Khalifa, 2008). It also plays an important role in allocating different organizational resources that support achievement of the strategy (Day, 1981). Also, different strategic purposes have different levels of top management commitment, involvement and support (Mintzberg, 1994). Recognizing the strategic objectives of a servitization strategy and offering service practices is a critical success factor (Baines et al., 2009a; Raddats & Burton, 2011). The literature suggested several factors and drivers motivating business to adopt a servitization strategy as shown in table (2-7).

Table 2-7: Drivers of Servitization

Drivers	Sources
External Forces: Servitization strategy is being forced and motivated based on different conditions of business environments, as these conditions are yielding different threats and prospects whereby offering service becomes a compulsory move for all business firms to create competitive advantage.	Vandermerwe & Rada, 1988; Oliva & Kallenberg, 2003; Neely, 2008; Artto et al., 2008; Spring & Araujo, 2009; Tether & Bascavusoglu-Moreau, 2012; Visnjic et al., 2013; Kujala et al., 2013
Internal Motivations: The rationale for offering services integrated into products proceeds along four main potential routes. These are marketing, strategic, innovation and financial benefits.	Mathieu, 2001a; Gebauer et al., 2005; Gebauer et al., 2006; Gebauer & Fleisch, 2007; Raddats & Burton, 2011; Lay, 2014
Environmental Sustainability : Offering service integrated to the product has social benefits and lower environmental impact than traditional business models	Goedkoop et al., 1999; Mont, 2002 ; Baines et al., 2007; Tukker, 2013
Mix of Forces and Motivations : servitization strategy is driven by external environment and motivated by substantial potential benefits	Van Halen et al., 2005; Pawar et al., 2009; Nordin & Kowalkowski, 2010; Tether & Bascavusoglu-Moreau, 2012

The literature indicates that servitization strategy is being forced based on different conditions of business environments, as these conditions yield different threats and prospects (Vandermerwe & Rada, 1988). Thus, providing service becomes a compulsory move for all businesses to create sustainable competitive advantage (Kujala et al., 2013). According to Tether & Bascavusoglu-Moreau, (2012a) service becomes an indispensable element of a business model; and the success of the organization is very strained without being able to offer services (Visnjic et al., 2013a). Other scholars consider three sets of strategic advantages are the main drivers of servitization. Organizations are inspired to adopt servitization strategy based on marketing, strategic, and financial motivations (Mathieu, 2001a). Lay (2014) argues that servitization enhances organizational innovation advantage, which is crucial to a company's continued success. Offering service is an important source of feedback and information by having close customer relationships.

Moreover, services innovation requires a lower level of investment in research and development and sophisticated technology (Hollenstein, 2003). Further, offering service is labour intensive and does not require sophisticated assets or a significant level of capital investment (Ding et al., 2006; Turunen & Neely, 2012; Visnjic et al., 2012).

Other scholars consider both forcing factors and motivations as drivers for offering services strategy. Accordingly, these drivers were based on external and internal factors motivating a business to offer different types and levels of service. For instance, Van Halen et al., (2005) argue that there are three broad strategic drivers for adopting a servitization strategy: pushing drivers, pulling drivers, and improvement drivers. The pushing drivers are the factors, which force organizations to offer service as a responsive strategy to meet customer needs or intensive competition and to react efficiently to changes in the market place. The pulling drivers refer to factors that encourage organizations to offer services as a constructive strategy to capture new marketing opportunities or enhance customer relationships. Finally, the motivation for process improvement drivers, are factors pulling and pushing the organization at the same time to enhance operating process and productivity by offering service, seeking more process efficiency and effectiveness to manage business instability and ambiguity (Van Halen et al., 2005). Similarly, factors offering services were classified into offensive, defensive, and environmental drivers. Offensive drivers refer to the strategic planning factors to offer service. This includes forming a long-term customer relationship to anticipate possible challenges in the external environment. Defensive drivers refer to the service offered to support organization adapting activities to unanticipated events from the external environment. While environmental factors are the social responsibility incentive instrument that offers to sustain green environment sources (Tether & Bascavusoglu-Moreau, 2012a). Finally, (Nordin & Kowalkowski, 2010) use the intrinsic and extrinsic to describe the drivers of offering services. Intrinsic factors are internal factors that motivate businesses to offer service for self-interest and to gain more financial benefits such as a new revenue stream or cost reduction or pushing the product selling process. Whereas, extrinsic drivers refer to outside factors that influence the decision to offer service. These factors include change of customer behaviour or responding to new customer needs, or as a differential element to face intensive competition and product commoditization or responding to the environment, when organizations desire to turn into environmentally responsible by offering product utilization rather than product consumption (Nordin & Kowalkowski, 2010).

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Particularly, several forcing and motivating factors could lay behind adopting a servitization strategy, such as new characteristics of the business in the world economy; resource scarcity; business recession cycles, the notion of market- driven demands; the relative decrease of product demand; global competition, the concept of corporate social responsibility, and customer awareness of company obligations toward their products and their operations (Javan & Touri, 2012). Also, offering service could be an obligation for organizations enforced by law or required by regulations (Tether & Bascavusoglu-Moreau, 2012a), reducing organizational dependency in distribution channels (Schmenner, 2009) or providing companies with sustainable development processes (Lin et al., 2011). Still, the dynamism of customer's needs, advanced technology, the notion of a free economy, globalization, and intensive competitions are the outspoken drivers that force manufacturing firms to engage with servitization strategy and offer service (Vandermerwe & Rada, 1988; Cohen et al., 2006; Martinez et al., 2008).

Empirically, Gebauer et al., (2011) found strategic factors such as a differentiation edge has positive responses from customers sophisticated needs and enhances the product innovation process. These are the two greatest drivers among advantages of offering service. This view was affirmed by Turunen & Neely, (2012) as they reported that servitization is a competitive advantage strategy in the first place and mainly considered as a differentiation tool for manufacturing firms. On the contrary, Baines et al., (2010) argue that although the utilization from the servitization strategy advantages are the main factors that inspire businesses to offer service. Yet, the factors that relate to marketing benefits such as customer centric and customer relationship are factors that have the most effect, followed by the financial benefits like extra revenue, whereas strategic factors are less important as a motivation factor. Nevertheless, Wise & Baumgartner, (1999) considered only the financial advantage as the main driver of offering services.

Turunen & Toivonen, (2011) examined the motivation factors of organizations behind adopting servitization strategy. The result showed that organizations are inspired by different advantages of offering services. These include developing sustainable competitive advantages, responding to customer needs, and increasing revenues. Tether & Bascavusoglu-Moreau, (2012a) found that organizations are offering services for a combination of strategic, marketing, and financial reasons.

2.3.2 The Scope and Extent of Offering Services

The aspects of servitization scope and extent are not properly referenced in literature (Benedettini et al., 2015a). Oliva & Kallenberg, (2003) argue that identifying the extent of servitization strategy is a critical success factor. According to Galbraith, (2002), the different numbers and types of services that combine into one solution system are the biggest factors affecting organization strategy and design. Certainly, there are several values and benefits of identifying servitization scope and extent. For instance, Boyt & Harvey, (1997) argued that the identification of the level of service provision helps organizations to understand the optimum system of product and service that satisfies either particular or general customer needs. In addition, it helps to identify the optimal level of service essential for gaining a competitive advantage, understanding the level of management commitment required for delivering the service successfully. Furthermore, it is vital to determine the required organizational competences, and to determine the development process of type and amount of services offered needed for future service expansions (Boyt & Harvey, 1997). Finally, it is considered an important tool for developing more tailored services (Lovelock, 1983).

Galbraith, (2002) identified different categories for service expansion. The first category consists of two dimensions; the vertical and the horizontal offer. The vertical offer is about offering service related to the product, customers, and the industry. The horizontal offer is more general and the service is offered as detached from the product and customer segment. The second category classified the service based on the scale and the scope of the offer, which stands for the number of products and the number of different types of services that make up the "bundle" of services to provide a solution. The third category is the degree of integration and incorporation between product and service and more importantly, how they work together. Finally, the fourth category is based on the revenues of the product and the service and the expected return by the organization. This will then show the additional contribution to overall company profits (Galbraith, 2002).

Fischer et al., (2010) distinguished between two types of services offered, the exploitation, and the exploration. In the exploitation approach, offered services are connected vertically with the current customer activity chain and via developing new service through co-improvement of the existing knowledge and technologies. The exploration approach is based on expanding the service offered that connects horizontally with the customer activities chain by finding new service opportunities, using new knowledge and technology, new design integration, and developing new value streams (Fischer et al., 2010). However, the

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large scale and scope of solutions requires a large number of organizational units to be able to offer more services. These include more coordination schemes, more customer contact points, more control systems, and an incentivised customer focus climate (Galbraith, 2002). However, (Benedettini et al., 2015a) say that this large scope and scale of services increases the risk of failure within the system.

The decision to offer services is complex, and associated with a high degree of uncertainty (Biege et al., 2012; Benedettini et al., 2015a). The broad range of services approach makes it difficult to classify (Gebauer et al., 2008a). Benedettini et al., (2015a), argue that organizations will fail if they do not have the ability to deploy an effective services provision. Biege et al., (2012) identify the factors complicating the process of designing an affective product- service system. These factors include the lack of experience needed for developing an effective product-service system; the narrow thoughts and beliefs that views service as merely a secondary element; and the fact that the process of development of service is customer driven and occurs in chronological steps rather than by systematic, planned and controlled methods.

The previous literature defines the different scope and extent of servitization (Baines et al., 2010). Table (2-8) presents these different trends.

Table 2-8: Scope and Extent of Service Provision

Aspects identify the scope of service provision	Description	Sources
Organization Strategic Purpose	The extent of servitization strategy is linked to the organization strategic purpose of providing services. For product differentiation strategy, organizations offer service related to the product. A customer orientation strategy requires adding more advanced services tailored to customers. While , for developing new organizational competency, services are offered as new products that are not necessary related to the firm's products or customers	Mathieu, 2001a
Organizational Capabilities	Moving from offering pure product to a service provider is based on organization core competences and development of capabilities	Oliva & Kallenberg, 2003
Sustainability	Eight different models of product and service systems exist. Potential environmental gains, economic return and low risk are the main factors determining which model to implement.	Tukker, 2004
Business Environment	Various situations of business environment require various types of service strategies.	Gebauer, 2008
Customer's Needs	Offering different types of services depend on different customer strategic decisions and needs	Helander & Moller, 2008
Business performance	The successful extent of servitization depends on organizational strategic focus, where service provision should be related to the organizations core business, and does not require complex competencies.	Fang et al., 2008
Competitive advantage	In order to develop a distinctive competitive advantage, an organization has to offer protective services which are simple and basic services and move forward by proactively engaging with customers to offer proactive services which are more much advanced and sophisticated	Baines et al., 2010
Business Model	The transformation of value creation of the business model from offering product to offer services determine the extent of servitization strategy	Kujala et al., 2011
Failure Risk	Different service types are associated with different risks. The amount of internal and external risk, resources and capabilities that are involved with service provision are a central issue involved with service provision	Benedettini et al.,2015

However, among the above-mentioned factors, Manzini & Vezzoli, (2003) consider customers are the most important component of a combined product and service provision strategy. Kohtamäki et al., (2013) argue that positive effects of servitization are valid by moving toward full service expansion. Likewise, Artto et al., (2008) argued that in order to capture the value of servitization, the extent of services should cover the whole project, and the organisation should offer basic and standard services and move forward by offering more advanced services, which shape the solution system provider. Visnjic et al., (2012) present the investments approach and the market approach of offering services using the service scale and scope. The investments approach refers to offering a variety of standard services aiming to gain financial benefits rather than marketing benefits. On the other hand, the market approach refers to offering a limited number of advanced and customized services aiming to gain more marketing benefits, such as customer satisfaction and customer loyalty. Still, increasing the service breadth in terms of number of services offered decreases the organizational performance. While increasing services depth by offering more advanced and customized services enhances organizational performance (Visnjic et al., 2012). Nevertheless, Fang et al., (2008) found that the impact of offering service practices is highly dependent upon the type of industry. Bascavusoglu-Moreau, & Tether, (2010) found that the positive impact of servitization only occurred at a higher level of servitization. Recently Min et al., (2015) established that the positive impact of servitization is providing added-value by adding service to customers based on a gradual transformation and long-term process, rather than offering large numbers of superficial services. A servitization strategy requires a high understanding of the tasks and roles of the services element and a genuine idea why the services are being offered (Neely et al., 2011a).

2.3.3 The Entry Mode of Servitization Strategy

Service innovation is considered an imperative factor for servitization (Gebauer et al., 2006). However, very little research has studied the services innovation and the new service development (Gebauer et al., 2008a). Determining how to introduce and deliver services to customers in the most customer-oriented way is imperative for the success of servitization (Lerch & Gotsch, 2014a). Businesses extend into the service business using a variety of types of services (Turunen & Finne, 2014). Gebauer et al., (2007) distinguished between services that support products' functions and services that support customers' activities to introduce the service business into the market. Both approaches of service innovation involve a different set of arrangements and antecedents (Gebauer et al., 2008b).

The extension into service businesses tends to be a random process through unsystematic development (Gebauer et al., 2008a; 2008b). Oliva & Kallenberg, (2003) suggest a

systematic starting process, where offering simple and basic services bonded around organizational capabilities is an optimal entry step into servitization. Accordingly, the offered service should be product oriented and closely related to the firm's competences and available resources. This starting point facilitates the efficient move toward offering more advanced services which then leads to added more value (Windahl & lakemond, 2010; Salonen, 2011; Cook et al., 2012). Gebauer & Friedli, (2005, p70) argue, "The transition is based on an extended service business, starting with a few product-related services and ending up with a large number of service offerings." According to Neely, (2008) offering a product related service, supports product selling, and reduces service expansion risk. This view has been confirmed empirically by Baines et al., (2010) and Visnjic & Looy, (2013c), who found that the most common services offered by manufacturing firms are the service packages bonded around the organizations product. These types of services were selected to reduce service expansion risk (Baines et al., 2010). Also, in the construction industry, Cook et al., (2012) argue that organizations should start with services related to their products such as developing power saving buildings, heating preservation and more utilization of the sun light and heat.

Nevertheless, offering services is strongly linked to customer values (Pawar et al., 2009; Baines & Lightfoot, 2011). Antioco et al., (2008) argue that organizations should start with offering services related to customer activities to leverage product sales. According to Martinez et al., (2010) offering services related to customer activities is more notable, perceptible, appreciable by customers and more strategically fruitful. This kind of service that supports customer activities broadens customer relationships and increases the effectiveness and efficiency of the servitization process (Gebauer et al., 2007), this in turn, delivers more customer satisfaction (Lerch & Gotsch, 2014a). In addition, offering services that support customer's actions and activities have a major positive impact on the organization's service business orientation (Kowalkowski et al., 2013). According to the servitization typology (Figure 2-3) developed by (Mathieu, 2001a) and modified by (Heikkilä & Brax, 2010), offering service related to customer needs is the optimal tactical route and starting point for offering services. It has limited implications on organizational activities and product marketing mix. Also, it promotes a customer orientation approach and facilitates organizational culture change (Mathieu, 2001a; Heikkilä & Brax, 2010).

Figure 2-3: Servitization typology developed by (Mathieu, 2001a) and modified by (Heikkilä & Brax, 2010).
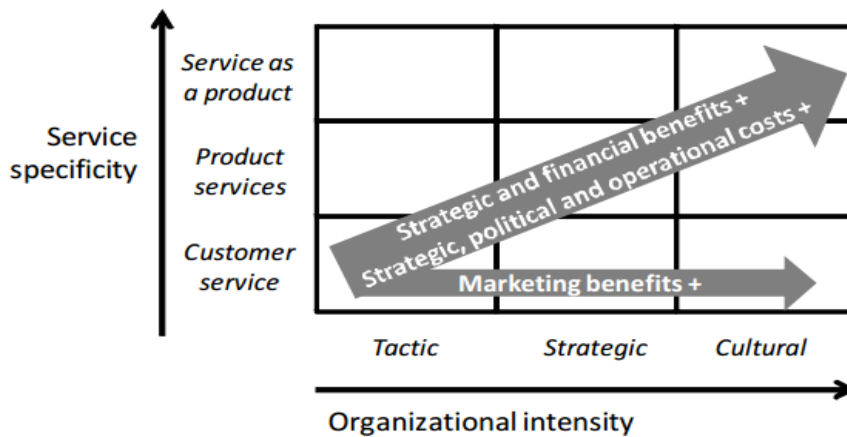
Penttinen & Palmer, (2007), argue that different paths of servitization lead to different market positions. Offering product related services leads to basic components and solutions, whereas offering customer related services leads to more integrated components and solutions, still, these strategic positions are influenced by customer needs. Baines et al., (2010) indicate that both a product support service and a customer support service are two important strategic moves that support the success of a servitization strategy. The product support service is considered a protective strategy, where organizations offer service to protect their market position. They do this by offering services that support the product function such as customer training, delivery service, providing product spare parts, maintenance service and customer service desk. These services are considered an essential attribute within the marketplace as order qualifier characteristics. Services offered relating to products are considered as a reactive move, these services are having order qualifying characteristics. Services offered relating to customers are considered as a proactive move, these services are having order winning characteristics. These include systems integration service, product monitoring service, different financing solutions, and customer advice and consulting services. These services are offered to distinguish the manufacturing offers from competitors and work as a facilitator to winning the contract (Baines et al., 2010). According to Boyt & Harvey, (1997), and Lerch & Gotsch, (2014a), these two modes of entry, regardless of whether the services are related to products' functionally or customers' activities are good as a starting point for servitization strategy, as long as these services are easy, standard, simple, cover a large segment of the organization's customers and provide an acceptable level of customer satisfaction.

2.3.4 The Factors Influencing the Design of Services

Designing an effective marketing offer is a risky process and should be handled deliberately (Bamford & Forrester, 2010). Services are intangible, heterogeneous, inseparable, and perishable; services are perceived, sensed, and experienced, and services are activities customized for individuals (Bowen & Ford, 2002). Businesses are offering a broad range of services (Sakao et al., 2009). The diversity of the services available for organizations makes it difficult to generalise a successful design of servitization (Gebauer et al., 2008a). Generally, the product and service system encompasses three crucial dimensions, the customer, the provider and the services offered. The customer and provider are inseparable, as organizations need to understand and anticipate customer needs and link these needs to organizational capabilities through the offer. Services offered involves different activities and elements of the system through its whole life cycle whereby organizations have to identify thoroughly the system and its life cycle components. Still, the customer is the central aspect of value. Organizations have to start from customer needs, and to be open to fit with whatever requirements are needed to change the solution design (Sakao et al., 2009).

According to Lertsakthanakun et al., (2012) several factors are involved in designing appropriate services and numerous considerations and arrangements are needed. Most of the published studies concluded that organizational internal factors are the main influential factor affecting the design of services offered (Oliva & Kallenberg, 2003; Gebauer et al., 2012a; Kindström & Kowalkowski, 2014). Other scholars consider customers as the most important element of services design with customer satisfaction being the imperative success factor of services offered (Boyt & Harvey, 1997; Mont, 2001; Manzini & Vezzoli 2003; Ping & Jia, 2010). Fulfilling customer demands and satisfying customer preferences are the most significant issues when designing the services to be added to the product (Mont, 2001). According to Boyt & Harvey, (1997) customer satisfaction happens when the customers' expectations are fulfilled. As such, manufacturing firms have to design their services based on different performance measurements that fit with different procedures and criteria used by customers to evaluate the service.

Other scholars considered both external environmental factors and internal organizational factors as having the greatest effect on design and the success of services (Lele, 1997; Windahl & Lakemond, 2006; Kujala et al., 2008; Pawar et al., 2009; Weeks & du Plessis, 2011; Lertsakthanakun et al., 2012). According to Weeks & du Plessis,(2011) the dynamism of the environment forces organizations to focus their emphasis on customer needs and requirements. Still, economic pressures force them to focus more on quality, and cost. Pawar et al., (2009) argue that to design a successful service, organizations should start by

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identifying customer needs and values, and link these needs and creating that value to the cost of offering the services. Gebauer et al., (2012a) added networking as another factor to be considered for designing the service to be offered as formal and informal strategic alliances are required to offer advanced solutions and integration service systems and manufacturers need to develop the required capabilities to manage this network. In a project based business, Kujala, et al., (2008), argued that several factors influence the design of offered services, but that the customer is the most influential factor.

Lertsakthanakun, et al., (2012) developed a decision-making framework to design a successful service package based on categorizing factors, which influence the servitization strategy into external and internal factors. In order to design a successful service businesses have to investigate the dynamic capabilities, the ability of their customers and supplier to support transformation and the cost structure of offering services. Furthermore, selecting the best service approach requires a difficult balance between customers, costs and organizational capabilities (Lele, 1997), and the significant issue when designing the service process is to avoid the redundant cost into the operation function (Vasantha et al., 2012). According to Manzini & Vezzoli (2003), the trade-off between design service to satisfy customers and design service to reduce cost is an essential challenge of the service design process. Still, organizations have to design services so that these added services are valued by customers and able to create their own market demand.

2.3.5 The Design Approach of Services

An efficient development of new product or services is a critical success factor, where failure to design and introduce an attractive product leads to loss of organizational competitive advantage and market failure (Bamford & Forrester, 2010). The product-service system has three main elements: the product, the service, and the integration system. According to Goedkoop et al., (1999), the product, which refers to the physical good, is produced to meet different customer's needs. The service, which refers to the economic activity, is offered for other people based on their requirements to generate profit. Finally, the system, which refers to the different joint mechanism, is used to integrate the product and the service to gain market positioning. The integration system is the unique design of different components of products and services to work in an organized manner and operate consistently and concurrently (Galbraith, 2002). It should increase the value of both the product and the service through effective integration mechanisms (Baines & Lightfoot, 2011), and profitably contribute to the business (Pawar et al., 2009).

Usually, the service development and innovation just happen and are difficult to systemize (Gebauer et al., 2008b; Biege et al., 2012). However, the primary objective of servitization is to ensure that services are productively integrated to the organization's products and the outcome is aligned to customer needs (Manzini & Vezzoli, 2003; Sakao & Lindahl, 2012). Thus, a systematic method for developing the product and service system together is a major requirement (Shekar, 2007; Kindström & Kowalkowski, 2014).

The traditional development methods of products or services are not appropriate for developing an integrated system of product and service (Clayton et al., 2012). Furthermore, product manufacturers are at a skill disadvantage when developing and integrating new services, compared to developing new product (Sakao & Lindahl, 2012). Additionally, the nature of developing service is a chronological and via a co-creation process, rather than a planned and controlled development, which hinders the operative design of both the product and service systems (Biege et al., 2012). In addition, firms emphasise on the product's tangible characteristics, and how these characteristics function with each other and with other tangible parts. There is less emphasis on integrating these tangible elements with intangible ones. This is because services are not usually being a part of the production operation. Maussang et al., (2009) say that this lack of emphasis on the intangible aspects i.e. added services obstruct the process of having a full-integrated package of product and services.

In terms of project-based businesses, integrating services into a project is more challenging (Artto el al., 2008). A customer specific solution is the key outcome of any project-based business (Kujala et al., 2013). Project-based firms have to consider the services element in the earlier stage of project design and the overall project lifecycle (Artto et al., 2008; Kujala et al., 2013; Galera-Zarco et al., 2014).

In general, Pawar et al., (2009) identify three main stages to designing a profitable and successful services package. At the first stage, organizations need to define customer needs and the cost of addressing those needs. Accordingly, organizations have to design the product-services system and determine the required capabilities to produce that system. Organizations have to develop the required capabilities that needed to deliver that system successfully as well. Clayton et al., (2012) affirmed that the development process starts from data collection and analysis. Organizational research, organizational employees, customer, suppliers, competitors, and specialized events are the sources of data for a new service development (Biege et al., 2012). Still, customer interaction and organizational learning are fundamental aspects of service design and development (Visnjic et al., 2013).

Nordin & Kowalkowski, (2010) presented different approaches to identify customer needs and values. Firstly, the linear process approach, in which services are designed realistically and systematically, passes sequentially through analytical steps. The process starts from identifying customer problems and ending with recognizing the optimal solutions to address these problems. Secondly, the relational approach is where the developing process of service starts with a casual conversation between customer and provider, to explore and understand customers' needs and addressing these needs in co-development manner. Finally, the iterative approach is where service design emerges from long-term buyer and supplier relationships and interactions, from which organizations develop the abilities to understand customers and recognize their hidden needs, and how to address these needs.

Clayton et al., (2012) identified several integration techniques to integrate products and services in different systems. The first approach is taken from a product and services system perspective, where organizations focus on the system outcome that meet customers' needs. The dominant feature of this approach is to encounter particular customer needs in a particular marketplace. Here, the outcome of the solution system is the dominant element of product- service design, whereby the process is oriented toward designing service and product in parallel and the characteristics of the solution system are the leading factor. The second approach is considered from a product point of view, where services are developed after the recognition of product features or the product already available on the market. In this case, the product features have a significant effect on the service design and narrow the service packages so that they have to be bounded around the product. Finally, the service-oriented technique, which used when service element is the focal point in the economy, and the outcome is oriented toward offering more value. In this case, the process is oriented toward the service characteristic as leading factors, and the product is the added-on element. The design of products and services separately is considered a proper methodology when the characteristic of one of them (product or service) is the central element of the offer and more important than the other. The joint approach is more proper when both service and product are strongly connected and none of them dominating the other (Clayton et al., 2012). Alonso-Rasgado et al., (2004) argue that the success of a product-service system depends upon both product and services for which Alonso-Rasgado & Thompson, (2006) recommend the joined approach of product-service design to overcome the design difficulties.

2.3.6 Facilities Arrangement for Offering Service

Servitization strategy impacts on the entire operations of an organization including the facilities arrangements for offering services (Kowalkowski et al., 2011b). Facilities

arrangements are concerned with operational system location, specializations and make or buy decisions (Preker et al., 2000). According to Eisenhardt, (1985), the proper organizational arrangement should be selected based on several criteria such as the degree of control over the process, the performance management evolution tools and the importance of information system in the process. The academic discussions that have appeared in mainstream literature suggested different organizational arrangements to produce and deliver a product-service system (Kowalkowski et al., 2011b). These different arrangements are classified based on internal and external designs, where each of these arrangements has its own advantages and disadvantages (Gebauer, 2008; Kowalkowski et al., 2011b; Baines et al., 2012; Gebauer et al., 2012). Table (2-9) presents these advantages and disadvantages.

Table 2-9: Pros and Cons of Facilities Arrangements

	In- house production	Source
Pros	Optimal for offering simple services, provides more control over service price and quality; stimulates product and service innovation; maintains a close relationship, facilitates the shift toward customer centric and develops marketing capabilities;	Dunn & Thomas, 1994; Neu & Brown, 2005; Gebauer, 2008; Gebauer et al., 2010b; 2010c ; Kowalkowski et al.; 2011b; Nuutinen, & Lappalainen, 2012; Gebauer & Kowalkowski, 2012
Cons	Creates conflict , increases operational process complexity and decreases profit margin	Dunn & Thomas, 1994; Gebauer et al., 2010b; Turunen & Neely, 2012
	Separate business unit	
Pros	Supports offering different types of services , reduces the impact of cultural change , balances focus in product innovation and service innovation and propose more customers focusing culture , provides mangers with more control tools and services performance measuring	Galbraith, 2002; Gebauer et al., 2005; 2007; & 2010c; Brown et al. 2009; Nordin & Kowalkowski, 2010; Gebauer & Kowalkowski, 2012; Turunen & Neely, 2012
Cons	Raises organizational complexity, increases coordination cost, reduces organizational flexibility , requires large investment , more financial resources and more coordination between departments	Gebauer et al., 2010a & 2010b; Matthyssens & Vandenbempt, 2010; Turunen & Toivonen, 2011; Gebauer, et al. 2012a
	Process outsourcing approach	
Pros	Offers simple service to support the product functionality , reduces the required initial investment, reduces organizational expansion risk , supports focusing more on product production process , enhances organizational flexibility , supports offering more options of services and developing new system solutions ideas	Axelsson & Wynstra, 2002; Matthyssens & Vandenbempt, 2008; Gebauer, 2008; Gebauer et al., 2010c & 2012a
Cons	A risky process as the outcome, performance and value of the chain will depend on works and values are added by different actors in fulfilling a part of organizations obligation to customers	Webster, 2000; Axelsson & Wynstra, 2002;
	Partnering and networking approach	
Pros	Provides more advanced and complex services , supports concentrating on core capabilities and developing more services capabilities , supports the organization market position of offering services and delivers superior performance	Matthyssens & Vandenbempt, 2008; Gebauer, 2008; Gebauer et al., 2010c; 2012a & 2013
Cons	Rigid relationship, difficult to change, and leads to reciprocal dependency between different organizations on available resources and market success , actions and reactions services development rather than in-house systematically and cautious development , and overlapping of different roles	Kowalkowski et al., 2011a; Nenonen et al., 2014

According to Van der Valk et al., (2005) acquisition of a service business is becoming more imperative for organizations. However, numerous factors affect the organizational decision to offer services (Ohvanainen & Hakala, 2014). For instance, Dunn & Thomas, (1994) linked the types of offered services and the level of integration to the organizational decision of how to produce, organize and offer these services. Gebauer, (2008) used the strategic conditions of the external business environment and the internal organizational competences as the base to select the optimum choice of organizational design for offering services. Baines et al., (2012), argue that the decisions of the organization to design and offer services are determined by the level of customer contact, the availability of resources and competence required to produce services, the availability of operational capacity, the offer's reliability and the cost of any necessary arrangements.

However, Gebauer et al., (2013) argue that organizations are not able to produce internally all service activities required to deliver systems. Businesses need to make different arrangements to engage successfully with different approaches of servitization (Gebauer et al., 2010c). Several scholars recognise the need of multidimensional configuration to support services, and the transition from product orientation to service orientation and being more customer centric (Dunn & Thomas, 1994; Raddats & Burton, 2011; Matthyssens & Vandenbempt, 2010; Kowalkowski et al., 2011b).

Kowalkowski et al., (2011b) presented the advantages of the hybrid organizational arrangement for offering services. They argue that a range of different organizational arrangements is preferable, whereby the organizational choice for the service structure is influenced by the organizational strategic decision, the type of service offered, and market characteristics. Several factors such as the market strategy, the level of customer relationships, the degree of product-service integration, the organizational competences and the characteristics of the external market channel should be used as a basis of organizational decision-making to design hybrid organizational arrangements. Dunn & Thomas, (1994) developed a framework of different internal and external arrangements for service provision process based on moving from offering simple services to more complex offers. The lower point of the model is the product solution where services are offered from production to support the product. The business solution is the second platform where services are offered from separate business units to support numerous products. Finally, the partnership solution is the upper point where an organization joined others to provide different type of advanced solutions.

Raddats & Burton, (2011) developed a framework to select the optimal design based on organizational strategic purpose from offering the service. For example, the joint functions

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of service and product fits better when services are added to improve product differentiation. The separate business unit is more appropriate for offering services that detach from products. Particularly, when these services are offered to develop a more customer centric approach and subsequently, more financial growth. Also, in terms of services closely related to product and the production process, a virtual service unit, which refers to the process of producing service from the same production unit with detached costs and revenue responsibility, is more appropriate to overcome coordination and communication problems. However, In terms of offering solution system, where service becomes the main stream of organizational revenue and competitive advantage, outsourcing and networking are a better way of developing required competences. Finally, Matthyssens & Vandenbempt, (2010) developed a multidimensional framework for organizational arrangement in line with the incremental notion of servitization strategy that consists of in-house production, outsourcing and networking.

2.3.7 The Price Decision of Offering Service

The pricing strategy plays significant roles in accomplishing the organization's goals successfully (Kaplan & Norton, 2006). In a service industry, the price of the service is viewed as an important evaluation principle for customers to make purchasing decisions (Huber et al., 2001). According to Avlonitis & Indounas, (2005) both external and internal factors affect the pricing decision. The internal factors, which are considered to be under organizational control, are the cost of service and organizational marketing strategy. The external factors such as demand elasticity and competition intensity are difficult to govern, and out of the organization's control. Thus, in a service industry, pricing strategies are categorized into three broad classifications. First, the price decision is made based on the cost of service as the price of services is determined by adding a profit margin to the service's actual cost. Secondly, the price decision is made based on market competition, as the price of service depending on the market price and direct competitors prices. Finally, the price is made based on customer demand; here the service price is linked to the customers' perceptions of service, value and quality (Avlonitis & Indounas, 2005). Still, there are several objectives guiding the price. These include pricing to ensure market survival and improve sales, maximize organization's profits, set a barrier for competitors from entering the organization's domain and creating a particular product quality image in the eyes of customers (Bearden et al., 2004). Therefore, a multidimensional and comprehensive pricing approach that considers both the internal and the external factors is a more appropriate pricing tool (Indounas, 2009).

In term of servitization, the pricing decision is more significant and more complicated (Ulaga & Reinartz, 2011; Newnes et al., 2014). According to Rapaccini (2015), there are several factors influence servitization pricing strategies. For instance, business organizations have to develop new business models based on revenue and pricing schemes that produce a higher value from offering services, and at the same time reduce the risk when offering services (Kowalkowski & Kindström, 2013). Still, the uncertainty of services consumption complicates the services pricing decision (Nudurupati et al., 2013). A further challenge, that offering services are invariably labour intensive (Neely, 2008). In addition, because of the lack of services cost rates, the service price decision could not be reliant on the operating experiences (Lay, 2014). Thus, a dependable pricing policy geared to the nature of servitization is an imperative success factor (Artto et al., 2008), whereby different external and internal factors should be considered (Newnes et al., 2014).

Although, few studies address servitization pricing policies, there are different views of service pricing schemes (Rapaccini, 2015). For example, the decision to offer services free of charge to support the product sales and functionality (Lele, 1997) are perceived as a basic part of an organization's primary marketing offer (Morschett, 2006; Ulaga & Reinartz, 2011), and customers are not keen to pay more for this basic service (Loomba, 1998). The second view of the pricing decision is based on distinguishing between different types and purpose of offering service (Ulaga & Reinartz, 2011). For instance, in case of offering a basic service where services are perceived to be included when buying a product and considered fundamental to product functionality, customers are not enthusiastic to pay for this basic service, and hence should be offered free of charge. However, in cases of offering more costly advanced services, a comprehensive product-service packaged price is the best tool, as the price decision will encompass the cost of both product and service. In the case of offering professional services used to distinguish the firm products in the market place, and where such services are perceived as a replacement of customer risk and responsibility, customers are more likely to pay for receiving this type of service. Here, a value-based pricing scheme to determine the service price is an appropriate tool as this technique is dependent on the value perceived from a customer's standpoint (Ulaga & Reinartz, 2011). Gebauer et al., (2012a) argued that when offering advanced services looking at more financial rewards, the services should be offered separately from the product price. This detached price will not disturb the customer who is only interested in a product without any additional services. Besides, a separate service price has several effects on the organization, which will have the ability to re-utilize the available resources to serve customers who are keen to pay for this customized service. Separating service price from product price will decrease the product price and as such organizations will attract new customers who prefer

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low price products. Similarly, separating service price from product will attract new customers who prefer only service (Gebauer et al., 2012a).

In order to effectively price a product-service system, businesses have to evaluate the cost of the service offered, evaluate customer's ability to pay for the services, and evaluate the risk of offering services and how much of the service to offer (Kindström & Kowalkowski, 2014). Rapaccini, (2015) argues that different pricing policies are crucial for offering different approaches of servitization. However, different pricing capabilities are more crucial for effectively developing these more advanced pricing policies.

2.3.8 Section Summary

The above section has attempted to define the servitization strategic design process, by which businesses select the most appropriate courses of action of offering services to achieve organizational objectives. The central output of the section, that designs an effective servitization strategy is not an easy process. Servitization offers a wide variety of options and levels of service. The decision to offer these services is enforced by the external environment and driven by strategic, financial, marketing and innovation rationales. The servitization process should start by offering basic and simple service bounded around product functionality or customer activities. The extent of service infusion should be extended to reach the system solutions stage, whereas the scope of services should be limited and minimized. Still, customers are the most important element of services design and customer satisfaction is the imperative success factor in what services to offer. Lastly, hybrid facility arrangements and different pricing policies are crucial for offering different approaches of servitization.

2.4 Implementing Servitization Strategy

Strategy Implementation refers to the strategic management process of managing the execution of a strategic plan. The process involves the use of managerial and organizational tools to direct resources toward achieving strategic outcomes (David, 2013).

Offering different services is now dominating business (Raddats et al., 2015). Still, servitization is not any easy strategy to adopt (Benedettini et al., 2015a). Servitization consists of different dimensions (Oliva & Kallenberg, 2003; Tukker, 2004) and each of these dimensions has its own set of requirements and challenges (Baines et al., 2009a). These requirements are varied based on the organization's intended strategy to expand in to offering more services (Martinez et al., 2010). Where likely, organizations need to develop new and alternative organizational principles, structure, and design (Leoni, 2015 ; Wallin et

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al., 2015). For this, organizations have to carefully implement servitization and to understand the critical success factors of servitization (Tonelli et al., 2009; Ahmed et al., 2013b).

Businesses are making efforts to integrate services and product (Wallin et al., 2015). According to Krajewski et al., (2013), services produce intangible and perishable outputs that cannot be held in inventory. The process involves a high level of customer contact with a short response time and difficult quality measurements. Comprehensively, Baines et al., (2009b) demonstrate in detail the differences between the traditional operation process and the service operation process. These differences are presented in table (2-10) below.

Table 2-10: The Difference Between Manufacturing & Service operations, reproduced from the work of (Baines et al., 2009b)

Product Operation Process	Service Operation Process
The process is bounded around the transformation material into physical outputs	the service operation process is oriented towards customers and customer satisfaction
More machine intensity	More labour intensity
A product process design tends to prefer a little variety and more product standardization	A service process is designed based on high customer contact, customer interaction and requirements
The capacity is driven by the level of demand to gain higher level of capacity utilization.	The capacity designed to meet variant level of demand and low level of utilization is an acceptable into the process design.
The value chain is designed based on vertical integration to reduce cost, increase quality and ensure chain control.	The value chain is designed as a system to deliver different solutions to customers.
The control system is more complex and designed to be linked to market demand and internal operational processes to ensure more productivity, where cost, time and quality are the common criteria of performance measurement	The quality control system depends on customer performance and interaction and designed based on customer satisfaction criteria. The process concentrates on time of delivery and service performance.
The process tasks are usually designed to be more standard and routine to benefit unskilled workforce.	Customer involvement and customer contact require more skilled people with good customer interaction capabilities
Different quality control methods are oriented toward reducing production costs and increasing the resources utilization.	The planning and control system is linked to the customers and usually considered as unique project.
New product development tends to be more systematically process and delegated into different business functions	New service development process is linked to customer needs, and usually customers are involved in all the developing steps
the manufacturing process is designed based on less customer interaction and close supplier relationship	The service process design based on high customer interaction and being close to customers

Ahamed et al., (2012b; 2013a; 2013b; & 2013c) identify and demonstrate organizational strategic factors that affect the implementation of an effective servitization strategy. In summary servitization requires a service oriented approach and an active implementation plan. Whereby, organizational ability to create new business vision is significantly influencing the success of adopting servitization. Also, organization's abilities to change,

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reinforce leadership commitment and encourage a team working spirit are required to becoming more customer-centric. The organizational ability to develop different communications and coordination mechanisms, to create collaborative actions among the whole organization i.e. individuals, departments, and units is also necessary. The final requirement is effectively socializing the service culture and the necessity of a service element as a main source of developing organizational sustainable competitive advantage. These requirements are addressed in more detail below.

2.4.1 Servitization Strategy Requirements

The successful accomplishment of a servitization strategy depends on the organization's ability to develop an optimum structure, culture, management practice and conversion process that fits with the requirements of offering services (Martinez et al., 2010; Kindström & Kowalkowski, 2014). Servitization strategy requires a specific set of capabilities to develop, produce, and deliver services (Hanski et al., 2012; Raddats et al., 2014; 2015) and also, to support the organization's transformation process from product orientation to services orientation (Baines et al., 2009a).

2.4.1.1 Organizational Capabilities

Organizational capability refers to "the capability of an organization to perform a coordinated set of tasks utilizing organizational resources for the purpose of achieving a particular end result" (Helfat & Peteraf, 2003, p. 999). It refers to the rare synergy of individuals, groups, procedure, skills and knowledge combination. This synergy facilitates the creation of an organization's core competences that underpin its competitive advantage (Johnson et al., 2013). These capabilities are a key success factor for any strategic choice, where organizations have to align the strategic choice with its key capabilities (Schneier et al., 1991).

Strategic capabilities are a key success factor enabling the successful delivery of servitization (Raddats et al., 2014; 2015). Servitization strategy requires different capabilities to be successfully implemented and delivered (Gebauer et al., 2012a; Baines & Lightfoot, 2013b). Organizational capabilities are vital components of a servitization strategy (Paiola et al., 2013; Raddats et al., 2015). It is the main aspect that determines types and extent of offering successful services (Oliva & Kallenberg, 2003) These capabilities are also significant for producing services and facilitating the organizational transformation process (Baines & Lightfoot, 2013b; Gebauer et al., 2012a). Several exploratory studies investigated the required capabilities for adopting servitization strategy successfully (Raddats et al., 2015). Still, the capabilities to provide services are less understood (Neely et al., 2014). Table (2-11) below summarized these required capabilities for offering services.

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Table 2-11: Required Capabilities for Servitization

Capability	Description	Source
System Integration Capability	the process of bringing products and services together into one system and ensuring that they are functioning together as a system	Brady et al., 2005b; Davies et al., 2001;Lin et al., 2011; Salonen, 2011
Service Operational Capability	The capability of develop , produce and deliver services	Brady et al., 2005b; Davies et al., 2001; Visnjic & Looy, 2013b
Service Orientation Capability	The process of shifting from product transaction business to relationship based business	Oliva & Kallenberg, 2003; Brady et al., 2005b; Vargo & Lusch, 2008; Salonen, 2011
Innovation Capability	The application of developing new ideas and system to meet customer needs.	Salonen, 2011; Santamaría et al., 2012; Visnjic & Looy, 2013b; Wallin et al., 2015
Flexible Process & Dynamic Capability	The ability of the operational process to adapt to changes based on offering services	Vladimirova et al., 2011; Kowalkowski & Kindström,2013; Kindström et al. 2013; Zhang & Zhang, 2014
Customer Intimacy & Client Capability	The ability to monitor any client tensions, problems and movement	Miller et al., 2002; Raddats et al., 2014
Human Resource Capability	The people skills for high customer interaction and customer orientation	Lay, 2002, Santamaría et al., 2012; Visnjic & Looy, 2013b; Raddats et al., 2014
Organizational Change Capability	The ability of an organization to plan, design, and implement change efficiently	Oliva & Kallenberg, 2003; Gebaure, et al., 2010a Baines & Lightfoot, 2013a : Watanabe & Shimomura, 2013
Entrepreneurial Capability	The ability of an organization to modify their business model through acting with foresight, creative and innovation and being alert to the new business opportunities of offering services	Manzini & Vezzoli, 2003; Ettlie & Rosenthal, 2012; Raddats et al., 2015
Organizational learning Capability	The process through which an organization develops new knowledge or improves a current one in order to sustain or improve its performance	Brady & Davies, 2004; Brady et al., 2005b; Den Hertog et al., 2010; Ulaga & Reinartz, 2011
Risk Assessment Capability	The process through which an organization reduces uncertainty and clears ambiguity through identifying potential events and establishing optimal responses	Vladimirova et al., 2011; Paiola et al., 2013; Raddats et al., 2014
Marketing & Selling Capability	The organization ability to promote and selling the product and service system	Vladimirova et al., 2011; Ryals & Rackham, 2012; Nudurupati et al., 2013
Customer's anticipation	The process of understanding customers and develop more tailored and advance services	Davies et al., 2006; Den Hertog et al., 2010; Salonen, 2011 ; Ettlie & Rosenthal, 2012
Networking Capability	The process of developing strategic relationship with others in order to produce and deliver complex services systems	Oliva & Kallenberg, 2003; Gebaure, et al. 2010a & 2012a; Henneberg et al., 2013
Value Co-creation Capability	The process of focusing on customer needs, experience and interactive relationship by involving customers in the value creation process through more active customers involvement	Vargo & Lusch, 2008; Den Hertog et al., 2010; Zhang & Zhang, 2014

According to Miller et al., (2002 p.3) companies must be able "To produce a profitable surplus for a firm and its customers and solutions must deliver outcomes valued by clients based on unique supplier capabilities." Raddats et al., (2014), identified eight broad capabilities necessary for adopting a servitization strategy. These capabilities include personnel capability; effective operation capability; change capability; networking capability; innovation capability; customer management capability; service orientation capability; and service development capability. Conceptually, four capabilities are the common capabilities needed for adopting a servitization strategy successfully. These capabilities are system integration; innovation; services operations and; organizational change and transformation (Oliva & Kallenberg, 2003; Brady et al., 2005a; 2005b; Gebauer et al., 2012a; Baines & Lightfoot, 2013b; Galera-Zarco et al., 2014).

Other scholars indicate that organizations have the ability to innovate service with minor level of capabilities, where only the entrepreneurial capability is needed for adopting the servitization strategy (Manzini & Vezzoli, 2003; Ettlie & Rosenthal, 2012). Likewise, Wallin et al., (2015) argue that the innovation capability is the greatest capability for successfully servitizing. Conversely, Lay, (2002) and Santamaría et al., (2012) claimed that the dissimilarity between product process and service process has almost vanished, and that only personal skills related to human resources and customer interaction is of major importance when offering greater service.

Kindström et al., (2013), argue that dynamic capabilities are the significant capabilities to enabling service innovation. Gebauer et al., (2012a) emphasises the systematic incremental steps in moving toward offering advanced services and solution systems for developing and gaining different types of capabilities. Different stages of servitization are linked to different functions of organizational dynamic capabilities. According to this model, the servitization process is divided into three main stages: the initial stage; the planning stage; and the implementation stage. Likewise, the dynamic capability was broken up into three functions: sensing, sizing and reconfiguration. Each function is responsible to develop a particular set of capabilities needed in each stage of servitization. Baines & Lightfoot, (2013b), developed a framework of two broad sets of capabilities. The first set is needed to respond effectively to the sequences of adopting a service strategy, while the second set is needed to continuously operate and improve the services strategy.

Empirically, Raddats et al., (2015) found that the ability of executive managers to lead the effective organizational transformation form product-orientation to service-orientation and the ability of sustainable service operations are the most important capabilities enabling

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servitization. Paiola et al., (2013) divided the services provision process into several activities and linked each of these activities to a specific capability. These required capabilities could be developed either through an internal development process or an external process or by a combination of both approaches. Another empirical research by Ulaga & Reinartz, (2011) found that knowledge gaining capability is the most important one for successfully implementing servitization strategy. This capability will facilitate the development of other important capabilities such as risk management, system integration, marketing and selling, and innovation capabilities. Leoni, (2015) argued that there are different connections between an organizational knowledge management system and the adoption of a servitization strategy. In fact, an organizational learning capability is considered a vital element of servitization strategy, where the needed capabilities are developed over time, and by the incremental process of servitization (Brady et al., 2005b; den Hertog et al., 2010). Thus, exploratory learning capability to gain new knowledge and exploitative learning capability for developing an existing one are very important for a combined product and service system (Brady & Davies, 2004).

2.4.1.2 Organizational Structure

Organization structure is defined as the interactions of the set of roles, principles, power and responsibilities within the organization to regulate the groups and individual's activities and attitude, toward effective accomplishment of organizational goals. This organization structure manages group and individual interaction with each other internally and with outside organizations, and how the organization itself inspires them to accomplish organizational goals and objectives (Jones, 2013). According to Johnson et al., (2013), the design of an organizational structure has to be altered to reflect the selected strategy.

An appropriate organization structure is considered a strategic critical success factor that improves organizational performance (Davies et al., 2006). According to Turunen & Neely, (2012) a traditional manufacturing structure differs from a service structure; while the manufacturing structure tends to be more mechanistic and rigid, and the service structure tends to be more organic and flexible (Turunen & Neely, 2012). Table (2-12) summarises the characteristics of product and services organisational structure.

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Table 2-12: The characteristics of product versus service organizations (Turunen & Neely, 2012)

Manufacture Organizational Structure	Service Organizational Structure
Mechanistic design	Organic design
Bound around production effectiveness and efficiency	Bound around customer and customer satisfaction
Task Specialization	Realistic nature of individual tasks
Departmentalization Design	Interaction Design
High task certainty	High task uncertainty
Formalization focused design based on Hierarchical structure	A network structure of control, authority, and communication
Centralization of decision making	Decentralization and fast decision making
Narrow spans of control	Wide spans of control
Lower authority delegation	High authority delegation and problem solving

The traditional manufacturing organizational structure doesn't support servitization strategy (Turunen & Neely, 2012). This traditional structure is subject to fundamental changes following the implementation of a services expansion strategy (Oliva & Kallenberg, 2003; Gebauer & Kowalkowski, 2012). Service features play significant roles in determining the nature of the required organization design (Martinez et al., 2010). According to Buzacott, (2000), fitting with customers' needs is the key point in designing the organizational structure based on a servitization strategy. Bieberstein et al., (2005) described the impact of service provision into the organizational structure. This is where the optimal organizational structure should empower the workforce, and create common corporate practices and routines to fit with a high task uncertainty. The structure should promote the ability for rapidly adapting to changes in business environment. Similarly, the rapid changes in customers' needs and in competitor's offers require a flexible decision making process and more delegation of authority. Therefore, the structure in a service organization tends to be of a more organic design rather than a mechanistic one.

Offering services involves close customer relationships with high customer interaction and high customer involvement; this involvement requires more flexibility with fast decision-making and a problem-solving approach (Neu & Brown, 2005). Moreover, offering services increases the level of uncertainty, task interdependence, and organizational complexity (Turunen & Neely, 2012). The organizational structure therefor, should promote fast responses to customer needs; support working closer with customers; develop high level of customer centricity and; aid long relationships (Gebauer & Kowalkowski, 2012). The structure has to facilitate an effective integration that is needed to equip the organization to become a complete solution provider (Kujala et al., 2011). Also, the required organizational structure has to provide a balance between exploitation and exploration in the decision-making process and customer problem solving approaches. This should be based on both

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innovative thinking and experience awareness (Galbraith, 2002). The servitization structure should balance the attributes of both organic and mechanistic structures (Vickery et al., 1999). Finally, this structure has to facilitate communication and coordination and balance the focus on innovation and productivity (Kujala et al., 2013).

Mont, (2002) suggests a modified functional structure when offering services. This functional structure's design is based on departmentalization and formalization where specific departments deal with specific tasks. The structure mainly consists of three main departments supporting services. The marketing department should focus on the business market and also maintain a close customer relationship. The information technology department that focuses on information management and seeks appropriate customer feedback. Also, a function responsible for managing the network chain and knowledge-sharing with different parties within the industry is needed. Still, the decentralization of the decision-making process is vital to empower employees accompanied by an inter-organisational control system to effectively develop the product service package. Salonen, (2011) linked the organization structure to its operations process, firms with lines and continuous operational processes, where products are manufactured by a number of interconnected operations need a mechanistic structure to provide more control. Firms using job process and batch process where products are tailored to customer choice need an organic structure to provide more flexibility. For offering both product and service, the project-based structure is more suited to providing the organization with the required level of flexibility to move between offering services and products.

Turunen & Neely, (2012), argue that the fixed organization structure design whether it based on mechanistic or organic design is not appropriate for a servitization strategy, which requires a more multi-flexible structure. The required structure should be developed based on the incremental movement of servitization. In the first stage of servitization, organizations need to change from a mechanistic structure to an organic one to stimulate innovation and to develop solutions integration. In the second stage of servitization, where business is growing, organization needs to move back to a more solid structure based on a mechanistic design, which provides greater process standardization and control system . In the final stage, a hybrid structure, which combines and balances elements from the organic and the mechanistic structure, is more suited to offering a fuller system.

2.4.1.3 Organizational Culture

Organizational culture is defined as the organization's methods to understand the surrounding environment and the way of accomplishing different tasks and objectives based

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on fixed norms and beliefs (Schein, 2010). According to Jones, (2013), an organizational culture plays significant roles in creating organizational identity and competitive advantage. This culture is the outcome of shared values and standards that manage groups and individual relationships and activities. It is the control system over the organization's performance and decision-making process.

Organizational culture is a significant component of a servitization strategy (Kinnunen & Turunen, 2012; Nuutinen & Lappalainen, 2012). Traditionally, the manufacturing culture is bound around the product. It focuses on productivity, quality, efficiency, economies of scale and scope, and directs employees toward production output (Kinnunen & Turunen, 2012). However, the organizational culture of a service firm is bound around customers and focuses on customer values, preferences, and behaviour (Webster & White, 2010).

Servitization emphasises customer orientation culture (Nuutinen & Lappalainen, 2012). A customer orientation approach is an imperative feature for the success of all organizations (Korunka et al., 2007; Stanley, 2007). Customer orientation culture is defined as the set of activities that relate all organizational actions to their customers to maximize customer values (McGee & Spiro, 1988). Repositioning toward customer orientation requires businesses to enforce the importance of customers crossed with their individual behaviour. Also, to enforce the view of customers as the organization's main value and most important partner (Appiah-Adu & Singh, 1998). Customer orientation emphasises the market driven strategy, by which organizations tend to focus on internal competencies that foster greater responsiveness to their customers and their target market (West et al., 2015). Overall, organizational culture has to be developed around the marketing concept and direct the workforce to understand and consider the significant role of the customers as the main source of success. Businesses are responsible for identifying, anticipating and satisfying customer requirements (Lukas et al., 2013). Interpersonal skills, which refer to the set of skills and abilities enabling employees to interact effectively, properly and positively with customers are necessary for a successful servitization strategy. In addition, employee empowerment, which refers to engaging employees in the thinking processes of an organization in ways that matter and giving them ownership of their jobs is also necessary (Goetsch & Davis, 2014). Employees have to be empowered to successfully deal with the challenges of offering services (Gotsch et al., 2014). Employees have to be directed to understand the importance of addressing the marketing approach through the whole firm's behaviour, which could include the mode of performance that meets customer expectations and customer interactions (Webster, 1995; Nuutinen & Lappalainen, 2012; Kinnunen & Turunen, 2012).

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Services characteristics significantly reshape organizational culture, and servitization strategy requires significant changes of organizational practices and attitudes toward services as the main source of competitive advantage (Baines et al., 2010). This means more customer focus rather than product focus (Dubruc et al., 2014). According to Neely et al., (2011a) organizations need to shift from product orientation to customer orientation; from offering pure products to offering solutions; from focusing on tangible results to focusing on the whole outcome; from product transaction to customer relationships; from being supplier-oriented to being partner- oriented; and finally from being a closed organization to being open that recognises both its effect upon and how it is affected by its surrounding environment.

The service culture in manufacturers must motivate entrepreneurial thinking, inspire problem-solving approach, and encourage innovations capabilities (Kinnunen & Turunen, 2012). This culture has to be expressed into different organizational functions and processes (Brax, 2005; Gebauer et al., 2010b). According to Nuutinen & Lappalainen, (2012), to ensure success in service provision, organizations need to consider the service as the main element of the business model and value proposition and this robust orientation toward the importance of services as the core outcome should be developed before the implementation process. Therefore, a high level of socialization of corporate strategy and service values are vital for effectively managing the transaction toward service provision (Kowalkowski et al., 2011a). Still, the embedded product oriented culture is the main challenge of servitization strategy (Nuutinen & Lappalainen, 2012), as perceiving service as a mere secondary element inhibits the development of a customer oriented culture (Brax, 2005). Developing a customer orientation culture requires the business to enforce the importance of customers across the whole employee spectrum (Kinnunen & Turunen, 2012). The overall organizational culture has to be developed around the marketing concept. The culture has to direct the organizational activities toward the market as the main source of organizational success (Brax, 2005). Workforces have also to be directed to understand the importance of addressing the marketing approach through the whole firm's behaviour, which could include the mode of performance required to meet customer expectations and customer interactions (Nuutinen & Lappalainen, 2012).

According to Brax, (2005), adopting servitization requires support from the whole organization, for which a radical change of culture is biased toward the service element and customer needs. Customer orientation requires a linking of all organizational activities to maximize customer values (Nuutinen & Lappalainen, 2012). Integrating product and

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services into one process allows organizational functions to participate in offering service, and facilitating the shift toward customer orientation (Neu & Brown, 2005; Gebauer & Kowalkowski, 2012). Also, this integration facilitates resource-sharing, investment, experiences and customer knowledge, which enhances organizational learning and development (Ohvanainen & Hakala, 2014).

However, changing organizational culture is challenging process (Gebauer et al., 2010b). Organizational change causes internal resistance and a clash between production and services. Developing a separate services unit decreases this clash between product operation and services operation and mitigates the negative influences of service provision over the product operation (Oliva & Kallenberg, 2003; Gebauer et al., 2006; Brown et al., 2009; Nordin & Kowalkowski, 2010). Customer orientation and a service culture should be integrated into different strategic levels (Gebauer et al., 2010b). Kinnunen & Turunen, (2012) argue that separating production and service within two processes in different business units is beneficial for the adoption of service culture more than integrating the production process of product and service within one unit. This vision of separated process is explained by arguing that a service culture might negatively affect the product orientation and causes organizational resistant of service expansion. Thus, organizations, to successfully develop a service orientation culture could assign the service process to a separate function, as well as separating the service norms and principles in several interconnected levels such as, service behaviour, service value and service norms, and senior manager commitment.

Nevertheless, developing a separate business unit requires a huge investment, decreases collaboration and coordination and businesses have to focus in both units. It could become stuck in the middle without a clear strategic path (Raddats & Burton, 2011). Also, offering services from a separate business unit will keep traditional thoughts of manufacturing and so contradict with the new trend of customer orientation (Ohvanainen & Hakala, 2014). Kowalkowski et al., (2011a) argue that a balance between service orientation and product orientation into one organizational design and within different strategic levels is more preferable. Service orientation cultures create more sustainable competitive advantages and lead to better customer satisfaction by stimulating and developing organizations' innovation capabilities (Baines et al., 2009a). Product orientation creates competitive advantage by focusing on productivity and product shape, style, design, attributes, performance and quality (Visnjic & Looy, 2013a). Gebauer & Kowalkowski, (2012) suggested that by increasing customers and services orientation gradually into the organizational culture reduces the clash and resistance to change.

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2.4.1.4 The Operational Process for Providing Services

The operational process refers to the collection of activities and tasks designed systematically and directed to produce services or products (Krajewski et al., 2013). The operational process has its own set of objectives; involves a systematic workflow that goes across departmental boundaries and requires resources from several divisions (Slack et al., 2013). The operational activities are usually designed to achieve the required competitive priorities, where organizational strategic choices should be aligned with operational processes and core competencies (Krajewski, et al., 2013). Usually, the product operation process differs from the service operation process (Baines et al., 2009b). The popular manufacturing operational designs are project operations process, job process design, batch process design, mass process, and continuous process, whereas the popular operational services processes are professional service, service shop service and mass services (Slack et al., 2013). The outputs of manufacturing systems are tangible goods or investment assets such as machines (Baines et al., 2009c). This traditional manufacturing process is frequently centred on cost, time and quality factors (Lightfoot et al., 2011). The service operational process is usually centred on customers (Krajewski et al., 2013). The services process is labour intensive, highly divergent, with high customer contact and involvement; whereas the manufacturing operational process tends to be machine intensive, highly standardised, less divergent and with low customer contact (Brown et al., 2013).

The project-based business is a type of manufacturing processes. "A project is an interrelated set of activities with a definite starting and ending point, which results in a unique outcome for a specific allocation of resources" (Krajewski et al., 2013, p 70). This means, that each project is specific and every project is customized. Many different skills have to be coordinated. Each project is unique with defined objectives, resources, start and finish time, quality and cost. Finally, there is a high interdependency between project activities (Slack et al., 2013). The three main objectives of any project are completing the project on time, within the specified budget and quality. Consequently, a project can be complex and challenging to manage (Krajewski et al., 2013).

According to Bamford & Forrester, (2010 p. 26), a business process "is frequently a process of adopting appropriate systems for particular circumstances and of balancing the productivity/flexibility dilemma." Matching production scale and scope, the degree of standardization and customer contact are the main characteristics used to determine the design of an operational process (Krajewski et al., 2013). However, the new notion of operations management is operating close on customer as possible and focusing on both flexible and effective operations (Forrester, 2015). Usually, operations management seeks

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for stability and standardization, whereas marketing requires more flexibility and adoption. Therefore, an affective operational process design should balance the productivity and flexibility to fit with a particular circumstance (Bamford & Forrester, 2010).

The product-service system requires different arrangements that affect the whole operations process (Martinez et al., 2010 and Baines & Lightfoot, 2011). Service characteristics modify the operational process (Voss & Hsuan, 2009). The vital aspects of service such as availability, reliability, simultaneously and customer dependency require more flexible operations process to respond more quickly to customers (Baines et al., 2009b and Baines & Lightfoot, 2011). Services are heterogeneous and high numbers of employees are required to produce services. Also, providing services connect people with systems, increases customer involvement and increases the number of customer touch points, which require an effective alignment of the service and product operational process (Martinez et al., 2010). Therefore, designing an applicable, robust, and distinctive service operations system is challenging (Voss & Hsuan, 2009).

According to Smith et al., (2014) it is complex to design a combined product and services process. Ohvanainen & Hakala, (2014) argue that understanding customers' needs are the main matrices to use in guiding the design of the product and service operational process. Without deeper understanding of customers, service provision will be based on presumption and speculation. Quinn et al., (2013) argued that the operations process should be designed around service element as it is considered the source of marketing success. However, Baines et al., (2009c) argue that the outputs of a product-service system are the value of both tangible assets and intangible services. Accordingly, Baines et al., (2011) suggested a decentralization facility design, by which service and product operational processes are separated. Collier & Meyer, (1998) argue that the process could be designed based on the expected outcomes of product and service integration, and the degree of integration, where either the product is the most dominant or service is the most dominant in an operational system. Smith et al., (2014) linked the operations process design to the value transition based on servitization , she argue that it is complex to shift from product to service immediately, and the transition should be linked gradually to the shift in the value proposition from pure product to solution outcome.

In servitization literature, a taxonomy has been developed by Davies et al., (2006), who suggest a multi- function design consisting of three functions. The front office is a function that is responsible for addressing customer needs, contacting with customers, informing customers of the organization's new vision, building strong customer relationships and

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developing the customer value proposition. The second function is the back office, which is responsible for developing and providing the required capabilities to support the front office. These capabilities facilitate the response to inconstant demand and the developing of different product-service system designs and combinations. Finally, the strategic centre is the function responsible for coordinating between the front office and the back office. This unit is responsible for enabling prompt knowledge sharing and balancing the pull of customization and the push of standardization between the two units.

According to Collier & Meyer, (1998), the front office process, which design service provision based on developing a function that is responsible for addressing customer needs and contacting with customers, could be structured along three lines. The first line provides a standard service related to organizational available capabilities and under organizational control. The co-routed service line provides a standard customized service that is a co-created service, where customer and organization jointly work together to produce such a service. Finally, the customer routed service line that provides numerous customization services, from which customers have the freedom to choose. Buzacott, (2000) recommended that two task channels should be added to the front office design based on the types of customer demand. The first channel is responsible for fulfilling predetermined customer needs, benefiting from the job design process, as one employee accomplishes all the required jobs or several employees performing different jobs in a comprehensive manner. In the second channel, where the customer needs are not exactly recognized, a process design that consists of multiple works with different tasks. The starting point will act as a check to evaluate and assign different tasks to different workers based on the type of job required by customers.

Empirically, the characteristics of the product-services operational process based on a front office and back office design have been studied recently by Baines & Lightfoot, (2013a). They argue that the process should ensure the customer easy access to the touch points. The process should integrate the internal and external supply chains to increase process flexibility and efficiency. The process should be run by flexible employees with strong personal skills and service in mind. The process should be supported by information and communication technologies. Finally, the system should be monitored based on integrated metrics that reflect the integrated outcomes of product and services. Furthermore, an effective customization lies behind building modular design acting as a standard platform to develop and deliver more customized outputs (Forrester, 2015). Voss & Hsuan, (2009) develop a model to design a standardized service based on a menu-driven approach, which

allows customers to select a service/services that fit their needs from a set of existing services or products.

2.4.1.5 The Quality Control System of Product-Service System

Businesses have to satisfy customers through exceptional performance (Krajewski et al., 2013). A quality management is compulsory (Brown et al., 2013). The quality system is the process of transforming customer needs into a successful market offering, whereby, operations focuses on elements that enhance organizational competitive advantage (Bamford & Forrester, 2010). Developing a quality control system that is able to evaluate the outcome of both product and services system is a crucial parameter to ensure superior performance (Meier et al., 2013; Mert et al., 2014).

Generally, the quality control system refers to the ability and the extent to which a product successfully serves customers' needs (Beverly et al., 2002). The criteria of a product quality control system differ from the criteria of a services quality system (Baines et al., 2009b). According to Garvin, (1987), the product quality assessment system uses several dimensions such as expected performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality. Parasuraman et al., (1988) argue that service quality is measured based on different dimensions, such as reliability, tangibility, assurance, responsiveness, and empathy. Baines et al., (2009b) added that the product control system is used to ensure the efficiency of the production process, whereas the services control system is used to ensure customer satisfaction. A more comprehensive quality control system is needed for adopting servitization, which integrates both product and service into a system (Meier et al., 2013; Mert et al., 2014).

Meier et al., (2013) argued that the control system of product and services involves several interconnected levels; the lifecycle level, the operational level, the process level and the effect level. Each level is used to ensure the delivery of high customer value based on different dimensions. The lifecycle level focuses on the whole process from designing an effective product-services system, through the operational process to deliver an effective system. The operational level focuses on the quality of system execution. The control system at the process level focuses on the sequence of the different processes to assure process quality and flexibility, whereas the effect level controls the quality of the outcome. Mert et al., (2014) develop a customer-oriented quality control system to assess the quality of product-service system. The quality system considers the quality over the whole life cycle of the product and service system by identifying the customer needs and transferring those needs into quality criteria.

2.4.2 The Challenges of Adopting a Servitization Strategy

Generally, any strategic decision involves pressures that influence that strategic decision and thus have an effect on the prospect for future success (Johnson et al., 2013). One way of understanding the phenomenon of a servitization strategy is to explore the issues considered challenging which could cause a strategic failure (Martinez et al., 2010). Servitization is described as a transformation journey (Oliva & Kallenberg, 2003). Still, this journey raises a set of challenges facing organizations (Benedettini, & Neely, 2010; Visnjic & Looy, 2013b).

The strategic decision of servitization is complex and often accompanied with derailing challenges (Slack, 2005; Gebauer et al., 2005; Baines et al., 2009a; Martinez et al., 2010; Visnjic & Looy, 2013b; Baines & Lightfoot, 2013b). Benedettini & Neely, (2010) argue that not all organizations reach the expected goals of offering services. According to Ohvanainen & Hakala, (2014), the traditional organizational design is not suitable for offering services without modification. Organizations likely need to change their strategies, operations system, value chains, technologies, workforce attitudes, and organizational capabilities (Martinez et al., 2010). These difficulties associated with the process of operating a servitization strategy emerge mainly from the combination of two divergent processes, namely, the product operational process and the service operational process (Baines et al., 2009a). Unlike the product process, the service process is vague, wide, complicated, and hard to standardise (Slack, 2005). Adopting servitization requires transforming employee skills and altering the way they are organized (Baines & Lightfoot, 2013b). Perceiving service as a secondary element leads to strategic failure because of lack of management support and motivation (Gebauer et al., 2005). Martinez et al., (2010), found that the main challenges of servitization are overcoming the embedded product culture, the delivery of an integrated system, the operational aspects of services, the required strategic alignment and supplier relationships. Baines et al., (2009a) classified servitization challenges into three broad categories: organizational change, organizational services strategy and service design.

Organization changes are common with any new strategy implementation. The changes could affect organizational scope, organizational design, and the resources allocation process (Hofer & Schendel, 1978). Major change is the main challenge of a servitization strategy as organizations have to create a service oriented culture that supports a customer focussed approach as well as managing organizational resistance to changes (Gebauer & Friedli, 2005; Gebauer & Fleisch, 2007; Neely et al., 2011a; Nuutinen & Lappalainen, 2012; Ohvanainen & Hakala, 2014).

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Servitization strategy requires competencies for offering services with close customer relationships (Ohvanainen & Hakala, 2014). To offer a successful service, businesses have to shift from product orientation to system solution; from mere production to delivering an outcome; from product transaction to customer relation; from supplier relationships to partners and collaborators and from a close system to an open and living system (Neely et al., 2011a). However, organizations taking for granted culture, corporate management behaviour and practices are the main challenge to into a service arena (Gebauer & Fleisch, 2007). The embedded norms, and beliefs, toward the product and the production process are highly rigid and influence the whole organization. This impact upon the ability of organizations to recognize the high level of change required (Nuutinen & Lappalainen, 2012).

The services design challenge is explained by the difficulty of developing an effective service system based on organizational expertise, operational capabilities, and customer needs (Pang, 2009). Designing an appropriate service is one of the main challenges of the servitization strategy (Neely et al., 2011b; Biege et al., 2012; Vasantha et al., 2012; Ohvanainen & Hakala, 2014). The complicated process of designing an effective product-service system is attributed to several factors. The impeded thoughts and believes viewing service elements as a secondary element (Biege et al., 2012). Product design and service design are different, and different skills are needed to perform both of them (Hara et al., 2009). The insufficient experience needed for developing an effective product service system (Ohvanainen & Hakala, 2014). The process of developing service is considered to be customer driven and occurs in chronological steps rather than by systematic, planned, and controlled methods (Biege et al., 2012). In addition, in a product design process, firms' emphasis is on the tangible characteristics of the product, and how these characteristic functions with each other and with other tangible objectives; where the process of integrating the intangible characteristics of services is not reflected in the initial design stage of the product (Maussang et al., 2009). Moreover, customer presence is another challenge that manufacturing is not used to, as customers are now participating in designing the process (Neely et al., 2011b).

The service strategy challenge could be understood as the servitization is consisting of different dimensions (Oliva & Kallenberg, 2003). Each dimension has its own set of requirements and challenges that vary based on the organization's decision to the degree to which they wish to expand services (Martinez et al., 2010). Different dimensions from producing services will stretch the organization's domain and increase its responsibility and

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risks at different levels and with different requirements (Windahl et al., 2004). However, the fruitful outcomes of servitization are delivered based on a full scope of servitization (Visnjic & Van Looy, 2013a). Moreover, providing life-cycle services is critical to gain full customer satisfaction, whereas, providing a wide scope of services could pose major risks and discourage the integrated packages provision (Kujala et al., 2011). Also, networking is another challenge and is developed based on the level of service strategy. Both formal and informal strategic alliances are required to offer advanced solutions and integrated service systems. Whereby, organizations need to develop the required capabilities to manage this networking (Gebauer et al., 2012a).

2.4.3 Managing Servitization Challenges

Despite the several benefits of servitization, many organizations failed to confront the challenges when adopting a servitization strategy (Ohvanainen & Hakala, 2014). Extending into a service business is challenging (Dubruc et al., 2014). Developing a service-oriented organization requires integration of organizational strategic choice and tasks necessary for the provision of services into an efficient and harmonious system (Bowen et al., 1991). In 2008, the advanced institute of management research conducted a workshop based on the UK, looking at enhancing the competitiveness of the UK economy based on servitization. 39 scholars from different disciplines participated in this workshop. Scholars demonstrated that the movement toward servitization required a comprehensive organizational transformation shifting from product- orientation to customer-orientation by offering services (Martinez et al., 2008).

"In the change management literature there is considerable disagreement regarding the most appropriate approach to changing organisations" (Bamford & Forrester, 2003, p. 547). Gagliardi, (1986) identifies three main approaches to organizational transformation and these are evolutionary, revolutionary, and apparent change. The evolutionary change is changing a process by small and incremental steps that change the deep organizational norms and values. This approach is the optimal way to gradually develop new values and assumptions. The revolutionary approach is a fundamental change based on sudden and large steps. This approach works better when the new strategy is contrary to the old one. In effect, the new strategy requires a complete change from old values, norms, and assumptions and there is a need to rapidly develop completely new ones. Finally, the use of apparent change is more of a surface change and does not reach deep values. This approach is better when there is no need for fundamental change of organizational values, norms and assumptions and where old and new values are complementary.

According to Martinez et al., (2010), businesses are changing based on servitization by different approaches. These include deliberating change, evolving change, responding change, and an unsystematic changing approach. Gebauer et al., (2008b) argue that service expansion just happened and it's difficult to be systemized. Kinnunen & Turunen, (2012) argued that the incremental development of a service culture and customer centric approach based on steady and cautious change is preferable for lower resistance to change and lower chance of strategic failure. This incremental development of service provision is useful to meet the requirements of developing new procedures, service culture, flexible structure, organizational capabilities, and a new business process model (Oliva & Kallenberg, 2003). However, Brax, (2005) and Nuutinen & Lappalainen, (2012) argue that a revolutionary change approach with fundamental shift based on sudden and large steps is better to implement a servitization strategy successfully by a comprehensive and radical change of organization culture. According to Tukker & Tischner, (2006), this radical system change is a form of creative destruction required for adopting servitization successfully. Nevertheless, Kowalkowski et al., (2012) affirmed that a servitization strategy requires large transformation steps. Still, these steps should be incremental., They suggested the agile incremental transformation, whereby organizations are transformed into service oriented and customer-centric entities via a systematic and logical incremental change, and with more flexibility and responsiveness change based on emergent design consideration.

Dubruc et al., (2014) affirmed that, the adoption of a servitization strategy needs deep modifications to an organizational system. This modification toward a service culture needs a long time-period to be integrated into the whole organization. Thus, in order to facilitate servitization, the change process should start from executive managers at corporate level and then be gently diffused into the other organizational levels gradually. This should be achieved based on a learning process to deal with operations and strategic issues. Gebauer et al., (2010b) argue that there is a strong reciprocal relationship between organizational structure and organization culture. The services orientation could be divided into different strategic levels based on interconnected dimensions. This division will support the organization's activities to create a balance between values and norms related to product and service and reduce the impact of cultural change. It will also balance the focus in product innovation and service innovation, which is very important for the success of product-service system.

2.4.4 Section Summary

The previous section describes the required activities to manage the execution of a servitization strategy. The section emphasises the point that the traditional product

organizational design is not suitable for adopting servitization. Servitization requires an organization structure that supports the provision of services; an organization culture that fits with servitization, and organizational capabilities to support services provision. The whole operations should provide a consistent process to support service provision. Organizational change is the main challenge of servitization. Literature addressed the two main approaches to changes. These are gradual change and radical change. Each approach has its pros and cons. The next section presents the strategic evaluation process of a servitization strategy.

2.5 Servitization Strategy Evaluation

The strategic evaluation process is vital for businesses to offer guidance when enhancing the strategic decision process. It also acts as a control system over the organization's performance (David, 2013). It is a vital process to the wellbeing of an organization (Johnson et al., 2013). Incorrect strategic decisions could yield undesirable outcomes and impact on the organization negatively, whereby strategic evaluation alerts manages to actual and potential problems of a strategic choice (David, 2013). Several criteria have been developed to evaluate organizational strategic choices (Johnson et al., 2013). Simply, the strategy evaluation process is an appraisal of how well the strategy was formulated and implemented and how well the organization has performed (David, 2013). The process is concerned with how this selected strategy develops and maintains competitive advantage; how this proposed strategy will exploit synergies among different organizational aspects; and what are the outcomes of the selected strategies and the relative value of these outcomes to the organization's goals and objectives (Johnson et al., 2013). According to Min et al., (2015) with the controversy surrounding servitization in the literature, there is a crucial need to measure the outcome of a servitization strategy.

2.5.1 The Outcome of a Servitization Strategy

Service expansion is pervading the economy (Barrett et al., 2015). Services accounted for 77% of gross domestic product in the USA and UK, while other products represent only 22% (Ryals & Rackham, 2012). A growing number of scholars argue that businesses are becoming compulsorily more service driven (Ulaga & Loveland, 2014). They emphasize on the integration of services and products, which create a new competitive advantage (Baines et al., 2009a; Neely et al., 2011a; Gebauer et al., 2011). Today, 55.14% of manufacturing firms in the United States are offering services integrated to their products (Min et al., 2015).

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Offering service integrated to a product significantly increases sales and enhances the bottom line (Ryals & Rackham, 2012). Services and products together are generating more revenue than when offering product alone (Neely et al., 2008). In some cases, more than 30% come from contributions of service sales (Fang et al., 2008). Other studies reported that service revenues touched 40% (Visnjic & Looy, 2013a), and 65% (Ryals & Rackham, 2012) of an organization's total revenue. According to Bascavusoglu-Moreau & Tether, (2010) the revenues from service provision are 25% of total revenue and the financial earning from service provision is adding 10% to net profit. In addition to the financial expectation, earlier literature recognized several outcomes that resulted from offering services integrated to the product. These include improving organizational competitiveness, maintaining close customer relationships, and creating new revenue streams (Baines et al., 2009a). Mathieu, (2001a) classified these benefits within three broad categories: the financial benefits, the strategic benefits and the marketing benefits (Mathieu, 2001a); Lay, (2014) added the innovation benefits; whereas Mont, (2002) & Van Halen et al., (2005) focused on the environmental benefits. These benefits are summarized in table (2-13) below.

Table 2-13: Benefits of Servtizaiton

Category	Expected benefits	Source
Financial Benefits	Offering service develops new revenue stream, increase organizational sales , reduces operational cost and improves net profit margin	Wise & Baumgartner, 1999; Mathieu, 2001a; Oliva, & Kallenberg, 2003; Gebauer, et al. 2005; Gebauer, 2007; Gebauer, 2008; Artto, et al. 2008; Fang et al., 2008; Baines et al. 2009a and Ping & Jia, 2010
Strategic Benefits	Offering services sustains organizational competitive, sets entry barriers to competitors, exit barrier to customers, enhances organizational responsive and adaption, and creates new market opportunity	Mathieu, 2001a; Gebauer, 2007; Gebauer, 2008; Gebaure, et al. 2008a Artto, et al. 2008; Matthyssens, & Vandenbempt, 2008; Baines et al. 2009a; Pawar, et. al. 2009 ; Ang, et al. 2010; Neely, et al. 2011a, and Gebauer, et al. 2011
Marketing Benefits	Offering services maintains customers, enhances customer satisfactions, increases market credibility, increases customer confidence and improve customer understanding	Thoben, et al 2001; Mathieu, 2001a; Gebauer, et al. 2006; Evanschitzky et al. 2006; Gebauer, 2007; Gebauer, 2008; Artto, et al. 2008; Baines et al. 2009a; Baines et al. 2010; and Nordin, & Kowalkowski, 2010;
Innovation Benefits	Develops information sources	Baines et al. 2009a; Brax, & Jonsson, 2009; Turunen, & Neely, 2012; Gebauer, et al. 2012a and Lay, 2014
Environmental Benefits	Promotes Eco-efficiency approach	Mont, 2002 & Van Halen et al. 2005; Baines et al. 2007 and Baines et al. 2009a

The Financial benefits of servitization could be defined as the monetary value transferred downstream in the value chain as the product operation process generates low profit (Wise & Baumgartner, 1999). Today, services are more profitable than stand-alone products and

customers are looking for more services (Oliva & Kallenberg, 2003). Providing services enables the selling of more products, as well as offering a service creates a new steady revenue stream with better margins (Gebauer et al., 2005). The ability of a servitization strategy to increase the demand on services is attributed to the extension of the product life cycle based on services. There is also the fact that services tend to have lower sensitivity to economic cycles, which justifies the greater profit margin and the relative stability of income from services (Baines et al., 2009a). Furthermore, a servitization strategy enhances efficiency and effectiveness of use of materials and reduces operating costs (Ping & Jia, 2010).

The strategic benefits of servitization include achieving an improved competitive strategy (Gebaure et al., 2008a). The competitive advantage of products vanishes among the large numbers of common attributes and traits of products within the marketplace (Matthyssens & Vandenbempt, 2008). Also, the vast decline in product profit margins affects the market position of low-value goods (Pawar et. al., 2009). The characteristics of service create more maintainable competitive advantage due to the difficulty in imitating services (Oliva & Kallenberg, 2003). Besides, offering the best-packaged solution develops intimate customer relationships, enhances product differentiation characteristics and creates new competitive advantages (Ang et al., 2010). Furthermore, organizations that offer product and service do not have to compete using a low prices strategy anymore, as developing complex integrated solutions and creating more value shifts the organization from competing on price to competing on a value-basis (Baines et al., 2009a). Thus, servitization strategy enhances competitive advantages, sets higher entry barriers to competitors and a higher exit barrier for customers (Vandermerwe & Rada, 1988; Baines et al., 2010). Furthermore, servitization contributes to the organization's survival by steering their marketing offerings toward customers. It also promotes a prompter response to dynamic changes (Neely et al., 2011a, Gebauer et al., 2011).

The Marketing benefits of servitization are often described in literature differently. Servitization strategy maintains customers through building long-term relationship and customer commitment (Baines et al., 2010). It enhances customer satisfaction by offering tailored products (Nordin & Kowalkowski, 2010). Also, servitization enhances customer loyalty by a product co-creation approach (Heskett et al., 1990; Evanschitzky et al., 2006). It escalates customer's confidence and dependency on an organization (Gebauer et al., 2006). Offering services enables firms to increase their market credibility and gain more customer confidence (Mathieu, 2001a). Servitization improves organizational market

position (Schröter & Lay, 2014). Finally, servitization expands a firm's market share (Thoben et al., 2001).

In term of innovation benefits, Lay, (2014) argues that a servitization strategy enables businesses to collect valuable knowledge and enhance their product development and marketing offerings. Besides, for offering services firms are only exploiting their current operation capabilities, as there is an insignificant additional level of production assets and equities required to offer services (Turunen & Neely, 2012). Offering services aids the rapid learning of customers' needs and expectations. (Gebauer et al., 2012a), Thus, offering service is an important source of information for product innovation (Brax & Jonsson, 2009). Finally, servitization is also delivering environmental benefits through enhancing resource productivity and resource utilization as well as reducing resources consumption and waste (Mont, 2002; Van Halen et al., 2005). Offering services develops the firms' ability to renovate the product, where the obtained synergy helps to produce more value (Ang et al., 2010).

Finally, the servitization strategy is attributed with being effective to gain market information by having long-term relationships with customers (Baines et al., 2010). Market knowledge becomes a key competitive advantage (Bamford et al., 2015). Servitization strategy is considered an inexpensive source of knowledge attainment (Oliva & Kallenberg, 2003). Providing services promotes formal and informal learning (Van Halen et al., 2005); by which, facts about customer behaviour, needs, and activities needed for effective response to customer changes are simply gained by getting closer to customers (Lay, 2014). The value co-development process is imperative for maintaining organizational competitive advantage in a dynamic environment by the two-way exchange of knowledge process (Baines et al., 2009b). Providing services also requires firms to establish more comprehensive networking systems with the surrounding business environment and working openly, which enriches organization knowledge (Gebauer et al., 2012a). Customer feedback promotes the exploitation of operating proficiency and knowledge (Brax & Jonsson, 2009). In fact, being customer-centric helps organizations to sense, realize, recognize and deal with specific customer needs (Gebauer et al., 2011).

2.5.2 Servitization Paradox

Service paradox is the other hidden challenge of servitization (Visnjic & Looy, 2013a). The service paradox refers to the contradiction of anticipated results, where offering services are expected to deliver a particular outcome, but these outcomes came in reverse (Neely et al., 2011a). Several service paradoxes could emerge based on a service provision strategy (Li

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et al., 2015). These include cost-profit paradox, the sales growth paradox and branding paradox. The first paradox is the service cost- profit paradox as the increases of offering services will increase the total cost of service, and either reduce the profit from the service or at least not increase the profit (Gebauer et al., 2005). Visnjic & Looy, (2013c) mentioned, the cost- profit paradox resulting from the ambiguity of an organization's service strategy, which hinders ability to benefit from economies of scale and economy of scope in offering service. As a result, the productivity and net income from the service will decrease rather than increase. The second paradox is the sales growth paradox, where services substitute core products and total sales will reduce rather than increase. Also, the positive impact of service extending the tangible product life cycle will reduce the product sales growth in the long- term (Visnjic & Looy, 2013c). Finally, the branding paradox, that resulted from outsourcing, collaborating and networking with external partners. Organizations offer services and system solutions, which often require different forms of strategic alliance, while looking at sustainable market position and strong market branding that support the organization's actions to outperform competitors, however, the organizational image is strongly affected by external partners' actions and performances which could undermine the organizational existing well-known image and good reputation (Nenonen et al., 2014).

2.5.3 Servitization Cost Drivers

Cost is a monetary assessment of organizational sources, efforts, times, places, materials, lost opportunity, risks, and responsibilities incurred in order to produce product or service (Horngren et al., 2010). The cost of service is the cost of activities related to the production and delivery of a particular service, through the several stages of the service life cycle. In order to clarify, these are service design, sustaining service, service modification, service reinstallation and service operationalization (Machuca et al., 2009). The cost of service is invisible, indirect, and difficult to connect to a specific cost (Lerch, 2014). It is difficult to identify the cost and optimal price of a service that will meet customer expectations and sustain customer satisfaction at the same time (Alix et al., 2009). Besides, the long period of service provision is another challenge to being accurately able to estimate costs (Datta & Roy, 2010). As such, the cost information system plays a significant role in the decision making process (Boyd & Cox lii, 2002).

Cugini et al., (2007) divided the service operational process into activities and identified the cost of services based on tracing the cost of these activities. Seal et al., (2009) argue that the three broad classifications of production cost i.e., the cost of direct materials, the cost of direct labour and the overhead cost, could be used for both production and service

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processes. Still, the main differences between the cost systems of these two distinct processes are the unpredictability of service input and output in advance and there is no inventory assessment needed in a service costing system. According to Alix et al., (2009), the cost of offering a product-service system impacts on the three main categories of manufacturing cost. Those are: the cost of materials, which includes the direct cost of material and indirect cost of support activity required to design and produce the integrated product-service packages. The cost of labour which includes the direct and indirect cost needed to produce and deliver the integrated product–service packages. Finally, the overhead cost which includes all costs required to sustain the facility that produces the integrated product-service packages. Pang, (2009) argues that the main distinction between product and service from a monetary perspective is that service requires an additional long-term concern and support beyond the selling process, while manufacturer's worries end once the product is sold. Besides, the cost of service significantly relays in customer purchasing behaviour (Seal et al., 2009). Thus the cost of offering services is ambiguous and indirectly identifiable (Lerch, 2014). According to Tukker, (2004), the cost of developing a product-service system consists of several aspects including the cost of product, cost of investment , cost of production process , cost of market evolution, cost of exceptional risk and the cost of design. Empirically, (Lerch & Gotsch, 2014b) identified several cost drivers for service provision such as investment cost , start-up cost, change over cost , scrap cost , reworking cost , energy cost and spare parts cost . Alix et al., (2009) argue that three main factors affect the cost level of a product-service package. These factors include the degree of customer contact and involvement, the degree of production process similarity and the level of tangible characteristics within the product-service system.

2.5.4 Servitization Critical Success Factors

Usually, any strategic choice involves a group of aims and objectives that must be reached (David, 2013). These aims and objective are segmented further into tactics and activities levels to be systematically accomplished (Johnson et al., 2013). Still, managers have to consider other crucial areas that could impact on the strategic choice performance (Caralli et al., 2004). These factors are labelled as the critical success factors, which are defined as imperative issues having to be performed well to guarantee the future success of a strategy (Boynton & Zmud, 1984). However, the fluctuating nature of critical success factors makes them difficult to recognize (Belassi & Tukel, 1996). According, to Forrester, (2015), the order winner criteria could be related to the offer price, quality, or services. Neely et al., (2011b), argue that there are different views of what makes successful and unsuccessful criteria of servitization among scholars. Table (2-14) summarized these different views.

Table 2-14: Servitization Critical Success Factors

Factor	Description	Source
Customer Orientation	Implementing a customer-centric culture is the most challenging issue and the necessary factor for offering service successfully.	Sawhney et al., 2003; Mendoza et al., 2007; Heikkilä & Brax, 2010; Downton & Rustema, 2011;
Value Creation	A high level of value realization of service which is facilitated by value co-creation is the critical success factor for offering services	Brady et al., 2005; Kindström & Kowalkowski, 2009; Macdonald et al., 2011; Smith et al., 2014
Service Design	The design of service provision that fits with customer needs, and organization external and internal factors is a critical success factor	Davies & Brady, 2000; Johnstone et al., 2009; Vasantha et al., 2012
Organizational Change & Development	The ability to modify organizational structure, organizational culture, operational process and business model is a critical success factor of servitization	Gebauer et al., 2005; Brax & Jonsson, 2009; Yuanjian et al., 2011; Lazzarotto et al., 2013
Sustainable Service Operations	Developing a dynamic and preemptive operational process that creates synergy and stimulates response to changes is a critical success factor	Datta & Roy, 2011; Ulaga & Reinartz, 2011
Organizational Capabilities	The organization's ability to develop the required capabilities for sustainable service provision is a critical success factor.	Davies, 2006; Gebauer et al., 2012; Ulaga & Reinartz, 2011
Service Innovation & Development	Developing the services provision continuously and addressing the dynamic customer requirements is a crucial success factor	March, 1991; Galbraith, 2002; Gebauer et al., 2006; Salunke et al., 2013

According to Gebauer et al., (2006) the key success factors of a servitization strategy are summarized into five factors: the continual development of new and effective services provision; focusing on customer value proposition and supporting customers; transferring from a product transaction business to a customer relationship business; viewing servitization as an important, successful and comprehensive strategy that produces essential value; and finally, to promote an effective service culture. Ulaga & Reinartz, (2011) examined servitization's critical success factors based on liking these factors to the main capabilities required for providing a hybrid service. The design to meet actual customers' needs and expectations is vital for servitization success. This requires developing relevant customer data mining and interpretation capability, and the ability of turning data into a value service. The certainty of the strategic outcome is the second critical factor for a successful offering. The clear results and outcomes of a servitization strategy are imperative to gain management commitment and management support. This factor is facilitated by performing risk assessments to clarify any ambiguity. Value synergy is another critical success factor as the service provision has to be designed to create the required value by a fruitful integration mechanism. Finally, the saleability of the product service is a critical success factor which is facilitated by both customer involvement, and sales force experience.

From a broad perspective, Neely et al., (2011b), argue that organizations need to consider several factors to ensure the success in a service provision strategy. Businesses need to ensure the use of a systematic method of product and service expansion based on pre-defined goals. Servitization strategy requires many changes and alteration. The deliberately plane of these alterations is central for successful strategy implementation and for developing the required service capabilities and service culture. Aligning the expansion scope with the available capabilities and ensuring the development of required capabilities is critical., Also, offering advanced services are facilitated by information technology and determining the level of technology for service provision is another critical success factor. Customer demands significantly impact on the success of service provision, where, firms have to ensure that the service expansion is aimed at tracking customer needs rather than blocking out competitors. Customer involvement and value co-creation development is vital for identifying these customer needs and how customers recognize and perceive the added value. Networking is another critical success factor, as the service element tends to be more technically complex and multi-faceted, for which organizations have to concentrate on their core capabilities and collaborate to acquire further capabilities. Strategic alliance mechanisms are essential to provide advanced and complex service systems. Recognizing and controlling cash flow is also essential for success of a servitization strategy. The decision of offering advanced services shifts the demand from product to ability contracting. This shift will expand the scope of responsibilities and expose the organization to more and different types of risk. An advanced risk assessment system is vital for success in advanced service provision.

Recently, Benedettini et al., (2015a), point to the organizational internal risks from servitization's main failures. This internal risk occurs based on several mistakes of formulating and implementing the servitization strategy. Business must assess the risks and pitfalls of servitization. Belassi & Tukel, (1996) identified general critical success factors for executing a new strategy in project-based businesses. These factors include; the smart goals beyond the selected strategy, the portability of change required in organizational structure and culture, top management commitment, the resource allocation schemes, the control and co-ordination arrangements, and the system of continuous evaluation. These factors were categorized within four broad groups. The first group consists of factors related directly to the project. The second group consist of factors related to top management and the workforce in the organization. The third group consists of factors related to the organization and its systems and the last group consists of factors related to the external environment.

2.5.6 Section Summary

The previous section concerns the evaluation of servitization strategy, where the expected effects of servitization are financial, strategic, marketing and innovation. However, a contradiction of anticipated results could come from service provision, particularly as the cost of offering service is hard to measure. Organizations have to carefully evaluate their service provision strategy and to understand the critical success factors of servitization. The next section reviews the different processes of servitizing.

2.6 The Strategic Process of Servitization

Since the emergence of the servitization concept, several strategic routes of servitization were developed (Fischer et al., 2012). Vendrell-Herrero et al., (2014) argued that the success of servitization depends on using proper adoption methods. Still, the adopted methods vary between industries (Lay, 2014). According to Hipp & Grupp, (2005) service development is incremental in nature. Most servitizing models are based on the incremental approach and come from the work of Boy t& Harvey, (1997); Wise & Baumgartner, (1999); Oliva & Kallenberg (2003); Tukker, (2004); Artto et al., (2008); Javan & Touri, (2012); Gebauer et al., (2012a) and Visnjic et al., (2013). Nevertheless, some of the other models were developed based on different strategic fit mechanisms and come from the work of Mathieu, (2001a); Gebauer, (2008); and Helander & Moller, (2008). Other scholars used a different mechanism for servitizing such as Chase, (2010).

2.6.1 The Servitization Incremental Process

The incremental development process of servitization based on moving gradually from offering pure product to offering bundled packages and solution systems is the popular process of servitization (Brax, 2005). Boyt & Harvey, (1997) demonstrated servitizing in three phases: providing elementary, intermediate, and intricate services based on the service characteristics see figure (2-4) below.

Figure 2-4: Service provision characteristics and phases based on (Boyt & Harvey, 1997).

Service Categories			
Service Characteristics	Elementary Service	Intermediate Service	Intricate Service
Replacement rate	High	Medium	Low
Essentiality	Low	Medium	High
Complexity	Low	Medium	High
Personal delivery	Low	Medium	High
Credence properties	Low	Medium	High

According to Boyt & Harvey, (1997), organizations should mitigate servitization risk by beginning with providing basic services that are not essential for customer or organization. These services have lower customer involvement level, lower customer dependability and are easy to change or replace. Also, these services should be designed to provide an acceptable level of customer satisfaction for a large segment of the organization's customers. In the second phase, organizations should offer intermediate services. These services should provide moderator characteristics in terms of complexity, customer involvement, and essentiality. The design of an affective intermediate service requires more effort and the whole organization becomes involved directly in the service provision strategy. Finally, organizations offer intricate services, where an intensive level of customer attention and consideration is needed. Here, more customized services could be offered to deliver a specific design, provide a differentiation edge, and increase customer dependability.

Wise & Baumgartner, (1999) viewed servitization as an incremental forward vertical integration that highlights control over the distributors channel and providing an after-sales service for greater profits. They describe this vertical integration based on four strategic movements. The first strategy is supported by new technology where organizations are motivated to offer technological imbedded services. The second strategy is supported by an organization's production expertise and knowledge where, comprehensive services that support product functionality and sales are offered. The third strategy is offering a unified product and services packages and finally, organizations develop the ability to control the whole product lifecycle and take over the distribution channels and after sales services.

Oliva & Kallenberg, (2003) developed the product- services continuum (Figure 2-5) as a conceptual tool of servitization adoption.

Figure 2-5: Product- service continuum adapted from (Oliva & Kallenberg, 2003)

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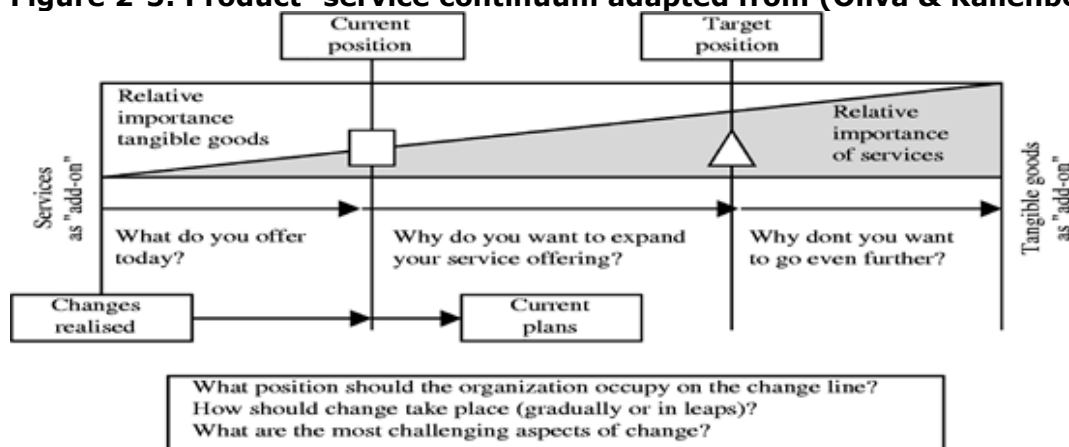
This model of servitization presents four incremental steps for embarking on a servitization strategy. Based on this model, organizations move incrementally from producing pure product to becoming service providers. At one end of the continuum, where, organizations produce and provide pure product, the first step is to add basic services to facilitate product sales. Here, the product is still the focal element and service is the add-on element. In the next step, firms engage with more marketing activity by offering advanced services related to customer's needs. At this stage, both product and service are the focal element of the market offering. Subsequently, organizations start offering more service options and various ownership alternatives moving from a transaction-oriented basis to a customer relationship basis, whereby service becomes the focal element and the product is the add-on element. At the extreme end, service is the main competitive advantage creator and the product is acting as a platform to deliver the value. During this stage, firms tend to become more integrated solutions providers rather than manufacturers.

Likewise, Tukker, (2004) developed a business model of eights types of different services to be offered in three incremental phases: the product oriented phase, the use oriented phase and the result oriented phase. The incremental movement of offering the first type of services to the last type is based on decreasing customer and organization reliance on the product as the core of the business, and replacing it by customer needs which become the main engine of the organisation's operations. According to this model, services are offered to achieve sustainable organizational competitive advantage by moving from a function oriented business model to product–service systems. In the product-oriented phase, the product is the core of the business and an additional service is added to enhance product functionality. The Product remains the core of the business. In the use oriented phase, organizations start offering the product based on sharing and leasing services rather than selling products. In the result oriented phase, the outcome of product-service system is the core of business. Still, the decision to move from one stage to another depends on the stages' ability to achieve a sustainable outcome that makes good sense for the business.

Artto et al., (2008) developed a framework of servitization for project-based businesses. Based on this model, services are offered in five incremental phases, which gradually contribute to the final value of the project. Different types of service could be offered before project design, during project execution and after project delivery. In the first step, services are integrated into the project to create an entry point for customers. In this stage basic services are added to attract customers. Then additional services are added to create more value for customers and develop closer relationships. Then, more advance services are

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offered to enhance project competitive advantage through customer involvement and co-creation to offer more tailored services. Next, services are offered to enhance operational efficiency and project cost effectiveness. In this stage, organizations are in close relationship with customers and in a situation to recognize the change in customer needs. Finally, service is the main element of the business model.

Baines & Lighfoot, (2013b) focused in the changing process and capabilities development when using an incremental route of servitization. They contended that servitization is developed incrementally based on three phases: offering basic services, offering intermediate service, and offering advance services. Still, businesses have to focus on each phase, which changes the business model from competing by merely offering a product to competing by offering system capabilities and solutions. This strategic intention of servitization enforces management commitment and requires organizations to change their orientation and build new capabilities.

2.6.2 Servitization Incremental Process Linked to Other Factors

Within the same perspective, other scholars link the incremental process of a servitization strategy to different factors. For instance, Brax, (2005) argues that different organizational strategic purposes impact upon the process of service provision and development. The first dimension is adding a simple service based on a differentiation approach to support product sales. The second dimension is about adding advanced services related to customers sophisticated needs, where organizations reposition themselves in the value chain taking charges of activities by moving upstream or downstream. Finally, more advanced service is developed based on organizational intention to transfer from manufacturing-focused to service-focused by which the manufacture becomes a provider of industrial services. Likewise, Chase, (2010) linked the incremental process to the degree of customer contact. Based on this model, service is offered with customer involvement by which the characteristic of the service will increase through a co-creation approach from the increasing level of customer contact. Here, three types of services were characterized depending on the degree of customer contact. The pure services with high customer contact, the mixed services with a moderate customer contact and the quasi-manufacturing services with low customer contact.

Kindström & Kowalkowski, (2009) link the incremental mode of servitization to two main factors. These are organizational learning and customer involvement. According to their model, these two factors are essential for each stage of service provision to develop superior customer value. Based on this model, organizations are moving within these

different phases continuously, where moving from one stage to the next is reflected in the negative and positive outcomes of the previous phase. Likewise, Visnjic et al., (2013) link the incremental development of servitization strategy to the organizational strategic purpose and learning curve. According to Visnjic et al., (2013) model, the first stage of servitization starts when firms see some strategic benefits by adding basic services to their products. This shows a possibility of achieving product differentiation. The second stage starts when firms engaged intensely with services and became more knowledgeable about customer needs and thus see marketing benefits such as customer loyalty and customer satisfaction by offering complex and sophisticated services. In the third stage, firms gain extensive knowledge of the sophisticated customer's needs. At this stage, the manufacturer has turned in to a solution provider achieving superior strategic, marketing and financial benefits.

Gebauer et al., (2012a) linked the incremental movement of servitization to various value creation tools and the accumulative development of necessary capabilities. A strategic framework that consists of three routes was developed to guide the incremental expansion in a service business. The first route seeks to improve the customer value co-creation process by exploiting the current supplier—buyer relationships, where manufacturing firms invest in existing knowledge and technologies with more customer involvement for co-value development. During this stage, the organization is concentrating in incrementally improving customer orientation, shifting from being transaction based to being relationship based and developing services to support customers in free of charge basis. The second route is exploiting the financial benefits from the current supplier-buyer relationships, as the manufacturer moves from being product transaction based to service transaction based, where products and services are produced by separate operations and offered based on separate prices. This is when service is becoming the main stream of total revenue. In this stage, the manufacturing firms are looking for more financial benefits from existing relationships by developing more customized services relying on current activities, knowledge and technologies. Finally, the third stage is the exploration route where organizations are looking for new business opportunities and new customer – buyer relationships, aiming to achieve new value propositions through partnering and networking. In this stage, a fundamental change and more innovation are required, to uncover market segments and address new customer needs. Collaborative learning is the main feature of this path and integrated solutions are the main revenue stream and source of competitive advantage.

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2.6.3 Servitization Process and Strategic Fit

From a different perspective, other scholars view strategic fit and strategic alignment as more important than the incremental process of servitization development. Strategic fit means that the operations capabilities are aligned with the requirements of its markets (Slack et al., 2013). Mathieu, (2001a) argued that organizations develop their service provisions strategy based on the alignment of two dimensions, service specificity and organizational intensity. Service specificity consists of three types of services; services related to the customer, services related to the product and services as the product. These different types of services are linked to different strategic purposes respectively, developing a differentiation edge, building customer relationships, and developing a unique competency. The service specificity dimension is linked to organizational intensity, which also consists of three levels, the tactical level, the strategic level, and the cultural level. This is where, different types of services impact differently on these three levels. The combinations of these two dimensions shape the organizational strategic route toward servitization based on organizational ability to change fundamental features of organizational design.

Gebauer, (2008) argued that the development of a servitization strategy is mainly dependent on a strategic alignment with conditions of the external business environment. Accordingly, there are various situations in a business environment requiring various types of service strategies. For instance, in a highly competitive environment firms have to compete by using a low cost strategy. In a less competitive business environment, firms have to compete using a differentiation strategy. Furthermore, in a highly competitive environment with more industrial-based customers, firms have to compete using a balance between low cost and differentiation strategy providing service to support customers and product functionality using outsourcing partners. Eventually, offering different types of services that fit with the characteristics of the business environment leads to businesses to compete in new domains as a market leadership based on new business model competing in a less competitive environment. Businesses offer solution systems, concentrating on advanced technology, product innovations and superior performance of customer orientation, looking to achieve exceptional customer support through organizational alliances, partnerships and networking, and providing research and development capabilities.

Helander & Moller, (2008) argued that organizations and customers are in a mutual relationship, particularly in the business-to-business market. The strategic alignment between organizational strategic choice and customer strategic decisions are more

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important when following a service expansion strategy. Consequently, organizations have to reposition themselves within one of servitization categories, governed by customers' strategy. When customers prefer to behave autonomously from the supplier, organizations should offer basic services such as maintenance, training, and help desks to support product. When customers are sharing knowledge with the organisation based on close relationships, the organization should offer customized services based on co-development, whereby, firms are looking for best product design and customers are looking for best product utilization. Finally, when customers are fully dependent on the organization's experience, organizations should offer comprehensive solutions with the aim of providing superior performance.

2.6.4 Section Summary

Different strategic routes describe the servitizing process of businesses. The incremental approach is a common process, where the process starts by offering basic services to reach the solution system. Other models consider different aspects of strategic fit to offer different types of services. Nevertheless, the deploying process of servitization varies between industries. In the next section the conclusion of the literature review is presented, where a conceptual model that captures all aspects of a servitization strategy based on the traditional strategic decision model is developed.

2.7 The Source of Servitization Competitive Advantage

Developing a competitive advantage is the central theme of strategic management (Johnson et al., 2013). Competitive advantage is a key determinant of organizational superior performance (Porter, 1985). Achieving a competitive advantage is the main concern of business organizations (Raduan et al., 2009). This competitive advantage is obtained when a business acquires or develops a set of features that allow it to outperform its competitors (Johnson et al., 2013).

In aggressive competitive markets, businesses have started to offer services integrated to products to gain a competitive advantage (Oliva & Kallenberg, 2003; Gebauer, 2008; Baines et al., 2009a). The literature of servitization refers to different management theories to explain the potential competitive advantage and benefits of having a servitization strategy (Velamuri et al., 2011; Alghisi & Saccani, 2014; Eloranta & Turunen, 2015. Table (2-15) below summarizes these perspectives.

Table 2-15: Management Theories Used to Explain the Potential Competitive Advantage of Servitization Strategy

Theoretical Perspective	The Sources of Competitive Advantage	Source
Market-Based Theory (Market driven).	Servitization contributes to the organization's survival by steering their market offering to customer needs.	Vandermerwe & Rada, 1988; Neely et al., 2011a; Gebauer et al., 2011
Dynamic Capabilities Theory	Servitization develops organizational capability that facilitates adaptation to external conditions of the environment	Velamuri et al., 2011
Service-Dominant Logic and Value co-creation approach	Offering services solutions develops intimate customer relationships and creates new competitive advantages based on joint production mutually valued outcomes.	Baines et al., 2010; Ang et al., 2010; Ohvanainen & Hakala, 2014
Organizational Learning Theory	Servitization stimulates organizational learning and improves businesses response to intensive competition. An organization improves over time as it gains experience. Offering services aids the rapid learning of customers' changing needs	Brady & Davies, 2004; Baines et al., 2010; Wallin et al., 2015; Leoni, 2015.
Network-Based view	Networking is essential to develop organizational capabilities and achieve new value propositions	Gebauer et al. 2012a; Eloranta & Turunen, 2015
Knowledge-Based view	Servitization enables businesses to collect more valuable knowledge and enhance their product development and market offerings.	Brax & Jonsson, 2009; Alghisi & Saccani, 2014
Resource-Based View Theory	Servitization is the innovation of an organisations capabilities and a process to develop a distinctive, long-lived competitive advantage	Baines et al., 2009a; Ulaga & Reinartz, 2011

The competitive advantage from offering service integrated to the product is explained by the market-based theory (Eloranta & Turunen, 2015). Servitization emphasises the market driven strategy by which organizations tend to focus on internal competencies that foster greater responsiveness to their customers and target market (Vandermerwe & Rada, 1988). Organizations are putting the market at the centre of their strategic decision. The process includes market analysis, defining the value proposition, creating the value chain and the revenue mode. These decisions are determined or driven by market forces (Lay, 2014).

The service-dominant logic is used to explain the competitive advantage of servitization based on a services atmosphere and the positive impact of moving from product consumption to product utilization through offering services (Baines et al., 2009b; Ohvanainen & Hakala, 2014). Servitization emphasises the role of value co-creation in business prosperity (Kowalkowski, 2010). The value co-development process is imperative for maintaining organizational competitive advantage in a dynamic environment by the two-way exchange of knowledge (Baines et al., 2009b).

The dynamic capabilities theory is also used to explain the competitive advantage of servitization through organizational ability to develop, integrate and reconfigure organizational internal competencies with external threats and opportunities in the business

environment (Velamuri et al., 2011). Servitization is a dynamic process that requires continuous adaptation to customers' requirements. Offering services stimulates organizational capabilities to sense business opportunities, transforming an organization from being product-oriented to customer-oriented. It also sustains the operating service and responds to customer needs or intensive competition (Gebauer et al., 2012a).

Also, organizational learning theory was employed to explain the competitive advantage of servitization. Servitization strategy is attributed with being an effective tool by which to gain market information by having long-term relationships with customers (Baines et al, 2010). Customer feedback promotes the exploitation of operating proficiency and knowledge (Brax & Jonsson, 2009). Offering a product-service system stimulates organizational exploratory learning capabilities to gain new knowledge and exploit learning capability for developing an existing one (Brady & Davies, 2004). In addition, Alghisi & Saccani, (2014) explained the competitive advantage of servitization through the lenses of the Knowledge Management theory, where the competitive advantage servitization emerges from collecting, and analysing the data that is generated from the use of industrial equipment.

Other scholars explained the competitive advantage of servitization through the network-based view, where the collaboration and partnerships with other organizations create more sustainable competitive advantage (Eloranta & Turunen, 2015). The development of economic competences and capabilities based on networking contribute to organizational competitive advantage. Providing services requires firms to establish comprehensive networking systems with the surrounding business environment. This is necessary to achieve exceptional customer support through organizational alliances, partnerships and networking, and providing research and development capabilities (Gebauer, 2008; Gebauer et al., 2012a).

Finally, the resource-based view theory is widely used to explain the competitive advantage of servitization based on creating unique resource combinations and innovating organizational competencies through offering services (Velamuri et al., 2011; Eloranta & Turunen, 2015). The Resource-based Theory provides the predominant basis from which the majority of servitization literature and research comes (Eloranta & Turunen, 2015). It also dominates operations management research (Slack et al., 2013). In fact, scholars argue that the capability-based view, the knowledge-based view, and the networking based view have been derived from the Resource-based View Theory (Grant, 1991; Curado & Bontis, 2006; Lavie, 2006)

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2.7.1 RBV and Servitization

As mentioned above, the Resource-based view is the most popular theoretical perspective in servitization research (Eloranta & Turunen, 2015). This perspective considers offering service as the tool to redefine a company business model (Gebauer et al., 2011). A servitization strategy innovates organizational capabilities to develop inimitable, rare and valuable competences that provide a causal ambiguity. These competences are used to manipulate the market environment based on proactive responses rather than reactive responses (Antioco et al., 2008; Eloranta & Turunen, 2015). These capabilities aim to added value to manufacturing output and increase value in the eyes of customers (Baines et al., 2009a). The sources of these rare, valuable and inimitable competences are viewed from different perspectives. These perspectives are summarized in the table (2-16) below.

Table 2-16 : The sources of competitive advantage from service provision based on the Resource-based Theory

The logic of the basic perspective	The sources of competitive advantage	Source
Service provision develops valuable, rare and inimitable competences and unique capabilities.	The characteristics of services	Baines et al., 2009a; Smith et al., 2014
	The unique combination of products and services	Ulaga & Reinartz, 2011
	The co-creation development of services	Gebauer, et al., 2010d ; Nordin & Kowalkowski, 2010
	Customer customized solutions	Biggemann et al., 2013
	Strategic alliance and networking	Gebauer et al., 2012a
	Exploit organizational capabilities & developing unique ones through the organizational transformation process	Ulaga & Reinartz, 2011
	Developing knowledge capability	Oliva & Kallenberg, 2003; Ulaga & Reinartz, 2011; Kowalkowski et al., 2013
	Developing close relationships with customers , suppliers and networks	Nordin & Kowalkowski, 2010; Matthyssens & Vandenbempt, 2010

From the perspective of the Resource-based theory perspective, scholars see the characteristics of service as the source of organizational competitive advantage. The service element is perceived as less vulnerable to imitation (Smith et al., 2014). Integrating product and service is "distinctive, long-lived and easier to defend from competition" (Baines et al., 2009a, p. 547). Others considered the co-creation development of the product –service system with customers as the sources of creating a unique offer and a competitive advantage (Gebauer et al., 2010d and Nordin & Kowalkowski, 2010). Also, the development of customized solutions as vulnerable to imitation creates competitive advantage (Biggemann et al., 2013). Gebauer et al., (2012a) viewed the networking and strategic alignments as main sources of organizational competitive advantage through developing unique capabilities. Other scholars considered the organizational transformation based on servitization by which unique capabilities are developed through exploiting

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organizational capabilities as the main source of competitive advantage (Ulaga & Reinartz, 2011).

Yet others considered developing knowledge capability to be the source of organizational competitive advantage (Oliva & Kallenberg, 2003; Ulaga & Reinartz, 2011; Kowalkowski et al., 2013). Collecting data and information regarding the customer usage process provides organizations with unique insights (Ulaga & Reinartz, 2011). Other scholars reflected on close relationships with customers, suppliers and networks as the sources of organizational competitive advantage through creating unique capabilities (Nordin & Kowalkowski, 2010; Matthyssens & Vandenbempt, 2010).

2.7.2 The Resource-Based View theory

The Resource-based Theory is considered as a popular theory of explaining competitive advantage. The theory was originally coined by Wernerfelt in 1984 (Raduan et al., 2009). It is an efficiency- based explanation of sustained superior organizational performance (Barney & Clark, 2007). The Resource Based Theory provides rich information on organizational resources and capabilities that impact on the operational process and organizational competitive advantage. The theory argues that organizations are heterogeneous in terms of the strategic resources they own and control. These tangible and intangible resources are the main source of organizational competitive advantage (Wernerfelt, 1984; Barney, 1991).

The Resource Based Theory argues that the market position an organization could take is reflected in the portfolio of the resources it controls. This means organizational resources have important implications for the ability of organizations to gain a competitive advantage (Barney & Clark, 2007). Organizational resources can be both tangible and intangible. The tangible resources are the physical assets of an organization such as plant, people and finance. Intangible resources are non-physical assets such as information, reputation and knowledge (Johnson et al., 2013). In order to develop a competitive advantage from these resources, it should be valuable, rare and inimitable and not able to be strategically substituted (Barney, 1991). Here, a distinction needs to be made between capabilities at a threshold level and core competences. Threshold capabilities are those needed for an organization to meet the necessary requirements to compete in a given market. Whereas, core competences are those unique resources that critically underpin competitive advantage and that others cannot easily imitate or obtain. Developing unique competences requires skills and abilities by which resources are deployed through an organization's activities and processes to achieve a competitive advantage. These unique competences emerge from the

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synergy between tangible and intangible resources (Johnson et al., 2013). Within this context, Kano's Model could be used to describe the relationship between threshold capabilities and core competences. The Kano Model links customer satisfaction to product performance based on three areas. The threshold or basic attributes refer to those characteristics or features that must be presented and are expected in a product or service. They are generally taken for granted. The second area is performance quality; these are features that are not only expected but also explicitly requested by customers. Customers are disappointed if these needs are poorly met. Finally, the attractive attributes are those characteristics that cover items that the customer was not expecting (Khalifa, 2004). On the other hand, order-winning and order-qualifying criteria are a more powerful means of developing core competences to meet market requirements (Brown et al., 2013). Order-qualifiers are criteria that represent the minimum capabilities and minimum characteristics of either a firm or its products must have to be considered as a source of purchase. Order-winners criteria represent the core competences as the characteristics of a firm that distinguish it from its competition so that it is selected as the source of purchase (Davis et al., 2005)

2.7.3 Order-Winner and Order-Qualifier

The terms "order winners" and "order qualifiers" were coined by Terry Hill, professor at the London Business School, and refer to the process of how internal operational capabilities are converted to criteria that may lead to competitive advantage and market success (Brown et al., 2013). An order qualifier is the minimal level required from a set of criteria for a firm to do business in a particular market segment. Fulfilling the order qualifier will not ensure competitive success; it will only position the firm to compete in the market (Krajewski et al., 2013). Still, without these capabilities, firms will lose orders (Brown et al., 2013). An order winner is a criterion that customers use to differentiate marketing offers (Krajewski et al., 2013). Order winners criteria are those factors that win orders in the marketplace over competitors (Brown et al., 2013). Understanding which competitive priorities are classed as order qualifiers and which are order winners is important for strategic decision-making (Brown et al., 2013; Krajewski et al., 2013).

The terms "order winners" and "order qualifiers" emphasize the vital role of operations management to develop a competitive advantage. The link between marketing strategy and operations strategy is vital to convert operational capabilities to criteria that will develop a competitive advantage and lead to market success. Marketing is responsible for identifying the criteria of order-winners and order-qualifiers. Operations management is responsible for

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providing and developing the criteria that enable the product to win orders in the marketplace. This process starts with the corporate strategy and ends with the operations strategy to provide the criteria that keep the business in the market and win the customers' orders (Brown et al., 2013).

2.7.4 The Role of Operations Management to develop a Competitive Advantage

One of the key tasks for operations management in developing strategy is their ability to put in place capabilities to deal with competitive requirements (Krajewski et al., 2013). The dynamic nature of the business environment increases the important strategic role of operations management for the best utilization of scarce resources and enhances the process of organizational change and becoming more adaptive (Brown et al., 2013). Operations management is one of the primary activities of the value chain (Porter, 1990). Operations management becomes a key determinant of organizational ability to achieve long-term success or its very survival (Hayes et al., 2005). The strategic role of operations management becomes a vital strategic function in business, where linking corporate and marketing strategies to operations management becomes a critical success factor (Forrester, 2015). Neglecting this significant strategic role of operations management impedes organisational marketing success, even when corporate strategy is well designed and formulated (Bamford & Forrester, 2010).

Effective operations activities need to be consistent with long-term strategic intentions, to be able to contribute to organizational competitive advantage. This means organizational strategic objectives should be identified and linked to operations (Hayes et al., 2005). An organization's strategy can only become a meaningful strategy when it is operationally enacted. Organizational success is only likely to result if short-term operations activities are consistent with long-term strategic intention, which makes a significant contribution to competitive advantage. The objective of the operations function is to produce the goods and services required by customers whilst managing resources as efficiently as possible (Barnes, 2008).

An effective operations strategy is extremely important to achieve business objectives and gain a competitive advantage in two ways. First, operations could be central to the implementation of a selected strategic decision. Here, the operations role is providing a strategic fit by developing resources and capabilities that match the objectives of the selected strategy and opportunities in the external environment. Second, operations management is considered an important factor of strategy development. Here, operations

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capabilities and competencies are used to create new opportunities or to target existing ones. The contribution of operations management is central to strategic planning and implementation (Brown et al., 2013).

2.8 Conclusion of the Literature Review

The previous sections have explored literature on servitization strategy. The strategy refers to the move towards offering product-service systems rather than products alone. The value added of offering services emerges from multiple perspectives. Offering services emphasizes the fundamental principle of creating more value to customers by having a better understanding of their needs, which leads to a better configuration of organizational competences. Offering services increases the level of product differentiation, as a product-service system is more difficult to imitate. Offering services maintains customers through building long-term relationship and customer commitment. It enhances customer satisfaction by offering tailored products and enhances customer loyalty by a product co-creation approach. In addition, offering services develop the characteristic of the product that is required in order for the product to win the customers' purchase.

Servitization consists of different strategic levels and approaches of offering services. These approaches deliver different outcomes and require different arrangements. These different types of services were categorized into two main approaches and these are protective services and proactive services. The protective services are the services that make the product eligible to be bought by the customer; it shapes the minimum market requirement, whereas, the proactive services are those that distinguish the product from those of competitors; it is much more sophisticated and shapes organizational competitive advantage. Organizations have to understand, design, implement and evaluate their service provision strategy. Building on the information presented in the previous sections, several aspects of servitization were identified by which the servitization strategy could be understood, and conceptualized. According to (David, 2013) the strategic model consists of three main strategic processes: strategic formulation, implementation and evaluation. These strategic management categories capture the comprehensive incremental process of a servitization strategy. Accordingly, a conceptual model formalizing the transition process for service business model was developed as shown in figure (2-6) below.

Figure 2-6: Conceptual Model of Servitization Strategy
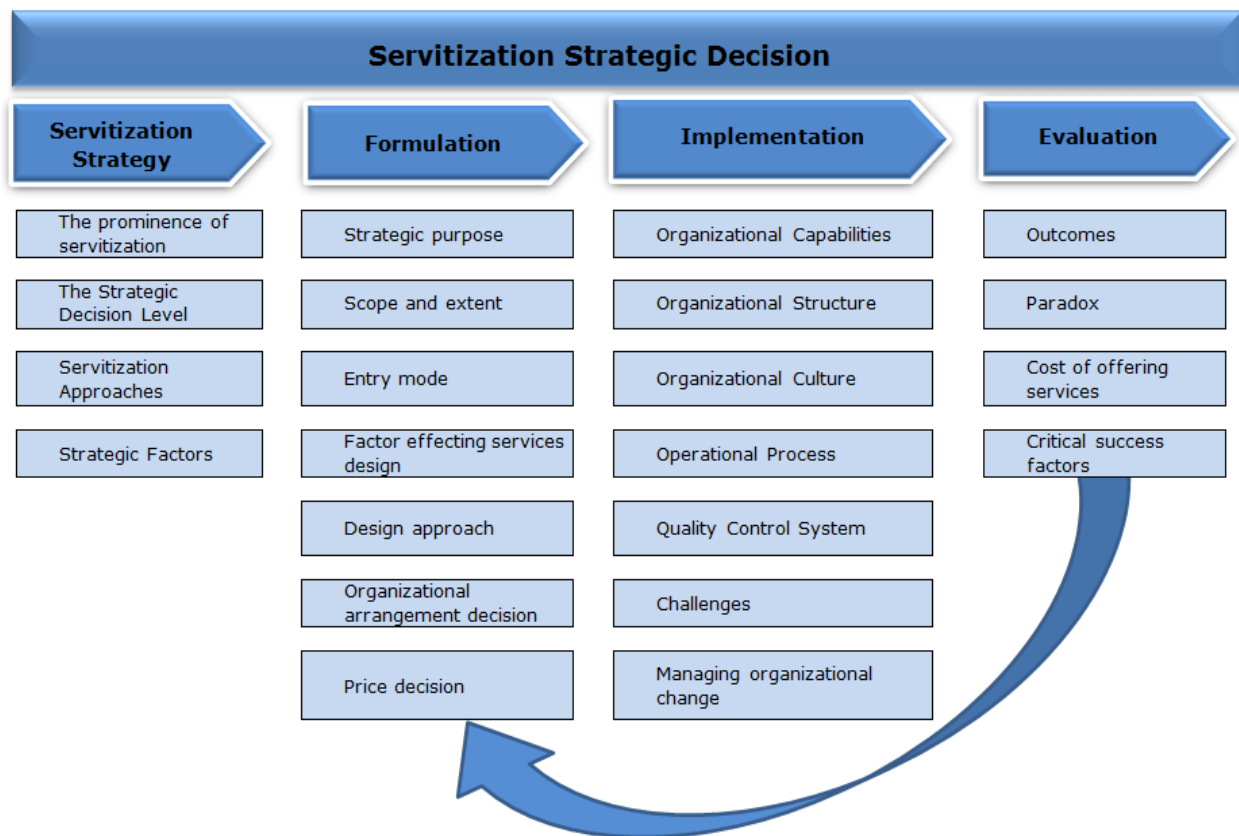
The underlying theme of this conceptual framework is to connect the different aspects of servitization from literature into one model by sorting through the mass of published material and producing a focused model. This model will support the investigation of a servitization strategy in the context of real estate development as revealed in the introduction chapter. The next chapter represents the research purpose and demonstrates the research design that developed answers to the research questions.

Chapter 3: Research Design

3.1 Introduction

This research has been conducted to extend servitization knowledge in the real estate development industry. The outcome is expected to contribute to the knowledge of servitization and develop an understanding with regard to facilitating servitization strategy adoption and service provision in realty projects. The aim is to enable the sector to develop abilities to create competitive advantage and to be able to adapt better to changing customers' needs and requirements.

The previous chapter presented the aspects of servitization. An initial conceptual framework that captures the servitization process and guides the research investigation was developed based on reviewing literature. This chapter provides an overall framework of the research process to in-depth investigate the aspects of servitization. The chapter is oriented toward presenting the scientific procedures that have been used in this study, and support the rationale behind choosing particular research methodology and methods. This chapter is divided into three sections (Figure 3-1), the research design, the research process and the research quality evaluation.

Figure 3-1: Methodology Chapter Layout

Conceptual Section	Research Design	Philosophical Position	
		Research Methodology	Research Strategy / Research Paradigm
		Research Method	Data Collection / Data Analysis
Practical Section	Research Process	Literature Review	
		Conceptual Framework	
		Developing case study	
		Secondary Data Analysis	
		Pilot study	
		Primary Data Collection Delphi round 1 Delphi round 2 Delphi round 3	
Research Quality	Research Evaluation	Research Design	
		Research Outcome	
		Ethical Consideration	

Section (3.2) is the research design. It represents the conceptual part, which was developed to rationalize the selection of particular research elements. The section was developed based on Creswell's (2013a) research design framework, which consists of three main

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elements. These are research philosophy, research methodology and research method. This section is developed to rationalize the adopting of a qualitative research approach. In this section, each category is discussed in order to justify the specific selection and the appropriateness of the selected research instruments to accomplish this research project. Section (3.3) is the practical part, which has been developed along the lines of Maxwell's (2013) model and inductive data inquiry approach. Mainly, the section consists of a full detailed research process. It shapes the empirical part of the chapter where data collection and analysis methods are demonstrated. Finally, section (3.4) addresses the evaluation criteria of research quality and research ethics codes that are used in this research project. Figure (3-2) provides a diagram of the research methodology.

Figure 3-2: Research Methodology Outline

Ontology
Relativism

↓

Epistemology
Subjectivist

↓

Philosophical Position
Critical Realism

↓

Research Methodology
Qualitative Approach
Inductive Data Inquiry
Case Study

↓

Iterative

Research Method	
Delphi Study	
Data Collection	Data Analysis
Secondary Data	Document Analysis
Email Interview	Content Analysis
Online Interview	Thematic Analysis
Online Interview	Validation Model
Collective Finding	Template Analysis

Round One
Round Two
Round Three

↓

Outcome Quality Evaluation
• Credibility
• Confirmability
• Dependability
• Transferability

3.2 Research design

The Quality Assurance Agency for Higher Education defines research "as original investigation undertaken in order to gain knowledge and understanding" cited by (Fendt et al., 2008, p.484). Under the umbrella of social science research, business research is conducted to help business managers make informed decisions that contribute to the success of organizations. It is a scientific approach aiming to solve business problems and enhancing decisions to become more efficient and more effective by looking for facts based on systematic investigation, gathering, analysing, interpreting and presenting accurate information that reduces business uncertainty and clears the complexity and ambiguities from the business environment (Zikmund et al., 2012).

The research design concerns the whole configuration of research projects. It refers to the action plan when conducting research projects. This plan describes the sequences of the research phases and task development by formulating the research problem throughout the data collection process until conclusions are generated. This design involves a research philosophical position, research methodology and method (Creswell, 2013a&b).

3.2.1 Research Philosophy

Research philosophy defines the process of developing knowledge (Creswell, 2013a). It refers to ontological and epistemological assumptions that support the practice of social science research (Brewer, 2000). A clear philosophical stance in conducting social science research has several benefits including expanding the researcher's thinking, enhancing his research skills and enhancing his ability to select an appropriate research methodology capable of addressing the research problem and improving the research outcomes. Irrelevant philosophical positions might lead to misleading results (Holden & Lynch, 2004). In terms of social science research, it is necessary to define what knowledge is. This means issues of ontology and epistemology should be defined and construed in line with the study investigation (Fletcher, 2006).

3.2.1.1 Ontology

Ontology refers to the philosophical assumptions about the nature of reality and existence (Easterby-Smith et al., 2012). Ontology is dichotomised into objectivist and subjectivist positions (Saunders et al., 2011). Objectivism maintains that there is only one description of reality. It refers to the state of being objective, where knowledge is accurately interpreted without the risk that this interpretation could be distorted by the researcher's preferences or biases (Bruce & Yearley, 2006). On the other hand, subjectivity is the

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opposite of objectivity. Subjectivity assumes that a social phenomenon is developed from the perceptions of people who are engaged in this phenomenon (Saunders et al., 2011). This phenomenon can vary from time to time and from place to place (Collins, 1983). Between objectivity and subjectivity there are different conceptualizations of ontology; realism, internal realism, relativism and nominalism. This research adopted a relativism ontological standpoint.

Realism emphasizes that the world is concrete and external. Objects exist independently of our knowledge. There is a single truth, and facts are existed and can be revealed. Internal realism assumes that there is a single reality, but is obscure. It is never possible to access that reality directly. However, once this reality is discovered, it is absolute and independent of further observations. The relativism argues that there are many truths. Facts depend on the observer's viewpoint. The truth is reached through discussion and agreement between people. Finally, nominalism argues that there is no absolute truth. Reality is human creations (Easterby-Smith et al., 2012).

Consequently, a relativism ontological standpoint is held by this study. Relativism is a moderate position between objectivism and subjectivism of reality. It recognizes that life is generated by the actions of individuals, which also have an external impact on them. This ontological perspective has been adopted to address the current debate about servitization strategy as a significant survival strategy for business. This statement could be defined and experienced differently by different people, as what counts as reality could vary from place to place and industry to industry. According to literature, servitization strategy is a general concept, and different industries have different approaches to servitizing (Benedettini & Neely, 2012; Rajala et al., 2013; Lay, 2014). "The Servitization process could take many different routes reflecting various properties of the manufacturing firm and its business contexts" (Kim et al., 2015, p180). Based on the relativist position, the researcher assumes that the real estate development industry has different interpretations of servitization and has a different way to adopt servitization strategy.

3.2.1.2 Epistemology

Epistemology is a general set of assumptions about ways of inquiring into the nature of the world. It discusses how knowledge can be gained about the world (Saunders et al., 2011). It is concerned about what establishes valid knowledge to approach reality (Easterby-Smith et al., 2012). Epistemology concerns the question of what should be regarded as acceptable knowledge in a discipline. A particularly central issue is the question of whether or not social issues of the world can and should be studied according to the same principles, procedures

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and ethos as the natural sciences (Bryman & Bell, 2015). Accordingly, epistemology is categorized into two main positions; positivism and constructionism. This research adopted a constructionism epistemological standpoint.

The key idea of positivism from an epistemological viewpoint, that the social world exists externally, and it should be measured through objective methods, rather than being inferred subjectively. Positivism assumes that knowledge that can be measured and observed is the only valid knowledge. On the other hand, constructionism is a term that has been developed in reaction to the application of positivism to the social sciences. The key idea of interpretivism from an epistemological viewpoint, that reality is not objective and exterior. It is socially constructed and given meaning by people. It argues that the subject matter of the social sciences, people and their institutions are fundamentally to capture the reality (Easterby-Smith et al., 2012). It believes that knowledge and understanding emerges when people engage with their realities (Crotty, 2003).

Realizing the importance of the study context dimension, this research is positioned based an interpretive constructionist epistemology (Subjectivist) to capturer knowledge on servitization seeking to understand servitization in a specific context through perceived knowledge. This position believes that objects and subjects cannot be separated, and neither of them exists independent of the other. Both are a part of the life situation where they exist, which means it is pointless to discuss either apart from the context in which it is happening. The researcher focuses more on people and how they manoeuvre the servitization strategy to gain a competitive advantage in the context of real estate development industry.

3.2.1.3 Philosophical Positions

Social science has several perspectives of philosophical thoughts (Stiles, 2003). These thoughts could be located within two dimensions, the objective or subjective nature of science (Burrell & Morgan, 1979). Accordingly, a philosophical position continuum was developed, by which social researchers move between two dimensions: the objectivism approach and the subjectivism approach. Within that continuum, three major categories of philosophical positions were developed based on the objectivity and subjectivity of the reality; namely positivism, interpretivism and critical realism (Myers, 2013). These different philosophical positions generate different outcomes, and vary in terms of designing the research process, identifying the research problem, developing research questions and choosing research methodologies (Silverman, 2013).

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The positivism approach is developed based on the objectivity of the reality (Hughes & Sharrock. 1997). It dominated the philosophy of knowledge for a long-time (Alvesson & Sköldberg, 2009). According to the positivist approach, knowledge is exists independent of practical life and is gained through a set of fundamental assumptions. It is assumed that the movements of the natural world are systematic and predictable, even in dynamic changes. The cause and effects relationship can explain all natural phenomena and events (Frankfort-Nachmias & Nachmias, 1996). The interpretivist paradigm is considered opposite to the positivist approach. The interpretivist researcher believes in the subjectivity of society, which cannot be studied as a purely scientific process (Roth & Mehta, 2002). Based on this approach the reality is an outcome of different perspectives and perceptions of human actions and behaviours (Schwandt, 1994). The interpretivist approach provides an insight into new knowledge and provides new understanding of social behaviour (Upadhyay, 2012). It aims to understand how people interpret an event rather than understanding the reasoning behind that event (Roth & Mehta, 2002).

The realist philosophical position is also known as critical realism, Post-positivism or Neopost-positivism (Krauss, 2005). This approach rises from the writing of Roy Bhaskar in 1970, which emerged as a counterbalance paradigm between the positivism and the interpretivism approaches. Critical realism believes in the objectivity and subjectivity of reality (Alvesson & Sköldberg, 2009). Where, knowledge is not an absolute and could be gathered, developed, verified, accepted or rejected, and people make their own contribution in developing reality (Holden & Lynch, 2004). Whilst, positivism believes in one objective reality and interpretivism believes in multiple subjective realities, the critical realism believes in multiple insights of one objective reality (Krauss, 2005). According to Alvesson & Sköldberg (2009), Bhaskar distinguishes between three types of realities; the empirical, the

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actual and the real reality. Empirical reality includes individuals' behavioural experience and knowledge in a particular situation. The actual reality refers to the knowledge that emerges and becomes known from the researcher's work. In contrast, real reality refers to the impeded laws, structures and instruments, which exist beyond the empirical reality and produces different events and actions. The researcher's role is to explore the real reality and how it impacts on other realities. Critical realism is flexible and can be applied to work with different research methods (Sayer, 2000). According to Easton, (2010, p118) "critical realism as a coherent, rigorous and novel philosophical position that not only substantiates case research as a research method but also provides helpful implications for both theoretical development and research process." Also, it has the ability to explain any situation by balancing the objectivity and subjectivity of data interpretation (Easton, 2010).

Accordingly, a critical realism standpoint is held by this study. This study aims to extend servitization knowledge into the real estate development industry. Although a generic model of servitization exists in reality, it is imperfectly applicable to the real estate industry. A critical realism approach is an appropriate approach to extend knowledge and explain new knowledge within a context or contexts (Saunders et al., 2011). Critical realism believes that realty is gradually developed, which means that a reality could probabilistically rather than perfectly understood (Easton, 2002).

Understanding the challenges of studying servitization, which has contributions from multiple business disciplines increased research complexity. As well, the multifaceted real estate development industry increases this research complexity. This complexity requires a multi-perspective lenses to fully understand business situations (Easterby-Smith et al., 2012). The critical realism philosophical position, offers the researcher the required adaptability and flexibility. It does this by acknowledging that reality is the process of logical reasoning and at the same time it recognises different explanations can emerge based on surrounding situations. This seems the appropriate approach to explore servitization in a new context, by incorporating the conceptual framework and the perspective of the study members; focusing on objectivity and subjectivity of the data collection and analysis; and blending the experimentation and theoretical logical reasoning (Krauss, 2005). Also, according to this approach, researchers should adapt multiple techniques for data collection that support a detailed examination of research phenomenon moving forward and backward between theory and practice and collecting data from a wide range of perspectives and experiences (Jeppesen, 2005).

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3.2.2 Research Methodology

Methodology is a combination of techniques used to inquire into a specific situation (Easterby-Smith et al., 2012). The research methodology decision identifies how the researcher will study the phenomenon (Arbnor & Bjerke, 2008). It refers to the decisions of the main systematic steps of research, and how the researcher will study the phenomenon in order to achieve the research objectives and answer the research questions (Silverman, 2013).

3.2.2.1 Research Approach

There are three main strategies of inquiries providing the overall research direction. These are the quantitative approach, the qualitative approach and the mixed methods approach (Creswell, 2013b). This research adopted a qualitative research approach.

The quantitative approach is hypothesis-testing research, whereas the qualitative approach is hypothesis-generating research (Auerbach & Silverstein, 2003). Choosing an appropriate research approach should be driven by the research problem and research objectives (Arbnor & Bjerke, 2008; Silverman, 2013). The qualitative and quantitative approaches develop a trade-off between targeting a specific situation and generalizability, and between in-depth and broad investigation by collecting different kinds of data (Silverman, 2013).

The quantitative research approach is more applicable to answer questions that investigate relationships between two or more known and measured variables looking at clarifying, controlling and predicting the research problem based on these variables (Leedy & Ormrod, 2010). The collected data is in the form of numbers and statistics. Survey and experimental research are the main strategies used based on quantitative research (Creswell, 2013b). This approach starts with developing hypotheses and collecting numbers and facts to test these hypotheses and confirm theories. It aims at establishing a basis for absolute truth (Easterby-Smith et al., 2012). A quantitative research approach, which emphasizes the measurement and analysis of causal relationships between two or more known and measured variables, is usually used when the subject was generally measured once or more; the intention is to establish associations and causality between variables (Leedy & Ormrod, 2010). Accordingly, at this stage a quantitative research approach is not an adequate methodology to in depth investigate servitization in a new context.

Conversely, the qualitative approach is more suitable when ambiguities surround the research problem (Chia, 2002). Also, when the phenomenon is still under investigation and considered in the exploratory phase. This is where the researcher's main objective is

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generating knowledge rather than testing theory (Silverman, 2013). Usually, it is used to investigate organizational development based on empirical studies (Döös & Wilhelmson, 2014). The qualitative approach aims to develop new insight and actions through collecting discourse and experiences, achieves a deep understanding and develops detailed stories to describe a phenomenon (Easterby-Smith et al., 2012). It enables a holistic and in-depth examination of a research phenomenon within its context. Also, when the phenomenon is still under investigation and considered in the exploratory phase. This is where the researcher's main objective is generating knowledge rather than testing theory (Punch, 2005; Silverman, 2013). Mixed methods research resides in the middle by incorporating elements of both qualitative and quantitative approaches. The mix methods research design combines the two forms of data collection in a study. The approach is a combination of theory generating and theory testing research (Creswell, 2013b).

The selection of a research approach is based on the nature of the research problem and research purpose (Silverman, 2013).This research is developed to examine the role of servitization strategy in the real estate development industry. To our current knowledge, this is the first attempt to apply servitization within the real estate development context. In fact, the servitization strategy is still under examination and in the development stages (Gebauer et al., 2012b; Baines, 2013; Lay, 2014; Baines & Shi, 2015). As a research topic, servitization is not easy to examine, which requires more critical and in-depth examination of the phenomenon (Lay, 2014). Studying servitization requires a long-term focus (Turunen & Neely, 2012) and a holistic approach to obtain a better understanding of such a complex phenomenon (Brax & Jonsson, 2009). Moreover, studying servitization and putting it into practice in new contexts is a sophisticated process and requires full in-depth investigation (Lay, 2014). Given that the phenomenon is under examination and still in the developmental stages where there is a limited knowledge available about servitization, a qualitative research approach is more a suitable. The qualitative approach was a better fit for the research problem, the type of research questions and the research purpose. At this stage, the knowledge pay-off of using a qualitative approach will be much more than using quantitative or mixed methods approaches.

Nowadays, the popularity of qualitative research has increased and its contributions have become more valid (Hodges, 2011). Case study, ethnography, grounded theory, phenomenological and narrative researches are the main strategies of inquiry that are used based on qualitative research (Creswell, 2013a). The qualitative design is employed to answer the why and how questions, collecting human behaviors, opinions and experiences that are difficult to obtain through a quantitative oriented method. From a philosophical

viewpoint, a qualitative approach is more adequate with a critical realism, which believes in the objectivity and subjectivity of reality. Together people and world make up the consciousness of knowledge. This knowledge is not an absolute and could be gathered, developed, verified, accepted or rejected, and people make their own contribution in developing reality.

3.2.2.2 Logical Reasoning

Logic reasoning refers to science of drawing of inferences or conclusions from known or assumed facts correctly (Kothari, 2004). Deductive and inductive are the two broad methods of reasoning (Creswell, 2013b). Deductive reasoning studies the phenomenon from a solid theoretical background based on a top-down approach. The researcher is moving from general theory to a specific situation (Creswell, 2013b). Researchers observe the organization seeking evidence that supports the pre-developed conceptual framework to test the applications of a particular theory (Lett, 1990). Deductive approach is general associated with quantitative research. The conclusion follows logically from available facts (Creswell, 2013b).Contrarily, inductive reasoning works the other way, moving from specific observations to broader generalizations and theories. The inductive-based approach looks at generating a theory through observation rather than testing an existing one (Eisenhardt, 1989). The researcher moves from a specific situation to general theories. The process starts with setting a research question then collecting observations and generating general propositions (Creswell, 2013b). According to Lett, (1990), the approach inductively studies the phenomenon based on a bottom-up approach through observing organization members' actions, behaviours and interactions, and incorporating researcher's experience to interpret these actions. This requires a close participation and work field observation to deeply understand and explain the research phenomenon. The inductive approach is associated with a qualitative research. The conclusion is likely constructed from people opinions and experiences (Creswell, 2013b).

This research is designed to generate theory rather than theory testing. An inductive data inquiry approach has been adopted. The main goal is to generate theoretical ideas from the data. It extends the premises and makes a claim beyond the cases that are given. The inductive approach is associated with qualitative research. It is a process of reasoning that moves from making observations to forming conclusions. It can also be thought of as starting from specific examples and moving toward a general statement. Inductive reasoning allows one to develop a theory based on learning from experience. Patterns and resemblances are formed to reach conclusions and generate theory.

3.2.2.3 Case Study Approach

Case study research is a qualitative approach in which the investigator explores a real-life, contemporary bounded system over time, through detailed in-depth data collection (Creswell, 2013a). It is one of the first approaches of research to be used based on a qualitative methodology (Starman, 2013). The case study is also widely used as an effective methodology in operations management research (Voss & Godsell, 2015). The qualitative case study based-research is considered a valuable research strategy to generate or develop theory, evaluate systems, examine or articulate processes and develop interventions (Baxter & Jack, 2008). A case study is a more appropriate strategy that deals with discovering, exploring and understanding concerns based on answering how and why type questions (Voss et al., 2002; Yin, 2013). Steenhuis & Bruijn, (2006) argue that when there are no previous studies for guidance or former defined variables or propositions, conducting a research based on the use of a case study is imperative.

The qualitative case study is defined "as empirical research that primarily uses contextually rich data from bounded real-world settings to investigate a focused phenomenon" (Barratt et al., 2011, p.329). In fact, there are numerous calls for more case studies research in the field of operations management looking at more empirical evidence; as it is more objective and more oriented toward real life situations and deals more with direct observations (Meredith et al., 1989; Voss, 2002; Steenhuis & Bruijn, 2006; Barratt et al., 2011; Ketokivi & Choi, 2014; Voss & Godsell, 2015). The case study serves a variety of purposes and could be used in different philosophical positions or research approaches (Crowe et al., 2011). According to Yin, (2013), case studies can be explanatory, exploratory or descriptive: the exploratory case study enables researchers to get a feeling for potentially important variables and to describe phenomenon in the appropriate contextual setting. The causality case study establishes the cause and effect relationship and the descriptive case study involves making detailed clarification from the case study.

Barratt et al., (2011); Ketokivi & Choi, (2014) and Voss & Godsell, 2015 address the importance of qualitative case study research in operations management, as a scientific method producing more meaningful and significant contributions to knowledge, particularly in the area of developing theory and exploration of a topic. According to Myers, (2013), the case study is a preferable research strategy in business and management to use empirical evidence from representative organizations to contribute to knowledge and practice. It provides multiple understanding dimensions of the research in its practical environment (Crowe et al., 2011). Also, it produces great influence directly applicable to new and creative visions, concepts and advanced theoretical ideas (Voss et al., 2002). Furthermore,

it provides more practical knowledge, focusing on learning rather than proofing and provides researchers with more freedom to investigate the problem (Flyvbierg, 2006). It also provides researchers with rich data and materials that increase the degree of theoretical validity (George & Bennett, 2004). Finally, case study approach is very suitable for serving the empirical purpose of inductively identifying additional variables and theory building. It is particularly useful for offering insight into a real world phenomenon and describing how practice is actually implemented (Starman, 2013).

This study is developed to elicit a rich insight into real estate development practice. Realizing the importance of the study context, a case study research therefore has been adopted. The key objective is to develop servitization theory in real estate development industry through in-depth investigation of a servitization strategy in a real-life situation. In order to achieve this objective, eight different companies managing various building projects in Jordan were selected. These companies operate in different market segments and in different geographical distributions around Jordan. Case study is valuable in practice-oriented fields such as business research. It allows the exploration and understanding of complex issues. It provides knowledge that is more practical and supports in-depth investigation of the problem. It also provides researchers with rich data and materials that increase the degree of theoretical validity.

3.2.3 Research method

Research method refers to the activities of data collection and data analysis. It is a series of interconnected processes aiming at collect viable information to address the research problem (Creswell, 2013a). Servitization strategy is still under examination and in the development stage (Lay, 2014). The traditional research strategy would not produce sufficient knowledge regarding how offering services influences businesses (Gebauer et al., 2012b; Baines & Shi, 2015). Smith et al., (2014), argued that a flexible research method and multiple techniques are required to study servitization. As well as, the research phenomenon is not well identified (Baines & Shi, 2015). Researchers and business policy makers are struggling to define servitization (Baines, 2013; Baines, & Shi, 2015). It is a complex and multifaceted phenomena (Baines et al., 2009a; Baines, 2013; Lightfoot et al., 2013). According to Baines & Shi, (2015), who are studying servitization for a long time, in terms of studying a servitization strategy, all research practices have their limitations; only the Delphi is a valuable method to elicit rich data and in-depth information and it fits well to expose service provision practices more efficiently. It is more appropriate to examine a servitization strategy, which currently has incomplete knowledge and information. They recommend using Delphi method to investigate servitization adoption and extend
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servitization further understanding (Baines & Shi, 2015). In additional, servitization strategy has been studied by different scholars based on several disciplines. These several disciplines participate in forming the servitization strategy (Baines et al., 2009a). Still, there are no universal agreed codes or particular definition or description of servitization (Lay et al., 2009; Servadio & Nordin, 2012). In fact, not only servitization is a multifaceted, but also, the real estate development is a multidisciplinary and a fragmented industry, where several parties are involved in fulfilling a project (Ankrah & Langford, 2005; Gehner, 2008).

Therefore, this study is carried out based on an incremental data collection strategy that includes the principles of Delphi study, which includes multiple stages of data collection, analysis and refining cycles. The Delphi technique attempts to achieve three main objectives as follows:
1. To systematically collect empirical data of a phenomenon that lacks comprehensive historical data in a new research context.
2. To reach categories saturation covering all aspects of servitization in real estate development and to ensure that these aspects are well-developed.
3. To develop consensus knowledge and achieve a convergence of opinion on the servitization in the real estate development industry.

3.2.3.1 The Delphi Method

The Delphi Method is widely accepted and used as a data collection technique that is applied widely to variety of problems in different domains (Hsu & Sandford, 2007; Pätäri & Sinkkonen, 2014). Delphi is a modern, iterative and interactive data collection process that provides deep understanding of the research topic, by systematically obtaining consensus knowledge from a panel of experts to support different research purposes (Hasson et al., 2000; Hallowell & Gambatese, 2009; Worrell et al., 2013). The main objective of Delphi method is to obtain reliable consensus from a panel of experts (Pätäri & Sinkkonen, 2014). The Delphi method is more appropriate for exploratory research, particularly with a complex, interdisciplinary research topic (Akkermans et al., 2003). It is a more flexible, efficient, and effective technique that could be used to clear ambiguity surrounding the research and to enhance the general understanding of the research problem (Powell, 2003; Skulmoski et al., 2007). The Delphi method improves objectivity of the research result using a structured way of data collection based on several sets and sharing opinions (Powell, 2003; Hallowell & Gambatese, 2009). Habibi et al., (2014) argue that using the knowledge and perspectives of experts based on conducting a qualitative Delphi study is very helpful to the development of an informed strategic decision.

- ### *3.2.3.1.1 The Delphi Data collection Process*

Delphi is used to achieve theoretical saturation and develop consensus knowledge (Skulmoski et al., 2007). According to Worrell et al., (2013) the Delphi study provides a deeper understanding, which requires the design to be set before implementation. Hallowell & Gambatese, (2009) demonstrate the objective use of the method in management research based on a qualitative approach as follows: the technique involves two or more rounds of data collection, with the output of the previous round providing the input of the next round. These rounds consist of between two and six rounds. According to the writers, two or three rounds are preferable, as the outcome of the Delphi study is more accurate after round two and it becomes less accurate with each additional round. The Delphi data process could start by using a brainstorming session or based on identified elements that were deduced from the literature and secondary data research (Worrell et al., 2013). According to Malhotra & Birks, (2007) Where the process starts with identified elements from secondary data enhances problem identification and description and improves the preparation for more appropriate research questions, and improves primary data collection and interpretation.

In terms of data collection, Hsu & Sandford, (2007) argue that the advanced technology facilitates the use of the Delphi method, where email, online interviews, and phone calls are typically used to collect data. The use of advanced technology reduces the time required to conduct a Delphi study, and aids in reaching research participants (Okoli & Pawlowski 2004). This mode of interaction based on advanced technology is more objective and rigorous (Skulmoski et al., 2007).

- ### *3.2.3.1.2 Panel Size*

In terms of the number of experts, usually, they are ranged from three to eighty experts, and the average number is between eight and sixteen. Still, the size of a Delphi panel is dependent on the availability of experts, the level of representation and the capacity of the researcher (Hallowell & Gambatese, 2009). It is also recommended to select multiple experts based on diverse perspectives and specialties to reach an objective outcome (Habibi et al., 2014). Nevertheless, these practices are changeable and researchers adjust the Delphi technique by using different practices to fit particular circumstances (Heiko, 2012).

- ### *3.2.3.1.3 Delphi Data analysis*

Data analysis refers to the process of converting data into more meaningful information and knowledge based on the systematic examination of every component of the data, aiming to develop conclusions about the topic under examination (Boeije, 2010). Nevertheless,

analysing qualitative data is not an easy process (Silverman, 2013). The analysis of qualitative data aims to make valid inferences from a large amount of collected data (Sekaran, 2006). According to Hancock et al., (2007), the data analysis process requires a summary of the large volume of collected data, to find frequencies, patterns, differences and similarities. Finally the presentation of the results is carried out in a way that addresses the research problem and contributes to knowledge. Practically, many techniques have been used to analyse qualitative data including content analysis, conversation analysis, discourse analysis, narrative analysis, ethnographic analysis, and interpretative phenomenological analysis (Hancock et al., 2007). Selecting the appropriate data analysis technique depends on several factors, such as the type of data collected , the size of data collected, the research objectives, the expected outcome, the level of technology and the researcher preferences (Kondracki et al., 2002).

Skulmoski et al., (2007) argue that the data of a Delphi study could be analysed by different analysis techniques based on the type of data collected, the research questions, and the objectives. Usually, the first round is designed to generate basic ideas. It starts with a set of general and comprehensive open-ended questions that are distributed based on flexible data collection tools allowing more freedom for the respondents. Usually, content analysis is the data analysis technique used to analyse the first round data by identifying substantive statements from the data and classifying similar answers together (Hasson et al., 2000). Then, the next round is typically designed on well-structured questions (Hsu & Sandford, 2007). Here, thematic analysis is preferred by identifying the main concepts, categorizing concepts, and demonstrating the relationship between the categories (Majzner, 2008; Brady et al., 2013). In this study, four data analysis techniques were used to analyse different data collected from different sources. , These techniques are document analysis, content analysis, thematic analysis, and template analysis. Each one is addressed in more detail in the next section.

- ### *3.2.3.1.4 The Delphi Outcome*

Usually, the data collection process in Delphi is stopped when sufficient data have been exchanged, the research questions are answered, categories saturation is achieved, and consensus knowledge is reached (Skulmoski et al., 2007). According to Miller, (2013), the consensus knowledge is the process of developing mutual agreement from multiple viewpoints. A debate has centred on how the consensus of the overall study could be developed (Hanafin, 2004). Although, the measurement of consensus is not the aim of the Delphi technique; it has to be considered as a valuable component of data analysis and interpretation in the Delphi method (Heiko, 2012). The measurement of consensus

knowledge development greatly varies (Millar, 2001; Hanafin, 2004; Okoli & Pawlowski, 2004; Skulmoski et al., 2007). Heiko, (2012) identified fifteen different processes for measuring consensus, where the consensus knowledge could be pursued using the iterations process, or personal interviews, or using the weighted average and other statistical methods (Heiko, 2012). Millar, (2001) used qualitative words such as "we agree" to judge the development of consensus knowledge. Some scholars considered the rounds of Delphi as a basis of determining the development of consensus knowledge (Habibi et al., 2014). Other scholars used the post rounds process, which is another process to measure the development of consensus knowledge. This is where individuals agree with the final result, and the experts validate data interpretation and categorise variables (Hanafin, 2004; Okoli & Pawlowski 2004). Finally, Skulmoski et al., (2007) suggested the reality matrix to measure the development of consensus knowledge. This matrix is a re-presentation of the key issues of the study; the key findings of the investigation and how these findings emerged.

3.2.3.2 The Design of the Delphi Study

This study applied the Delphi method to elicit a rich insight into real estate development practice. The key objectives were to elicit expert opinions on the viability of the servitization as a new business model, and to identify the main interruption factors in terms of adopting servitization as well as potential development needs of such a strategy. In order to achieve these objectives, three rounds of online Delphi study were conducted to collect data from the participants within the selected case studies (See Figure 3-3).

Figure 3-3: The Design of Delphi Study
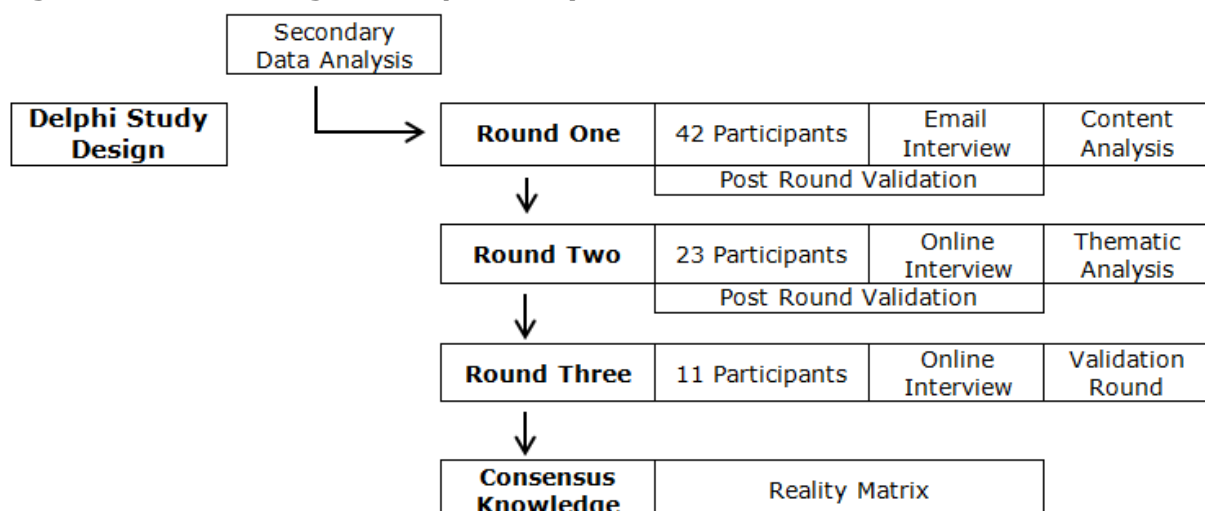
The Delphi process started by identifying general elements related to a servitization strategy and service provision from the literature review and secondary data research. In

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the first round, 42 participants at different organizational levels were interviewed via email. This round served as a basis for the second round in-depth interview. In the second round, data were collected from 23 executive managers where online interview was used to collect data. In the third round, data were collected from 11 executive managers also based on online interview. Evidence and opinions have been collected from experts in the field. The participants were all involved in the process of service provision. For instance, the respondents' profile includes CEO, CFO, Deputy CEO for Industrial Investment, Deputy CEO for Marketing and Sales Affairs, Deputy CEO for operations and engineering affairs, Deputy CFO for administration affairs, Chairman, office manager, Sales Director, Marketing Director, Subsidiaries Managers, Project Managers, Quality Assurance Managers, and a Budgeting, Treasury & KPIs Manager. Those executive managers work in eight different companies and managing various building projects in Jordan. These companies operate in different geographical distributions around Jordan.

Interviews are the most widely used tool for collecting data in qualitative research (Creswell, 2013a). Generally, there are different techniques used for conducting an interview such as face-to-face interview, phone interview, online interview and email interview. Each of these techniques has its own advantages and disadvantages (Opdenakker, 2006). Nevertheless, in business research, respondents often cite that they are too busy and do not have time. They can also be hard to reach. Gaining access is the main problem when collecting qualitative data. Therefore, researchers have to be more creative in the data collection process (Easterby-Smith et al., 2012). Furthermore, all social research methods develop in relation to social, political and intellectual factors. How researchers approach their investigation is clearly intertwined with the world in which they live (Hooley et al., 2012). In the current age of advanced technology, the use of internet-based data collection has risen, particularly in qualitative research (Meho, 2006; Stieger & Göritz, 2006; Hunt & McHale, 2007; Phellas et al., 2011; Ratislavová & Ratislav, 2014; Bowden & Galindo-Gonzalez, 2015). The two main forms of internet-based methods are email interview and online interview (Meho, 2006; Hooley et al., 2012; Salmons, 2012).

- ### *3.2.3.2.1 E-mail interview*

E-mail interview refers to the process of send and receive questions and answers through computer-mediated communications (email) (Salmons, 2012). It involves sending the research questions in the text of an email or in an attachment, which respondents answer and return (Phellas et al., 2011). This means there is a lead time between receiving the questions and answering them, which offers more flexibility for participants to read and answer the questions in their own time (Ratislavová & Ratislav, 2014). This lead time also

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allows the researcher to gain in-depth data, as participants have time to read, understand and think of appropriate answers (Meho, 2006; Hunt & McHale, 2007; Ratislavová & Ratislav, 2014). Email interviews have been widely used as a data collection method, and there is increasing evidence that it is an effective research tool (Hunt & McHale, 2007). It has several advantages. Collecting data via e-mail allows large numbers of respondents to participate. Geographical location is not a barrier any more (Phellas et al., 2011). It reduces the process cost and time and allows for easier access to participants regardless of their locations or positions. In addition, an email interview is more objective as it inhibits the effect of the researcher's presence on the respondents. Participants are also willing to provide more truthful answers by email than in person. Email interviews tend to give a more considered approach and provide a clean transcript (Bryman & Bell, 2015).Finally, it supports collecting direct information related to what is being investigated based on direct questions (Meho, 2006; Hunt & McHale, 2007; Phellas et al., 2011; Hooley et al., 2012; Ratislavová & Ratislav, 2014; Bryman & Bell, 2015).

- ### *3.2.3.2.2 Online Interview*

Online interviews have become one of the most commonly used methods for collecting qualitative data (Sullivan, 2012; Janghorban et al., 2013). The online interview refers to an interactive video conversation through computer-mediated communications. It is similar to face-to-face interviews, except it involves using advanced technology to conduct the interview. It enables real-time dialogue between researchers and participants (Salmons, 2010 & 2012). Nevertheless, "in comparison to face-to-face interactions, Internet interactions allow individuals to better express aspects of their true selves" (Sullivan, 2012, p, 56). An online interview is a free communication service that provides an opportunity of video interviewing with people wherever they are (Janghorban et al., 2013). An online interview increases the researcher's opportunity to reach participants. It is inexpensive, flexible and provides more access as it is more compatible with the participants' time and place (Hinchcliffe & Gavin, 2009). "The online interview has overcome time and financial constraints, geographical dispersion, and physical mobility boundaries, which have adversely affected onsite interviews" (Janghorban et al., 2013, p1). The main limitation is that internet-based interviews require the potential participant to have an advanced technology devise and internet access (Ratislavová & Ratislav, 2014; Bowden & Galindo-Gonzalez, 2015).

3.2.4 The Limitations of the Research Design

This research was mainly designed to achieve a methodological fit between the nature of servitization, the importance of research contexts, the research purpose, previous literature,

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and the expected outcome. Thus, this study adopted an exploratory single case study research based on a qualitative approach relying on Delphi concept to collect data. However, there is no perfect research design; regardless of types of research methodology adopted for the research, still criticisms apply (Choy, 2014).

3.2.4.1 Limitations of the Qualitative Approach

The qualitative approach has strengths and weaknesses (Silverman, 2013). The approach is time consuming; requires skill; the results are difficult generalise and usually the personal knowledge and experience impacts on the research process (Choy, 2014). In order to maintain high quality during the research, several applications have been applied as shown later in this section.

3.2.4.2 Limitations of the Case Study

Although there are numerous advantages of case study based research, it is exposed to number of criticisms. These include lack of rigorous research design, production of too much data, which often leads to more bias and misleading results. Also, the results are hard to generalize (Yin, 2013). Voss et al., (2002) argue that the case study requires a long time, high skilled observers, and good analytical researchers. Also, the data is usually limited to the chosen case or chosen process (George & Bennett, 2004). However, "it remains popular research methods and many important operational concepts have been developed by using a case study approach" (Dehe & Bamford, 2015 p.6720).

In order to avoid these criticisms, Yin recommends a clear case study design based on clear protocol. This protocol may include: an overview of the research project; the main research questions that lead to the data access procedure; a data collection protocol; a clear unit of analysis; and a chain of evidence which links research questions to collected data and the data analysis process (Yin, 2013).

3.2.4.3 Limitations of the Delphi Method

Time is one of the main Delphi study limitations; where the sequential and iterative nature of the Delphi process is time consuming making the researcher allocate a large amount of time to successfully complete a Delphi study (Hsu & Sandford, 2007). Hallowell & Gambatese, (2009) considered the size of the panel and the level of panel expertise as important, where low quantity or low quality of respondents decreases the Delphi outcome. Moreover, the characteristics of selecting the expert panel fluctuate and are not obvious, thus, it should be selected using well-defined characteristics (Hallowell & Gambatese, 2009). Habibi et al., (2014) view the uniformity of Delphi, the lack of structure when conducting a Delphi study and developing a consensus of knowledge as the main

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limitations. Therefore, it is appropriate to develop a set of procedures to reach mutual agreement.

3.2.5 Section Summary

In the above section, the research design was introduced. The section represents the conceptual part of the chapter, which was developed to rationalize the selection of particular research elements and the relevant aspects of selecting a specific research design were demonstrated. Table (3-1) below summarizes the relevance of the selected research design.

Table 3-1: Relevance of the Selected Research Design

Research Design Aspects	The Selected Design	The Rational of Selected Design
Ontology standpoint	Relativism Ontological	What counts for the reality could vary from place to place and industry to industry
Epistemology	Subjectivist Epistemology	The importance of the human participation element in understanding and formulating reality
Philosophical position	Critical Realism	The complexity of business research and the complexity of the research topic
Research Approach	Qualitative Approach	Exploring an immaturity research topic into a new research context
Research Paradigm	Inductive Paradigm	A theory developing approach based on gradual learning from people experience
Research Strategy	Case Study Strategy	The important of the study context. Improving the understating of servitization strategy and its operational issues.
Research Method	Delphi Study	An iterative and interactive data collection process to develop a mutual agreement from multiple viewpoints

Achieving sustainable competitive advantage, based upon services provision, is often claimed to be viable for businesses. Still, no one has investigated this statement in the real estate development context and developing countries. This statement could be defined and experienced differently by different people, as what counts for the reality could vary from place to place and industry to industry. This view goes along with the relativism ontological standpoint, which is a moderate position between objectivism and subjectivism of reality. It recognizes that social life is generated by the actions of individuals and has an external impact on them. The real estate industry could have different interpretations of servitization and a different way to adopt a servitization strategy. Thus, the research will examine the significance of offering service activities to the development of competitive advantage. To do so, the research explores the opinions of experts in the field as to the value of such a strategy and formulates a best practice for adopting servitization strategy in real estate development. Such a view could be influenced by the industrial context and the experts' background as real estate developers. This view of the researcher goes along with the

subjectivist epistemology adopted, which stresses the importance of the human participation element in understanding and formulating reality. Understanding the challenges of studying servitization, which has contributions from multiple business, disciplines increased research complexity. Also the multifaceted real estate development industry increases this research complexity. This complexity requires multi-perspective lenses to fully understand business situations. A critical realism standpoint is held by this study. A critical realism focuses on explaining knowledge within a new context through focusing on objectivity and subjectivity of the reality. It is an appropriate approach to extend the servitization knowledge into real estate development.

From a philosophical view point servitization knowledge is not only based on fixed foundations but also on human perception that includes opinions, assumptions and expressions. A qualitative research is characterized as interpretative research emphasising subjective experiences. Qualitative research collects human behaviours, opinions and experiences. It is more suitable to cover the depth of meaning that is important to understand social science, where reality is considered socially constructed and context interrelated. The inductive approach is associated with qualitative research. It evaluates the degree to which evidence can show the conclusion to be true. It allows for developing theory based on gradual learning from experience and to build up an understanding. Accordingly, this study is to develop theoretical ideas from the data, which is adequately imbedded in a number of relevant cases. Case study approach is very suitable for serving the empirical purpose of inductively identifying additional variables and theory building though in-depth investigating the research phenomenon in a real-life situation. Case study is a part of qualitative research. It is particularly useful for offering insight into a real world phenomenon and describing how practice is actually implemented. Nevertheless, servitization is a multifaceted concept, and real estate development is a multidisciplinary and a fragmented industry. In light of this a qualitative Delphi approach was adopted to reach category saturation and develop consensus knowledge by incrementally and systematically collecting empirical data on the servitization strategy in the real estate development industry. The qualitative case study research strategy enabled the research to gain more detailed and in-depth examination. The incremental research design based on iterative research approach through inductive reasoning helped the researcher to move forward and backward between the literature and empirical data. Also, the concept of a Delphi study supported eliciting a rich insight into the servitization practices from a cross-section of experts. Still, there is no perfect research design; several recommendations were applied to maintain research quality as shown in section two and detailed in section three. The next section is the practical part where the research process is outlined.

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3.3 Research Process

The research process is defined as detailed scientific steps that are used to collect and analyse data in order to address the research objectives and answer the research questions (Bhattacherjee, 2012). Barratt et al., (2011) studied the state of qualitative case studies in operations management and suggested providing sufficient details in term of research design, data collection and data analysis to make them more rigorous and consistent. Yin, (2013) argued that a detailed research process creates a more robust case study, and increases research objectivity and dependability. Accordingly, a research process (figure 3-4) that addresses the case study design was developed influenced by Maxwell, (2013) approach of data inquiry; and in line with Barratt et al., (2011) qualitative case study framework.

Figure 3-4: The Research Strategy Design Informing the Process Undertaken Of the Research in the Course of Conducting A Qualitative Investigation.
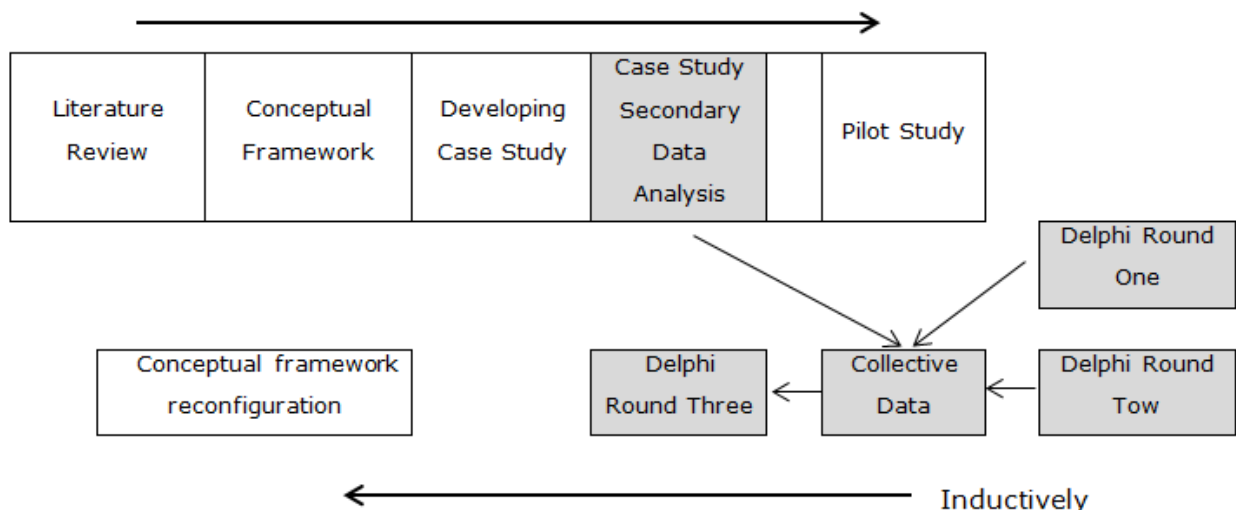
3.3.1 Literature Review

Reviewing literature refers to the process of selecting, describing, summarising, evaluating and clarifying the body of knowledge that relates to the selected research area. The purpose of a literature review is to develop the current state-of-the-art, develop the potential future research, and mainly, construct a theoretical knowledge of all aspects of the study. This theoretical knowledge will be used to guide the research strategy and construct the research questions (Ridley, 2012). According to DMU Libraries & Learning Services (2013), searching literature could be conducted using several approaches: systematic, citation, retrospective and targeted literature review. These approaches vary depending based on the research topic and the availability of research material.,

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Servitization strategy has been studied by many different research groups (Baines et al., 2009a). However, the results show a disjointed and fragmented knowledge, which was broken down into several perspectives, which did not provide an overall picture (Lay et al., 2009; Servadio & Nordin, 2012). In order to cope with these fragmented materials and diverse sources of data and to develop an overall understanding of the topic from this large amount of data, as well as ensuring that all relevant aspects of the phenomenon are covered, a systematic approach of literature review is necessary (Kauppi et al., 2013; Hou & Neely, 2013).

A systematic literature review refers to the process of searching a large base of literature to identify and analyse the best available evidence and produce a good level of understanding and knowledge (Colicchia & Strozzi, 2012). The study adopted a partial systematic literature review and networking analysis influenced by the work of Colicchia & Strozzi, (2012). This approach consists of systematic literature review and citation network analysis. The underlying assumption of adopting this approach is that different research groups are studying servitization based on different perspectives. This approach allowed the writer to follow and understand these different perspectives.

The literature research was divided into two phases, a broad focused bibliographical search on servitization strategy, and a proposal for a conceptual framework that captured servitization activities. The first step was oriented to develop an understanding of the key themes of servitization and identify its keywords. The study initially started by reviewing two state-of-the- art-articles (Baines et al., 2009a) and (Baines et al., 2007) addressing servitization strategy and product services system. Accordingly, several keywords related to servitization were identified such as product–service system, integrated services, integrated solutions, service innovation were identified. Also, several aspects and questions that related to servitization were developed. These included a definition of servitization; the evolution of servitization; the motivations for servitization; the strategic benefits and challenges of offering services; different classifications and typologies of service provision and how the transformation process is conducted.

The second step was oriented to identify existing literature on the subject and its branches, identifying the content and analysing it systematically. However, there were different research groups studying servitization form different perspectives, which complicated the understanding of it. Therefore, the study adopted partial systematic literature and network analysis. This is where three key research groups were identified as main sources and their works were followed based on the citation databases through the co-citation matrix and

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cross reference matrix (cited by). These three key sources are: the Aston Centre for Servitization Research and Practice, which is directed by Tim Baines, and has been addressing servitization since 2007. Secondly, The Cambridge Service Alliance, directed by Andy Neely, also addressing servitization since 2007. Finally, The Service Research Centre, University of St. Gallen Switzerland, directed by Heiko Gebauer, which has been studying servitization since 2004. These three are studying servitization extensively and deeply focussing on optimizing service provision in manufacturing. The literature search within these three groups covered all the subjects, years, and types of publications such as journals, books, working papers, conferences papers and PhD theses.

In the later stage, the topic led to a cross-disciplinary literature review whereby, articles from different discipline were reviewed to identify relevant and new aspects of servitization or services in general., The keywords were employed to gather articles from different data bases using summon which is the search engine at the University of Huddersfield. Also, Google scholar was used to ensure the widest possible cover of literature available. A broad understanding of servitization and an initial framework were developed. Also, in order to keep engaged and informed with up-to-date literature, Google alert was set to monitor any new literature published related to servitization and the writer joined many research groups including LinkedIn. Generally, each article was reviewed, looking at the value added to the preliminary framework. Articles with repeated information or with no added values were excluded.

3.3.2 Conceptual framework

Today, knowledge is interconnected and multifaceted (Easterby-Smith et al., 2012). In order to qualitatively explore this complex knowledge, a conceptual framework, which refers to a plan linked to several concepts, is essential for studying a multidisciplinary phenomenon, which is focussed on understanding rather than predicting (Jabareen, 2009). According to Colicchia & Strozzi, (2012 p.404), "The Literature review is a major contribution to research progress." Bamford, (2008), argues it is essential for researchers to use the existing literature to develop a conceptual framework that identifies the potential study variables and provides an abstract pre-conception about the findings. Voss & Godsell, (2015) argue in operations management research a research framework should be developed from the extant literature. Barratt et al., (2011) recommend conducting a focussed qualitative case study in operations management to increase the level of rigour and consistency.

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According to Maxwell, (2013), the research conceptual framework is either in a narrative or graphic form that explains key factors, concepts, or variables of the research project. Usually, in a qualitative research, this conceptual framework is mainly a blueprint or a perception of the research topic. However, it is considered a vital starting point of research projects by constructing a clear structure based on the features of the phenomenon deduced from preceding studies (Bamford, 2008). The Research framework is vital for several necessary functions. These include identifying the study scope; conceptualizing the research; constructing the study foundation; select appropriate research questions and research methodology; establish a reference point for data interpretation and discussion of the findings; and finally, determine how the study will advance current knowledge (Merriam & Simpson, 2000). Moreover, in management studies especially a case-based study, a conceptual framework must be developed, and defined before entering the research field. This framework is an essential element of effective, efficient, and high-quality research (Cepeda & Martin, 2005; Barratt et al., 2011; Voss & Godsell, 2015). The framework informs and guides the research project toward the important aspects that need to be examined through demonstration of theories, variables, previous results, systems, expectations, models and activities that relate to the research phenomenon and research project (Maxwell, 2013 ; Creswell, 2013b).

In order to examine the servitization strategy studied by different research groups (Baines et al., 2009a), where the results are disjointed and fragmented (Lay et al., 2009), a strategic management model, consisting of a strategic formulation, implementation, and evaluation (figure 3-5), has been addressed in this study as an umbrella to develop a holistic conceptual framework of a servitization strategy decision.

Figure 3-5: Strategic management decision model adapted from (David, 2013)

Understanding The Strategy	Strategic Formulation	Strategic Implementation	Strategic Evaluation
Understanding that the strategy is concerned with identifying the impact , the expectations and the influence of the strategy on an organisation's strategic position, which also involves the options for strategy in terms of both direction and implementation methods	the strategy development processes to support successful performance and establish long-term objectives	Structuring the organisation to support the strategic successful adoption , relocating of resources and Managing organizational change	Strategic assessment through comparing expected results with actual results and taking corrective actions

The strategic management discipline has roots in all business areas (Harrington & Ottenbacher, 2011). Accordingly, several abstract aspects of servitization were identified

from the literature review and rearranged into a concept model proposition to create a more comprehensive model. The specific arrangement of these aspects reflects the understanding of the researcher on how the servitization strategy is working. Still, within this conceptual framework, the content of these themes and how these themes look like in real life is unknown, and relies only on the collected data. Hence, this conceptual framework was used to guide the research process and to aid the collection and analysis of the empirical data. Therefore, the selected reasoning approach allows for adding themes emerging from empirical evidence.

3.3.3 Developing Case study

The purpose of a case study research is using empirical evidences to contribute to the existing knowledge (Myers, 2013). Therefore, the case study could not be randomly selected; its need to be purposefully selected (Voss et al., 2002; Seawright & Gerring, 2008; Silverman, 2013). Still, the designated case study should be accurately representative of the research phenomenon (Silverman, 2013). According to Seawright & Gerring, (2008), a representative case study should be typical of the research category and able to produce insights, information and knowledge related to the research topic.

3.3.3.1 Selecting Case Study

Barratt et al., (2011), argue the case is selected for theoretical or convenience reasons. The theoretical selection approach is used to elect a case that has different settings and is expected to produce different results. The convenience selection approach is used to select a case study that is convenient to the researcher. However, literature provides little guidance on case study selection criteria. The case selection process sometimes is insufficient to answer questions such as: why was this case selected from the global population of cases? Or what would this case contribute to knowledge compared with other possible cases? In order to answer these questions to some extent, the study adopted the selection criteria from the work of (Seawright & Gerring, 2008; Barratt et al., 2011; Silverman, 2013; Hyett, et al., 2014). The case study should be representative of a particular topic, or particular discipline or field, based on contextual description. Also, researcher familiarity of the case study, data availability, and data access are very important. Moreover, Barratt et al., (2011) suggested the number of selected cases should be between 4 and10 to obtain in-depth investigation, enhance external validity, and create more robust results.

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This research is exploring the use of servitization in the Jordanian real estate development sector. The typical representation, the availability of information, data access, and familiarity were the main criteria when selecting these companies. The cases were selected for theoretical and convenience reasons. In this study, the organizations that have been investigated are real estate development companies. The selected cases are eight companies that managing various projects in Jordan. These companies are working under the umbrella of a huge holding company that the researcher has full access to and used to work in. According to Bamford & Forrester, (2003) being a former employee at the selected case study facilitates an open access to the top-level managements, with a full access to the case study data and information.

The selected companies are addressing different market segments, in different geographical locations and based on different visions and missions. These companies are described in more details in chapter four. Those, companies who are managing projects were the main focal point of this study. Each of these companies has its own separate legal entity and each of these companies is working on a unique project. Each project is managed and accomplished by a separate management team. The projects varied and covered residential housing, resorts, public housing, industrial cities, and commercial properties. Each project strives to serve a different segment of the marketplace. Each project provides different type of services. The holding company's role (referred to in the remainder of this study as (HC), is to support, control and provide budgets for their subsidiaries. This balance of centralized and decentralized structure of decision making between the HC and its subsidiaries allow for significant levels of understanding of the development of the service-provision decision both at the HC level, which acts as a portfolio manager and its subsidiaries acting as project operators. Additionally, this structure facilitated and promoted the researcher's works in terms of data gathering, collection, refining and validating.

3.3.3.2 Data Access

In order to gain data access, an introduction letter signed by the main supervisor written on The University of Huddersfield headed paper was sent to the HC. This letter was a starting point to set-up formal arrangements for access to the companies. This letter introduced the research's aims, objectives, the level of access required, and the expected outcome. Accordingly, full access was guaranteed to organizational documents including confidential ones. In addition, the HC assigned a contact person who was responsible for supporting and facilitating the researcher's works. However, they requested that the company names remained anonymous.

3.3.3.3 Case Study Design and the Unit of Analysis

The case design is a plan for gathering data. It involves the selection of cases, variables, data sources and the most appropriate unit of analysis (kervin, 1995). Scholars offer a variety of complementary classifications according to case study type (Starman, 2013). The case study design defines the type of study. According to (Yin, 2013), the case study could be designed as a single case study or multiple case studies. Moreover, there is a choice of using an embedded or a holistic case study design. This research adopted a multiple case studies design. These cases are the core of the inquiry

A single case study design focuses on studying a particular situation within extreme or unique case based on a clear set of propositions, whereas a multiple case study design is studying several case studies. Still, multiple case studies design is more preferred over singly case study design, for these offers roust analytical conclusions and increases external validity (Yin, 2013). Furthermore, a case study could be an intrinsic, instrumental or collective case study. The intrinsic case is designed to explore a case context rather than a theory or a concept, where the researcher is interested in studying the case itself or a particular issue within the case study. The instrumental case study is designed to explore a theory or a concept in a specific context, where the case study acts as a tool to facilitate the understanding of something else. Finally, the collective case study is a research designed to study several instrumental cases (Stake, 2005).

This research is to develop servitization theory in the real estate development industry. And as such, is designed to generate theory from qualitative data. Realizing the importance of the study context dimension, this research is based on a multiple case study approach. The selected case studies are considered the instrumental cases used to study servitization in-depth in the real estate development to develop a theory. The cases are the core of the inquiry using multiple source of evidence.

The case could represent an individual, a decision or a program (Yin, 2013). Accordingly, the unit of analysis refers to the main level at which data is aggregated (Easterby-Smith et al., 2012). The study unit of analysis refers to the main object to be analysed. Usually, individuals, groups or organizations are the common units of analysis in business research. Also, there are other units of analysis such as decision activities, and processes (Voss & Godsell, 2015). Within relativist studies, research could consider different units of analysis (Easterby-Smith et al., 2012) which should be determined at the beginning of the research (Dolma, 2010). Nevertheless, the unit of analysis should be linked to the research objective and the role of theory. As the study could be designed to generate, test or extend a theory,

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this design should be mapped to the appropriate level of analysis (Voss & Godsell, 2015). Business researchers generally use one or more unit of analysis options. Those options include an individual person, events such as business problems, an object such as an operations process, a body of individuals such as groups or organizations, a relationship between two or more individuals and an aggregate unit of analysis (kervin, 1995)

This research is to develop servitization theory in the real estate development industry. And as such, is designed to generate theory from qualitative data. Theory building is an inductive approach, which develops gradually. The study therefore, is carried out based on incremental data collection and analysis stages. Hence, the study involves more than one unit of analysis. The main unit of analysis for this research is the cases, and how these cases design the process of servitization that delivers a competitive advantage by finding patterns in different real estate development companies. The secondary data research focuses on analysing service activities that support gaining organizational competitive advantage. The three rounds of Delphi focus on expert opinions, perceptions, knowledge and expertise regarding offering services activities within the real estate development industry. Therefore, this research tends to develop servitization theory of real estate development industry by analyzing and aggregating the case studies offering service activities and the opinion of experts.

3.3.4 Data Collection & Data analysis

The iterative technique of data collection and analysis was used to achieve category saturation. The process consists of multiple steps of "forth and back" data gathering and data analysis. This is where data are collected then analysed synchronously. The procedure then continues with more data gathering to find more information based on the result gained in the previous step or steps and so forth until reaching "category saturation." The process of "back and forth" allowed the research to conduct a more focused study; collect more in-depth and relevant data;, identify which aspects needed to be added to or made more elaborate; and whether more participants should be considered. Figure (3-6) illustrates the data collection and analysis process.

Figure 3-6: Iiterative data collection and data analysis

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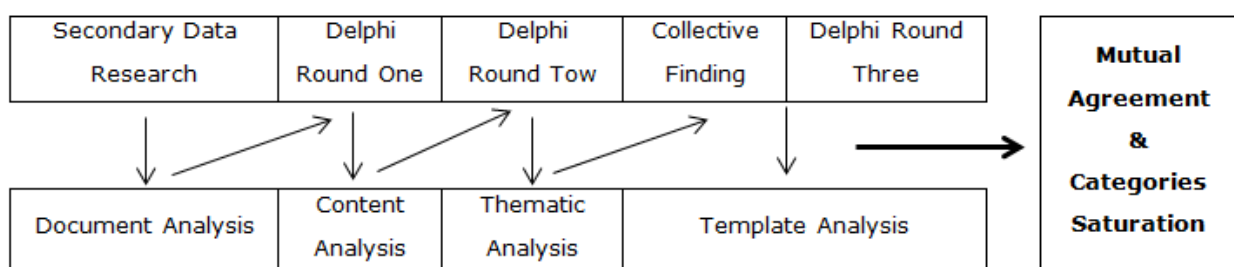
The data collection process started from examining the case studies' secondary data.

3.3.4.1 Case Study Secondary Data

According to Hyett et al., (2014), collecting and analysing secondary data is a reasonable starting point for any research project. It supplies background information and clarifies the main context of the required primary data (Zikmund & Babin, 2012). Secondary data produces large amounts of data used for exploring research questions and gaining a more in-depth understanding of the research phenomenon (Smith, 2008). Also, it provides historical insights of the research phenomenon (Zikmund & Babin, 2012). The secondary data could be deduced from internal and external sources (Zikmund et al., 2012), and it could be studied based on a cross-sectional or longitudinal design. The cross sectional analysis involves data collected at a defined time. The longitudinal design involves repeated observations of the same variables over a long-time period (Andersen et al., 2011). Turunen & Neely, (2012) argue that a long-term focus is needed to understand the evolution of servitization. Benedettini et al., (2015b) argue that examining secondary data is helpful to understand service-offering activities.

The data analysis process was arranged based on longitudinal design, which involved repeated observations of service provision activities from 2004 until 2014. These data were collected so that service-provision activities could be tracked and analysed. The study divided the analysis of secondary data into two objectives, a broad focused search on the background of the case study's companies' and understanding the companies' particular actions and decisions towards the offering of services. In order to analyse these documents, document analysis was conducted. The document analysis refers to the systematic approach of selecting, reviewing and analysing different forms of written text (Guest et al., 2013). Bowen, (2009) argue that document analysis is the main technique used to analysis secondary data based on a purely qualitative approach to generate meaningful data related to the research topic. Although the increased awareness of analysis of secondary data based on document analysis provides a sense of a very large amount of data. Still, there is no standard practical application of the analysis process for which Creswell's, (2013b) general approach of analysing qualitative data was adopted. This consists of three stages, namely, data organization, data reading and data interpreting and reporting.

The secondary data involved internal and external documents. For instance, internal documents included organizational correspondence, minutes of meetings, and annual reports. In addition, external documents such as government reports, business studies and researches, newspapers, websites, and weblogs were also used. Table (3-2) summarizes

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the type of documents used based on secondary data research and the logic behind analysing these specific documents.

Table 3-2: Summary of document types, sources and expected outcomes based on secondary data analysis.

#	Type of document	Sources of document	Objectives
2.	Board of Directors Meetings	The HC & Subsidiaries	Service-offering decisions, activities processes and outcomes at corporate level and business unit level
5.	Business plans	The HC & Subsidiaries	Service-offering plans, activities, and processes at business unit and operational level
4.	Executive Management Coordination Meeting	The HC	Offering services decisions, activities processes and outcomes at the business unit level
6.	Annual reports	The HC	Organizational structure, project description and service elements in projects and financial data.
9.	Marketing brochures	The HC	Project marketing promotion activities
10.	Company Official Website	The HC	Projects description, services description, and organizational services offering language.
7.	Official Prospectus	The HC	Professional Project description
1.	Companies' certificates of registration	Ministry of Trade	Companies official information
8.	Business Disclosure	Amman Stock Exchange website	Important decisions, events, and actions related to offering services.
11.	Business Studies	Private Investment Services Firms	Expert external projects description and competitive analysis
12.	Newspaper	Local news	Projects' news, advertisement and description
13.	Social Networking Website	Internet	Customer and public voice
14.	Governmental reports	e-Government	Economic and political background information

The analysis process started with the companies' certificate of registration, issued by the Jordanian Ministry of Industry and Trade. The process identified the company registered name, capital, shareholder and the company's purpose statement and specialism. Besides, government the document, statistics were reviewed to develop background information on the political and economic environment of the country. The second step involved reviewing the case companies' board of directors' meetings files. Issues related to servitization strategy and decisions that related to offering services were reviewed. In order to focus on servitization strategic decisions at the highest corporate level, The HC minutes of meeting files also were reviewed. Likewise, to view offering service activities at executive management level, the researcher reviewed the weekly management coordination

meetings. Likewise, companies, projects and HC different departments' business plans were also reviewed. In the next step, The HC's annual reports, and business disclosures were reviewed. Usually, these documents are prepared in cooperation with third parties or at least under a specific regulation and specific frameworks to provide transparent information. The documents provide an external description of service provision activities or at least give insight into how the company present these activities to the public. The processes of analysing the annual report started with finding answers to questions such as how the organizational structure which regulates the relations between The HC and its subsidiaries evolved. How The HC describes different projects and services within these projects? It also asks whether the added services considered as the main competitive advantage of the project or the project tangible characteristic and the quality of raw material are the main competitive advantage.

The business disclosures which are documents published by law to reveal critical information about The HC or its subsidiaries were reviewed. The data analysis process relied on finding a disclosure related to services provision decisions or activities and how The HC describes these decisions for investors and public. Furthermore, the organizational language, which is a communication method for external and internal people, was explored. It reflects organization identity, organizational orientation and marketing strategy by which the importance of service element could be inferred. In order to explore this language the company, marketing brochures and company website were reviewed. These are considered an effective marketing tool to inform both internal and external audiences. Also, organizational attitude and language that emanates from the organizational executive management and expressed in the phrases and words used to describe the organizational project were inferred. Finally, in order to view how experts, investors, customers and the public viewed the companies' activities, external investment reports were reviewed which were issued by several people and several investment companies who studied The HC and its project to provide the financial marketing investors with professional investment advice. Also, to understand how different external people viewed these projects, the company's brand name and project brand name were searched using Google to create a more balanced description.

3.3.4.2 Pilot study

In accordance with the study conceptual model and outcome of the secondary data analysis, the study developed a semi-structured interview based on open-ended questions as a primary data collection protocol. This protocol consisted of twenty-six questions and several sub-questions. Generally, these questions were developed in a comprehensive manner to

cover the main issue of servitization within a real estate development context. This protocol was tested based on the pilot study.

According to Turner, (2010) the pilot study is an important critical success factor of research projects, especially when using interviewing for data collection. The pilot study could be a trial study or a pre-testing of research instruments, including questionnaires or interview questions (van Teijlingen & Hundley, (2001). For which, the data collection protocol had been piloted. In addition to the main supervisor, the interview questions were sent to eleven professionals from different perspectives; four of them are strategic management lecturers based at the University of Huddersfield, two of them are CEOs at real estate development companies, two are project managers who hold PMP certificates, one is a CEO of pure services company, and finally, a strategic planner based in a real estate development company.

The main objective of the pilot study was geared towards a holistic data collection process, i.e. are these questions covering all the issues of a servitization strategy in the real estate development context. Indeed, they all agreed the questions covered most issues. However, they commented that they were too long, complex and sophisticated to be understood. Also, they argued that some of the questions and several sub-questions would not generate any rich or in-depth data. These comments and the amendment actions were summarized in table (3-3).

Table 3-3: The Pilot Study Outcome

Comments	Amendment actions
The lack of awareness of servitization concept	An introduction was added with some examples to create a level of awareness.
Questions are too long and too many, the response rate will reduced, which hinder in depth data generation.	The questions were reviewed and restructured to be more focussed, and reduced by removing some questions to the next round of data collection
The different level of question complexity could send the study off track	The questions were refined to be more general in the first round and more focussed in the second round.
Respondents could have a problem with understanding and answering questions only presented in English	The questions were translated and sent in two languages i.e. Arabic and English

3.3.4.3 Primary Data

The primary data were collected based on three rounds of Delphi via interview. The interview refers to the process of asking questions and getting answers from the participants based on different techniques and formats (Cohen & Crabtree, 2006). An
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interview is a viable tool for gathering data related to a multifaceted topic. It is more flexible and generates more in-depth data and detailed information (Onwuegbuzie et al., 2010; Silverman, 2013). Traditionally, there are three main formats of the interview: the structured, the semi-structured and the unstructured (Figure 3-7).

Figure 3-7: Level of interview structure (Salmons, 2010 & 2012).
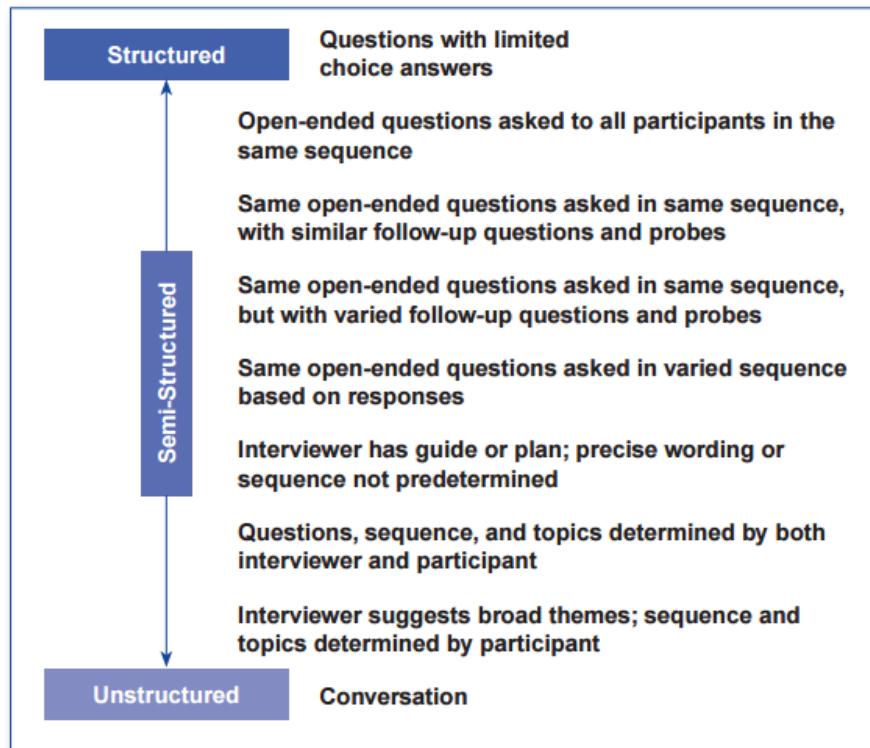
A structured interview is similar to a questionnaire design and used to answer specific questions with no variation, particularly "what" type questions. The unstructured interview is more narrative and is designed to open discussion in a specific topic or concept (Eriksson & Kovalainen, 2008; Turner, 2010; Salmons, 2012). The semi-structured interview is used to answer "how" and "why "questions. The semi-structured design consists of open-ended questions, which is more flexible. The semi-structured interview is considered the most useful tool for exploratory research. It is more focused, flexible and allows the researcher to capture the respondents' perspectives and viewpoints, while the interviewer still leads the discussion (Eriksson & Kovalainen, 2008).

This study was carried out based on three rounds of online Delphi. In the first round, open-ended questions were asked to all participants in the same sequence using email interviews. In the second and third rounds open-ended question were asked in same sequence but with varied follow-up questions and probes. These questions were asked based on interactive video conversation interviews. Nevertheless, using advanced technology to conduct

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interviews is an emergent method (Salmons, 2012). In order to provide a clearer and more transparent description, Salmons (2012), developed the internet based-interview research framework to offer a step-by-step e-mail interview or online interviews process for generating the most suitable data. (Figure 3-8)

Figure 3-8: The E-Interview Research Framework for understanding e-interview research (Salmons, 2012).
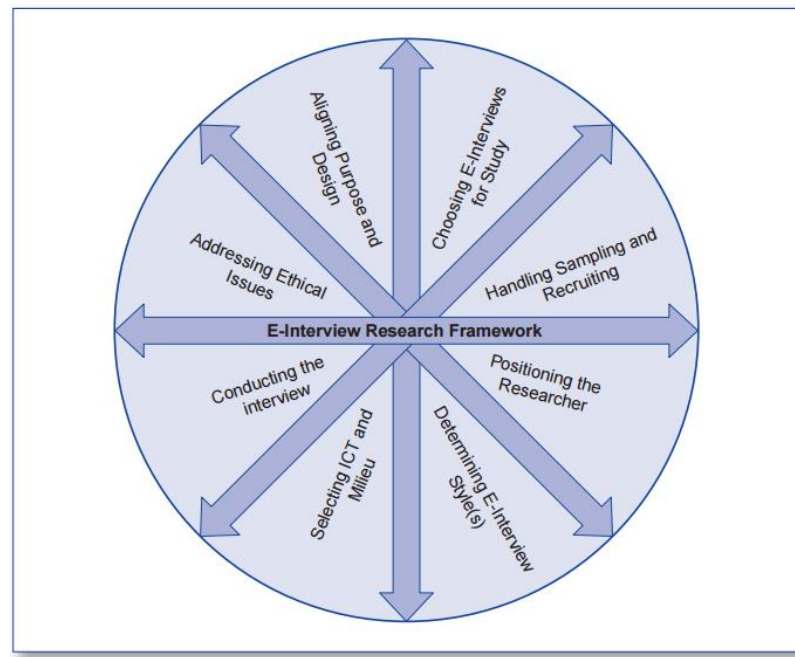
This model proposes a multidimensional framework to assess e-interviews. According to Salmons (2012), when looking at a study based on data collected with internet-based interviews, many questions need to be answered such as those about why and how the researcher made a choice to use information technologies to conduct the interviews. Are research purpose, epistemologies, methodologies and methods clearly aligned? Is the research intends to test an extant theory or generate a new theory? How were these interviews carried out (a synchronous method where data exchange is conducted in real-time or asynchronous where there is time lapse between sending questions and receiving answers). Other questions include ethical consideration i.e. did the interviews proceed as planned or were adjustments needed? How did the participants respond to the process and the interview questions? What would another researcher need to know if choosing a similar approach? What types of data were collected, and were the data adequate and appropriate given the purpose of the study?

In order to provide a clear and more transparent data collection method, the study applied the model of Salmons (2012) to raise the level of rigour and consistency of internet based data collection.

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This stage was designed to collect exploratory information to gather facts about people's beliefs, feelings and experiences about servitization. The questions were developed for simplicity based on generic and broad design, to collect perceptions of people from real estate development engaged with service provision. This stage was carried out using email interviews. Open-ended questions were asked to all participants in the same sequence looking to collect data from a broad range of people at different organizational levels and with different opinions and perspectives. Conducting an email interview was selected for several reasons. The flexible nature using advanced technology was the main reason for conducting the interviews via e-mail. Particularly, it was used to reach as many participants as possible regardless of location. It was a convenient tool to provide access and meet participants based on their availability and their busy work schedule. Also, it was a convenient tool to cover participants who are geographically dispersed.

Participants were selected in collaboration with the case studies contact person. They were selected to represent different types of companies, different types of projects, different organizational level and different departments. None of those participants was excluded because of lack of an email address, advanced technology device or internet access. Also, the questions were designed in such a way that participants had freedom to express their views without influence from the researchers. The questions were sent to participants via email as planned with a time lapse between sending the question and receiving the answers. This was to allow participants more time to answer the questions. In fact, technology becomes a fundamental transactional medium. This email interview method was driven by participants, who insisted on sending interview questions via email, which offered them more flexibility to read and answer the interview questions in their own time. In addition, they can think through answers before submitting which produces more reflective answers.

This round provided a rich description of service provision activities and supported eliciting an insight into the servitization practices from a cross-section of experts. The collected data allowed the researcher to construct an analysis and generate conclusions that achieved the purpose of the first round and the study in general. In order to collect these rich data the non-presence of the interviewer was considered. Accordingly, the interview's questions were worded simply and clearly without ambiguity or vague terms. An introduction to the interview and a descriptive title for each section were written. The questions were framed with words that did not hold more than one meaning. The questions were ordered in a logical sequence and were easy to complete. Finally, the follow up process was an essential element to collect the data.

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This round involved forty-two interviews based on seventeen open-ended questions that were designed to solicit a broad range of responses (Appendix no.1).These questions were designed based on the conceptual framework; the outcomes of the secondary data research; and the pilot study. These questions were discussed, reviewed, and revised several times with the main supervisor. Exploratory function, general understanding, and acquiring common knowledge are the main objectives of these open-ended questions, by which a broader view of a servitization strategy could be developed to clear the road for more in-depth study. In order to address these exploratory objectives, seventy-three participants were selected. Participants were selected in collaboration with the case study contact. They were selected to represent different kinds of companies, different types of projects, different organizational level and different departments. In particular, all of them have had experience with "adding services" activities to some extent. A list of potential participants email addresses was obtained. Those people were contacted and they agreed to participate in the research project. An introduction letter was sent to them explaining the servitization concept, the research aim, objectives and process. The questions were posed to them via e-mail.

Forty-two email-interviews were conducted as shown in figure (3-10) below. Data were collected between November 2013 and January 2014. Several follow-up phone calls and e-mails were sent to the participants urging them to answer the questions. In fact, one of the interviews was conducted by telephone during the follow-up process. Generally, these open-ended questions yielded a good amount of data.

Figure 3-9: E-mails sent and received for different HC organizational levels
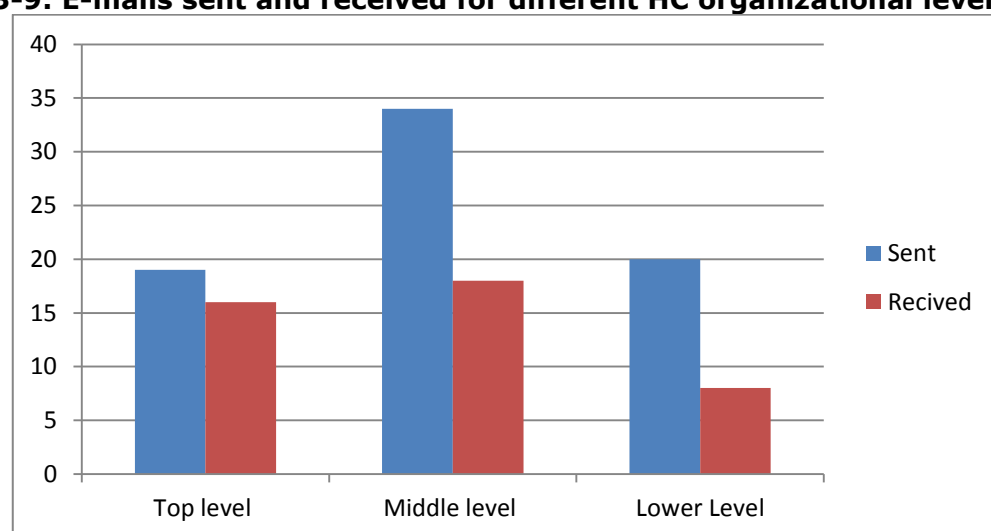
In this round, the data collected from different perspectives and based on different positions of respondents, reflected different opinions towards providing additional services. At that

point, a different level of data analysis could be applied. For instance, the data could be analysed based on individual characteristics, or job specialty and work position. Also, the data could be analysed at the strategic level. However, the initial data familiarity process revealed that there are no specific trends or tendencies among different respondents' profiles. Therefore, content analysis was used to objectively determine the inferences that will lead the way to more in-depth investigation. The data analysis process was oriented to provide an understanding of the overall perception of service provision and servitization strategy.

The content analysis technique was chosen to identify the main cluster in the data. It was selected for several reasons such as its ability to deal with large amounts of divergence data. It is more flexible, more objective and more sensitive to the content than individuals or groups, and allows a better build-up model or map for the next stage. According to Hsieh & Shannon, (2005, p.1278), the qualitative content analysis defined as "The process of viewing, understanding and interpreting the text content based on a structured categorizing procedure of identifying codes, patterns and themes". The essential feature of the content analysis process is about classifying texts and words into smaller categories and general themes (Elo & Kyngäs, 2008).The content analysis produces valid and replicable inferences between data and context, with the purpose of demonstrating facts and generating knowledge (Krippendorff, 1980). It allows researchers to extract objective content from texts, to examine meanings, patterns, and themes within the text (Kondracki et al., 2002; Elo & Kyngäs, 2008).

Analysing qualitative data could be done based on an analysis framework or on themes emerging from data (Mill et al., 2009; Saunders et. al., 2011; Yin, 2013). Elo & Kyngäs, (2008), separated deductive and inductive content analysis. The deductive analysis is applied based on the data analysis framework to conduct more concentrated data analysis. This framework consisted of a set of questions as an outline for the data analysis process whereas the researcher's role is finding the best answers for these questions from the collected data. Still, the process gave space for themes that could emerge from the data set. According to Elo & Kyngäs, (2008) and Fereday & Muir-Cochrane, (2008) a framework data analysis is an ideal data analysis technique to analyse qualitative data, allowing more focussed data analysis and interpretation, still, this framework should allow space for themes emerging from the data.

The step- by-step process of using content analysis was developed by Elo & Kyngäs, (2008) as shown in table (3-4)

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Table 3-4: Phases of Conten Analysis (Elo & Kyngäs, 2008)

Phase	Description of the Process
Preparation Phase	Making sense of the data, selecting the unit of analysis (It could be a word, a theme or the whole interview).
Organizing Phase	This process includes open coding , creating categories and abstraction
Reporting Phase	Reporting the analyzing process and the results

The content analysis consists of three phases: the preparation phase, organizing phase and reporting phase. The preparation phase is the starting point. It contains several steps: first, one must understand the data, obtain a sense of the whole data and generate general data perception by reading the data several times. The organization phase starts with developing a coding matrix for more focussed content data analysis. Next, structured data analysis is applied based on identifying sub-category, generic category and main category, where data are coded according to these categories, and data from various codes are gathered, reviewed and then re-categorized to form general and main themes. Still, items that did not fit with the analysis framework could be identified to create new codes or categories. Finally, the reporting phase consists of presenting the data, where data from different themes are gathered to form the study findings (Elo & Kyngäs, 2008).

- ### *3.3.4.3.2 Delphi Second Round*

This stage was designed to collect in-depth information about servitization. It was carried out based on interactive video conversations to give a full range of visual and verbal exchange. Each interview was conducted personally using advanced technology. Only one interview was conducted via email. These online interviews are closely similar to natural face-to-face interviews. In this round, the open-ended questions were asked in the same sequence, but with varied follow-up questions and probes. Conducting an online interview was selected for several reasons. It has a flexible nature using advanced technology and is free communication that provides an opportunity of video interviewing with people wherever they are. It was used to reach participants regardless of location. It was a convenient tool to provide access and meet participants based on their availability and their busy work schedule. It was convenient to meet participants who are geographically dispersed as well.

This round was orientated more toward decision makers or individuals with influence on decision-making. After the first round, all participants were thanked for their efforts and

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those fitting the above criteria were informed of the second round interviews. Several emails were sent to invite potential respondents from the full profile of the first round. The invitations explained the nature of this round and with their agreement, set an appointment time and elected their preferred online communication application. None of the participants was excluded because they did not have an advanced technology device, internet access or interactive video conversation software. Different online telephony applications such as Skype, Viber, Tango and Facebook Messenger were installed into the personal computer to meet participants' preferences. Interviews were recorded using pc-voice recording software. The process of conducting these in-depth online interviews was similar to face- to-face interviewing, which includes identifying the type of information needed, identifying the potential sources of this information and developing an interview protocol. The preparation process involved downloading the video call software; create an online identification name; obtain participants' online identification name; add participants' identification to your account; arrange a mutual data and time and install pc-voice recording software to record these interviews. In order to improve consistency and objectivity, the interview process was similar to face- to-face interviewing methods. Instructions were read to each participant as stated and the questions were asked in the order from the interview protocol. The participant's answers were confirmed with the participant after each question. Discussion was the main theme of these interviews, by which different perspectives, opinions, expertise and initial findings were discussed. This discussion mode generated a rich and deeper level of information. These data allowed the researcher to construct an analysis and generate conclusions that achieved the purpose of this round and the study in general.

The second round involved six main open-ended questions and one sub-question that formed the semi-structured interview (Appendix no.2). The Literature, conceptual framework and previous findings were the guidance used to develop these focused questions. The questions were designed for individual discussion to gain further clarification and to generate a more in-depth understanding. The questions were designed to reconstruct different events or decisions related to servitization, to elicit significant information; to fills in gaps of existing information; and to investigate the findings from other sources in order to confirm these findings or reconstruct them accordingly. These questions have been discussed, reviewed and revised several times with the main supervisor. This round collected data from 23 respondents, 15 of those respondents answered the questions from the first round and eight of them did not. The respondents were carefully selected as relative experts as having more knowledge and expertise than the other participants (Appendix no.3) This round was oriented more toward decision makers or individuals with influence over the decision making process as shown in figure (3-

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8). This round includes some respondents who did not answer questions in the first round, as the researcher believed that they will added more value as they are representing the voice of customers. Generally, all of the group members have a good experience in the real estate industry; all of them are experts in their relative fields. The group consisted of: decision makers, those responsible for decisions relating to directional strategy; strategic planners, who participate in strategy formulation and guiding the implementation process. The latter category has huge influence on service-offering strategies in terms of type, time, place, design …etc. The final category was decision makers, responsible for departmental management, functional management, or divisional managers whose roles have been affected by a services provision strategy.

Figure 3-10: Respondents' profiles according to The HC
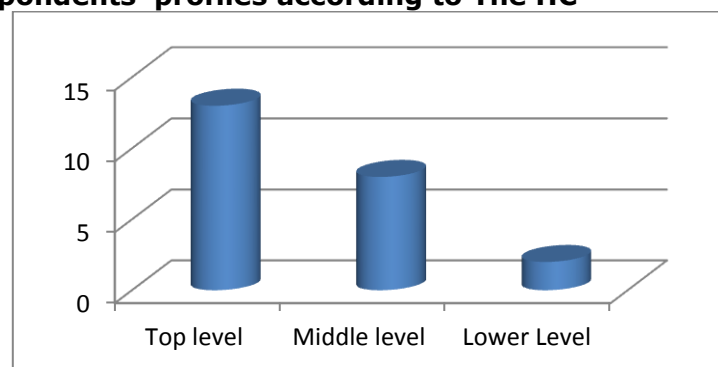
Twenty-three interviews were conducted between March 2013 and April 2014. The questions were asked in both English and Arabic. The respondents had the choice to answer these questions in their preferred language. The interview started by re-introducing the research topic, the research objectives and the research process. It included findings from other sources, and considered inconsistencies from different perspectives. Also, data confidentiality and privacy were confirmed, and the respondents were informed that the interview would be recorded. Also, they were informed when recording started and ended.

In order to analyse this more focused round, thematic data analysis was employed based on Braun & Clarke, (2006) step-by-step guidance. According to Braun & Clarke, (2006) the thematic analysis is the most used method for analysing qualitative data. Actually, most analysis techniques are some form of thematic analysis, which is a method for identifying, analysing, and reporting patterns within the data (Gibbs, 2007; Guest et al., 2013).

Braun & Clarke, (2006) demonstrate the several advantages of thematic analysis. They say it is a flexible data analysis method, based on integrating deductive and inductive data analysis techniques, for which it is useful in exploratory studies. It is better to capturer

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people's experiences and insights by identifying the implicit and explicit thoughts embedded into the data set. It is easier to learn and conduct. In addition, it has the ability to capture the complexities of meaning and generate unexpected visions. It is more objective and improves the quality-based findings by a systematic analysis and iteration process of matching, coding examination, recoding and refinements. Besides, thematic analysis works with different sets of data types or sizes and with different types of research questions.

The step-by-step process of using thematic analysis was developed by Braun and Clarke, (2006). As shown in table (3-5) below

Table 3-5 : Phases of Thematic Analysis (Braun & Clarke, 2006, p.87).

Phase	Description of the process
Familiarising yourself with your data:	Familiars with all aspects of your data, transcribing the data, reading and re-reading the data, generating an initial list of ideas.
Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
Defining and naming themes:	On-going analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

It is a very popular process cited and used many times. Data familiarisation is the most important step within the process and extensive data reading is the core process of this step. Initial coding is the next step, where the researcher marks the important features within the data related to the research questions and classifies these marked data into different categories. Thereafter, the main themes are identified by identifying the core categories and looking at the meaningful connections from amongst different themes. These connections and core themes inspection are reviewed, where initial codes, patterns and core themes are examined and revised to produce more refined themes, by which similar themes could emerge within one theme or the theme could be expanded into more focused themes. Finally, selective themes are reflected based on developing a consistent story line that describe the research central topic.

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- ### *3.3.4.3.3 Delphi Third Round & Collective Findings*

The final stage of data collection and analysis was used particularly to develop a roadmap of servitization strategy guiding the mobilization of a servitization strategy into a real estate development context. Accordingly, different models were developed by restructuring the collective study's data and findings that arose from different resources. These models were verified and validated with the case studies representatives and research participants based on Delphi third round.

Delphi third round was designed as a verification and validation round concerned with building the models right. The round was oriented to develop a mutual agreement about the role of service provision and collecting more data regarding the organizations performance. Accordingly, these initial models, analytic categories, interpretations and conclusions were tested with members of the case studies whom the data were originally obtained. The developed models were sent to participants via email. This was followed by interactive video conversations. Each interview was conducted personally using advanced technology. This round was orientated more toward decision makers or individuals with influence on decision making from different perspectives. Several emails were sent to invite potential respondents from the full profile of the second round. The invitations explained the nature of this round and with their agreement, set an appointment time and elected their preferred online communication application. The process of conducting this third round was similar to the procedures used in the second round. The third round allowed the researcher to redevelop the models and generate final conclusions that achieved the purpose of this round and the study in general. The third round involved eleven professionals from different perspectives. The group consisted of executive managers, strategic planners, sales and marketing and project managers. Based on this round, some of the developed models were modified and others were rejected and neglected. In additional, the respondents' comments were also reflected in the data analysis process.

This stage was developed by restructuring the collective study's data and findings that arose from different resources. Therefore, the template analysis method was used. According to King, (2012) template analysis is another technique of thematic analysis that involves the building of an analysis prototype based on themes identified by the research projects. It organizes them in a meaningful way, i.e. hierarchically, to address a specific need. It is considered the best way for managing large qualitative data to produce a more focused understanding. The data analysis process starts by identifying and developing themes. These themes are sifted and sorted to explore possible relationships and trends among them (Gibbs, 2007; King, 2012). The analysis involves the building of a prototype based on

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themes that were identified previously, and meaningfully re-organised in a hierarchical way to address a specific need (King, 2012). This structured enabled the researcher to follow a clear path in developing the strategic framework of a servitization strategy.

3.3.5 Section summary

The above section outlined the research process. The section shapes the empirical part of the chapter, whereby, the process of literature review, the case study selection and the data collection and analysis methods are demonstrated. The section was developed based on the work of Maxwell's (2013) model, and in lines with Barratt et al., (2011) case study framework. The next section presents the research quality assessment.

3.4 Research evaluation

The research quality assessment refers to the process of maintaining scientific methods when investigating research phenomena, acquiring knowledge, and developing a research outcome based on specific quality criteria (Tracy, 2010). Usually the emphasis in evaluating social science research is bound around two broad elements; the research design and the research outcomes (Silverman, 2013).

3.4.1 Research Design

The concern in research design is oriented toward the theoretical framework, the use of a proper research methodology, justifiable procedures of selecting data sources, and data collection and analysis methods (Silverman, 2013). This research was mainly designed to achieve a methodological fit between the following: nature of the topic, previous work, nature of the study, the philosophical stance, research strategy, research purpose, and the expected outcome. The research was designed based on the (Creswell, 2013a) design approach and in alignment with the (Barratt et al., 2011) framework. The selection of particular research elements were scientifically rationalized, by which the data sources, the collection methods and the analysing techniques were constant with the research design. They were based on the level of accessibility, and conducted using Maxwell's (2013) model to increase research quality and improve the results. According to (Silverman, 2013), a well-designed research enhances research outcomes and consequently enhances research quality.

3.4.2 Research Outcome

In business studies, the truthfulness of the research outcome is a vital element for decision makers and academic scholars (Eriksson & Kovalainen, 2008). Four main assessment

criteria of a successful quantitative research outcome are research objectivity, credibility, validity and generalizability (Silverman, 2013). Likewise, similar criteria were developed specifically to evaluate qualitative research outcomes and these were labelled research credibility, transferability, dependability and confirmability (Shenton, 2004). These criteria are described in table (3-6) below.

Table 3-6: Assessment Criteria of Qualitative Research, adopted from the works of (Shenton, 2004 and Tracy, 2010).

Criteria	Aspect of	Meaning
Credibility Validity	Truth Value	Findings are capturing the reality of what has been examined
Confirmability Objectivity	Neutrality	Decrease the researcher subjectivity and bias
Dependability Reliability	Consistency	Repeating the study in a similar situation will generate a similar outcome
Transferability Generalizability	Applicability	The level of data general or universally applicable

3.4.2.1 Research Credibility

Research credibility refers to research internal validity and whether the research results hold true values. Research Credibility is an important criterion to establish trustworthiness of qualitative research as different participants will have different opinions about what is true in their perceptions (Lincoln & Guba, 1985; Creswell, 2013a). The credibility involves establishing that the results of qualitative research are credible or believable from the perspective of the participant (Lincoln & Guba, 1985). The results are an accurate interpretation of the participants meaning (Creswell, 2013a). There are several ways available to establish the credibility of a qualitative research (Creswell, 2013a; Yin 2013). For instance, Yin, (2013) highlighted the need of adopting a well-established research method to increase research creditability.

This study is conducted as three rounds of online Delphi study among real estate development experts. The Delphi method enabled the researcher to receive different perspectives and develop consensus by using iterations and incremental process to collect data. The iterative technique supports achieving category saturation. The process consists of multiple steps of "forth and back" data gathering and data analysis. This is where data are collected then analysed synchronously. The procedure then continues with more data gathering to find more information based on the result gained in the previous step or steps and so forth until reaching "category saturation." The process of "back and forth" allowed the researcher to conduct a more focused study, collect more in-depth and relevant data, identify which aspects needed to be added or be explained in more detail; and whether more participants would be needed. Also, the post round data validation allows confirmation

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of the findings at different stages with organizational members and research participants which increases findings credibility. The reality matrix supports linking the output of different rounds and improves research credibility.

In addition, (Yin, 2013), suggests triangulation as an important method that ensures credibility in qualitative research. Accordingly, the study used different sources of evidence based on multiple data collection and analysis methods. The researcher used multiple types of data to support the interpretations and used evidence in the form of quotations. Also, Yin, (2013) suggests that researchers develop a document that describes the accuracy of their studies. Accordingly, the study provides a detailed research process of all the activities that took place throughout the research.

Silverman, (2013) suggested a tape recording to support the data analysis and interpretation process by which the conversation could be repeated several times to get a comprehensive understating and evaluation of the data. This research used both email and online interviews. The outcomes of email interviews are written answers, which facilitate a reading of all answers; this reading is repeated several times until the data analysis process was visualized. Then, each interview was downloaded using Microsoft excel 2010 to make sure that every question had been read, understood and uploaded. In the second round an interactive video conversation was used, all interviews were recorded, then, each interview was transcribed into Microsoft Word 2010 after it had been listened to several times.

Voss & Godsell, (2015) argue that developing a research framework from the literature improves research internal validity. Besides, developing a conceptual framework deduced from literature to guide the research process, data collection and data analysis improves the study quality (Cepeda & Martin, 2005). The study developed a framework that guides the research question and data collection process. This conceptual framework linked the researcher's observations to the developed theoretical ideas. Finally, Creswell (2013a) suggests several validation strategies such as multiple assessments that include peer review, respondent validation and confirming the findings at different stages with research participants. This study used several post round to confirm the study findings and used peer review to validate the study findings. Also, a third round of Delphi was conducted for data verification and validation.

3.4.2.2 Research Confirmability

Research confirmability refers to the process taken by researchers to ensure the research results arose from systematic analyses not random tendencies. It also ensures research

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outcomes are free of bias. The confirmability is reflected in the objectivity of a qualitative research. It is established to ensure the research findings are the outcome of the respondents' opinions and experiences and not the researcher's perceptions and preferences (Shenton, 2004).

This research confirmability is established by providing a clear description of data collection and analysis methods and a description of overall methodology employed in this study. The study established a philosophical and methodological alignment and conducted based on a systematic and logical rigorous enquiry to address research objectives. The study provides a detailed research process of all activities that took place throughout the research. A transparent procedure for conducting this study was developed and put in place to include a consistent data analysis description. Additionally, inductive data analysis was conducted based on bottom up analysis, which minimises the researcher's personal biases. Moreover, several techniques were used to improve research objectivity. These included peer review, participants validating findings, several analysis methods, several analysis stages and quoted evidence from research participants' and confirming the findings at different stages with organizational members and research participants. Evidence from collected data was used in the form of quotations.

3.4.2.3 Research Dependability

Research dependability corresponds to the reliability criterion applied in quantitative research. It refers to the ability of other research to reach the same result in the same situation by repeating the same research process in the same context (Creswell, 2013a). Qualitative research reliability could be addressed in several ways. Silverman (2013) suggests adapting suitable research methods that fit with the research problem; applying scientific thinking throughout the data collection and analysis; addressing practical and theoretical contributions; and linking empirical results to the theoretical research proposition enhances the overall qualitative research quality. Nevertheless, the justifications relating to research design, reasons underpinning the choice of research strategy and methods, and the data obtained should be outlined. These justifications can be referred to by other researchers to understand the processes (Saunders et al., 2011).

Accordingly, in this research, the researcher provided the relevance of the selected research design and justified the decisions and reasons behind the theoretical stance, the research approach and research methods as well as the alignment between research methodology and research method.

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Yin, (2013) argued that a detailed research process creates more robust research, and increases research objectivity and dependability. Accordingly, the researcher provides a detailed research process of all activities that took place throughout the research. These activities were reported in details including a complete clarification of the study design and its applications.

Form another perspective, Creswell, (2013a) emphasises the inter-coder agreement based on use of multiple coders to analyse transcript data, where different researchers agreed upon codes and themes for text segments. This study used multiple assessment strategy such as peer review to verify the identified themes. Also, the process of data transformation from raw data to interpretation is demonstrated. Additionally, the use of advanced rules in data collection such as the funnel technique in interviews increases data reliability (Voss et al., 2002). This research used a funnel method. The process is used to design the rounds of Delphi and used to interview within each round. The process starts with comprehensive questions and then narrowing them down to a specific object.

3.4.2.4 Research Transferability

Research dependability corresponds to the reliability criterion applied in quantitative research. It refers to the ability of research outcomes to be applied to similar broad situations (Shenton, 2004; Tracy, 2010). There is likely to be a concern surrounding the generalizability of findings from qualitative research. However, the question of generalizability of qualitative research is related to the significance of this research to theoretical propositions and the ability of the research to relate the findings to existing theory and have a broader theoretical significance than the case study (Saunders et al., 2011).

This research is developed to study the servitization in the context of real estate development industry. The findings of this study therefore, will extend the aspects of servitization strategy into a new context. The study aims to develop a conceptual model support adopting servitization, which could then be applied to the real estate development industry.

From other perspective, Yin, (2013) argues transferability could be improved by the number of cases, number of participants and number of observations or interviews. Likewise, Voss & Godsell, (2015) argue the use of several case studies improve external validity.

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This research examines the servitization strategy in eight real estate development companies. These companies manage various construction projects in Jordan. These companies address different market segments, in different geographical distributions in Jordan. Evidence and opinions have been collected from experts in the field using 76 interviews based on three rounds of Delphi. The participants were all involved in the process of service provision. The respondents' profiles included CEO, CFO, Deputy CEO for Industrial Investment, Deputy CEO for Marketing and Sales Affairs, Deputy CEO for operations and engineering affairs, Deputy CFO for administration affairs , Chairman office manager, Sales Director, Marketing Director, Subsidisers Managers, Projects Managers, Quality Assurance Managers, and Budgeting, Treasury & KPIs Manager.

Moreover, the study applied the Barratt et al., (2011) framework (table 3-7) which raises the level of rigour and consistency of qualitative case studies research in operations management.

Table 3-7: Operations Management Qualitative Case Studies evaluation criteria (Barratt et al., 2011).

Aspect	Required Actions	Applied actions
Justification for Case Research	The study provided an explicit justification for case research	The exploratory nature of the study was mentioned explicitly and several times
Unit of Analysis	The study provided an explicit statement of the unit of analysis	The unit of analysis was identified and mentioned explicitly
Theory vs. Phenomenon	The study was designed from an existing theory or existing literature	The study was designed based on both an existing theory and existing literature
Sampling Strategy	The study provided an explicit justification for case selection	The study identified several reasons for selecting the cases
Number of cases	4–10 cases are recommended	8 cases were selected
Data Triangulated	More than one source of data is recommended	Data were collected from different sources
Data analysis	Within and cross- cases analysis is recommended	Data were analysed within and across cases

3.4.3 Ethical considerations

Research ethical considerations are in place for several important issues when studying the social sciences as the researcher has an obligation to protect the study participants. As well as the outcome trustworthy is also important to take into account ethical issues. Research ethics are imperative in all types of research. Yet, the ethical challenges of qualitative approaches are a more important consideration (Silverman, 2013). The qualitative

researchers are considered to obtain more detailed information, and the ethical dilemma emerges differently to quantitative forms. These include such considerations as researcher action to assuring the required access and the potential effect of a researcher's behaviour and perceptions of the study participants (Orb et al., 2001).

Creswell, (2013a) argued that ethical issues should be considered during the whole process of the research project. Ulin et al., (2012) suggested three ethical principles to be taken into consideration when conducting qualitative research in social science: autonomy, beneficence and justice. The autonomy refers to the obligation to the respect of participants by realizing that they have privileges in participating or not participating in the study. This means that they should be informed of all the possible consequences of being participants. The beneficences refer to the researcher's ethical actions when trying to increase the overall benefits of research outcomes. Finally, the justice is the concern about the balance of risk and benefit among the research stakeholders (Ulin et al., 2012). Similarly, ensuring ethical processes and meaningful research outcomes in conducting business studies are also vital elements (Remenyi, 1998; Tracy, 2010). According to Tracy, (2010) the research quality assessment criteria and research ethical considerations are interconnected. Several recommendations have been made relating to research design, research process and data collection. Remenyi, (1998) argues the assurance of fully informed consent is more important in conducting business research. Also, data verification and the balance between subjectivity and objectivity in the data analysis process are important to ensure research integrity. Finally, the researcher has to maintain high confidentiality of the research results and to ensure ethical use of these results.

Accordingly, several procedures were applied during the research process to ensure ethical research. In order to require permission from the companies and the people who will be participating in the research, the case study companies were contacted by an introduction letter on university of Huddersfield paper signed by the main supervisor. This introduction letter explained the importance of the study topic, the reason behind the research, the research process and the expected benefits. Also, the study's participants were contacted via email before conducting the first and second round. They were introduced to the study subject and the research process and were given the choice of whether to participate or not. Furthermore, the researcher guarantees data confidentiality of case study companies' information and the participants, and assured them that identifiable information will not be made available to anyone not directly involved in the study. The researcher considered the objectivity and subjectivity through all the stages of this research, and neutralizes his own personal biases and opinions as much as is possible. This is helped by the different use of,

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data sources, different data collection methods, and different analysis techniques. In addition, the research accurately represents what was observed or what was told to the researcher and by verifying the research findings continuously with case study representatives and participants.

3.5 Chapter Summary & Conclusion

Usually, there is a constricted fit between research purpose, research methodology and investigation methods (Creswell, 2013a and Silverman, 2013). In accordance with the title of this research project, which consequently was reflected in the main objectives, a qualitative case study research design was adopted. The concepts of the Delphi concept were applied to collect and analyse data to investigate the servitization strategy in a real estate development context. This was to gain an understanding of how the servitization strategy should be designed, implemented and evaluated in the realty sector to create a competitive advantage. According to the literature, servitization is poorly understood, and remains a new and complex concept. Therefore, the primary reason behind the selected research approach has mainly emerged from the literature and the exploratory nature of this study as the first to study a servitization strategy in the real estate development sector and developing countries. This was prompted by the expected outcome of facilitating such a strategy in that sector by examining and articulating the servitization process as discussed earlier in the introduction chapter. The contributions from multiple disciplines in servitization and the interrelated, interdependent and overlapping of the process of business research increased the business research complexity. This complexity oriented the researcher toward adapting multi-perspective lenses to understand the business environment and situations. The critical realism paradigm offered the researcher the required adaptability and flexibility by acknowledging reality as the process of logical reasoning whilst accepting that at the same time, different explanations could emerge from surrounding situations of the business environment. The qualitative case study research strategy enabled the research to gain more detailed investigation and in-depth examination of the research problem. Additionally, the inductive research paradigms helped the researcher to move forward and backward between the theoretical framework and empirical practices. Using these techniques, the researcher was able to address the topic more efficiently. The Delphi concept supports electing rich data that improves the research outcome and enhances our understanding of servitization and the practice of offering services practices. The incremental multiple stages of data collection and data analysis were aligned with the research purpose, the researcher philosophical stance and the selected research methodology. Finally, different procedures and tactics were applied to maintain research quality and ethical considerations. In the next chapter, data collection, data analysis and the findings are presented.

Chapter 4: Data Analysis & Findings

4.1 Introduction

The previous chapter outlined the research methodology and discussed the research approach adopted to achieve the objectives of this research project. A full research process based on step-by-step activities was developed and presented. In this chapter, the results of the data analysis are presented.

An in-depth investigation of the activities of servitization in the real estate development industry is the main goal of this study, by which data collection, collation and analysis processes were driven. In order to do this, the study was carried out based on incremental multiple stages, which included Delphi techniques. This incremental multiple-stage design helped the researcher to proceed with the study and prepared the way for a more in-depth study. The data collection involved secondary and primary data based on incremental data collection and analysis approach. The data collection process started from examining the case studies' secondary data. The primary data were collected based on three rounds based on principles of the Delphi method. The first round of Delphi involved data collection and collation of 42 participants via email interviews. The second round involved data collection from 23 participants via online interviews. The third round involved data collection from 11 participants via online interviews. Accordingly, this chapter was split into several sections; section 4.2 presents the case studies' background. Section 4.3 presents the case studies' secondary data analysis. Section 4.4 presents the outcome of secondary data analysis section. 4.6 presents the results of Delphi round one. Section 4.7 outlines the results of Delphi round two. Section 4.8 presents the results of the collective data analysis and Delphi round three. Section 4.9 outlines the findings consolidation. Finally, section 4.8 outlines the chapter summary. Next, the case studies background is presented. Next is the background of the case studies and companies' strategic analysis is presented.

4.2. Case Studies' Background

This section aims to present the case studies of eight real estate development companies. These case studies provide a rich description of service provision activities within a broad range of business models and projects types. These companies that have been investigated are real estate development companies. The case studies consist of eight companies managing various projects, addressing different market segments, with different geographical distributions and based on different visions and missions. Table (4-1) below summarized the characteristics of the companies in the case study.

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Table 4-1: The case studies real estate development projects

Co.	Project	Project mission	Total Investment	Market Segment	Location
A	Andalucia Project	Gated Suburb	US$ 225 million	High income	Amman City
B	Red Sea Resort Project	Private Resort	US$ 60 million	High Class	Aqaba City
C	Al Gardens project	Modern City development	US$ 30 million	Middle income	Zarqa City
D	Ayla Park project	Commercial Complex	US$ 7 million	Business to Business	Aqaba City
E	Al Jiza project	New City development	US$ 60 million	Low & middle income	Al Jiza area
F	Mansion hills Project	Resort Town	US$ 1.5 Billion	Tourism	Aqaba City
G	Al Maha Project	Modern City development	US$ 20 million	Low & middle income	Zarqa City
H	Al Mushatta project	Industrial City	US$ 150 million	Business to business	Al Mushatta City

The broadly representative cases and data access are the main reasons for choosing these specific organizations. Besides, these companies are well-known companies in Jordan, with substantial experience in the business arena. These companies are working under the umbrella of a large Holding Company that set out to be one of the largest organizations in the real estate development sector at regional level. Yet, each of these companies has its own separate legal entity. Each of these companies is working on a unique project. Each project is managed by a distinct operations team. Each project strives to serve a different segment. These projects varied across residential housing, private resorts, modern housing, commercial buildings and industrial cities. Finally, each project offers different types of services.

4.3 Secondary data Analysis

A qualitative document analysis involves interpreting the data to give voice and meaning around an assessment topic (Bryman & Bell, 2015). The document analysis process looked at pre-existing data produced by the study companies and external organizations. The process was arranged based on longitudinal design, which involved repeated observations of service provision activities from 2004 until 2014. These data were collected so that service-provision activities could be tracked and analysed. The study divided the analysis of secondary data into two objectives, a broad focused search on the background of the case study companies' and understanding the companies' particular actions and decisions towards service provision. To do this, Creswell's, (2013b) general approach of analysing qualitative data was adopted. This consists of three stages; data organization; data

interpretation and reporting. The process of analysis involves organizing the data, conducting a preliminary read through, coding and organizing themes discovered within the data and interpreting these themes (Creswell, 2013b).

4.3.1 Data organization

In this study, the researcher was allowed access to companies' archives and was allowed to examine materials on companies' strategies. Companies' archives generate a large bulk of the data-base. The emphasis was placed on documents that contain specific information relating primarily to servitization issues. These documents relating to companies development and service provision were collected. They included internal and external sources (see Table (3-2)/ Ch.3. p27). The internal documents were reclassified into seven subcategories (Contract and Agreement, Annual report, company profile, coordination meeting, feasibility study, HR and working papers). Likewise, the external documents were reclassified into three subcategories (Business studies, Newspaper reports and Official documents). Accordingly, each document was coded. This code included letters and serial numbers where (In) refers to an internal document, and (Ex) refers to an external one. The next two letters refer to the document subcategory, for example, (Ag) refers to the contract and agreement folder, whereas (Ar) refers to the annual report. The number refers to the order of this document within the same subcategory. Tables (4-2) and (4-3) below

Table 4-2: Internal Documents' code and descriptions

Code	Category	Date	Document Description
In-Ag1	Contracts & Agreements	2004	Project B engineering services agreement
In-Ag2		2009	Project E development agreement
In-Ag3		2004	Project A engineering services agreement
In-Ag4		2011	A contract to install wooden pergolas in project B, under the supervision of the project team
In-Ag5		2008	Engineering services agreement for additional design and engineering works in project A.
In-Ag6		2007	Strategic coalition agreement to develop a beach club that served project B's customers and other similar projects in the same area.
In-Ar1	Annual Report	2006	Comprehensive reports on the company's activities throughout the years 2005, 2006, 2007, 2008, 2009, 2010 and 2011. They are developed to provide information about the companies ' activities and financial performance.
In-Ar2		2007	
In-Ar3		2008	
In-Ar4		2009	
In-Ar5		2010	
In-Ar6		2011	
In-Ar7		2012	
In-Pp1	Project profile	2012	Project C marketing brochure and promotion Plan
In-Pp2		2004	Project C profile
In-Pp3		2011	Project H profile and presentation
In-Pp4		2011	Corporate & Projects Overview
In-Pp5		2007	Introducing Project F to potential investors
In-Pp6		2004	Introducing project A to governmental institutions and to the proprietor for approval
In-Pp7		2009	Introducing different projects to potential investors
In-Pp8		2009	Different projects profile
In-Pp9		2011	Project B profile
In-Pp10		2011	Project B investment proposal
In-Pp11		2011	Corporate & project B detailed overview
In-Pp12		2010	Corporate & projects overview
In-Pp13		2010	Project idea demonstrated to potential investors
In-Pp14		2004	Project C profile and idea demonstration
In-Pp15		2004	Project A profile and idea demonstration to potential investors
In-Pp16		2007	The HC profile
In-Pp17		2009	Project D profile
In-Pp18		2006	Introducing project E to a government institution responsible for developing such a project in Jordan where this institution was the owner of the project land

In-Cm1	Coordination meetings	2009	Periodic coordination meetings of the executive management, the companies' managers, and the projects' managers to review projects' progress, work activities and problem solving including customers' issues.
In-Cm2		2009	
In-Cm3		2009	
In-Cm4		2010	
In-Cg1	Corporate Governance booklet	2008	A booklet referring to the processes, mechanisms, and relations directing and controlling the corporation's activities and decisions. It identifies the responsibilities and rights of different individuals in the corporation
In-Fs1	Feasibility study	2004	Project D feasibility study
In-Fs2		2007	Project H idea introduction and feasibility study
In-Fs3		2008	Project E idea introduction and feasibility study
In-Hr1	HR	2008	Recruitment announcement
In-Hr2		2008	Employee induction booklet
In-Hr3		2004	A report showing the number of required staff
In-Wp1	Working Papers introduced into different BOD's meetings	2009	A summary of contracts, introduced at The HC BOD meeting.
In-Wp2		2010	Project C proposed marketing campaign, introduced at the company BOD meeting.
In-Wp3		2008	Work-in progress and initiatives, introduced at The HC BOD meeting.
In-Wp4		2008	Project A detailed work-in progress introduced at The HC BOD meeting.
In-Wp5		2008	An executive summary of one of the customer's requirement introduced at the company A BOD meeting.
In-Wp6		2008	New organizational structure and marketing plan
In-Wp7		2010	Executive summary of internal engineering service agreement for project B
In-Wp8		2009	Additional work plan for projects A, B and E to be provided by a subsidiary company
The HC Website	An informational website provides information about the HC activities and their projects. The company has two website; http://taameer.jo/home/ and http://69.89.31.123/~taameerj/inde_x.php?option=com_frontpage&Itemid=1		

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Table 4-3: External documents' codes and description

Code	Category	Date	Document Description
Ex-Br1	Business reports issued by private investment companies	2007	A business report conducted by an external business firm
Ex-Br2		2008	A business report describing the Jordanian real estate sector in general as well as The HC projects
Ex-Br3		2009	Investment proposal was conducted by an external business firm to be presented to potential investors
Ex-Br4		2010	Project G experience report conducted by an external appraiser to be presented to potential investors
Ex-Br5		2005	The HC prospectus (a formal document provides several details to establish a public company. It is required by the stock exchange and issued by an external financial firm.
Ex-Br6		2009	Jordanian building sector market analysis/ HVS
Ex-Np1	Newspapers	2008	News report about project F
Ex-Np2		2006	News report about project G
Ex-Np3		2006	News report describing project G
Ex-Np4		2008	News report describing project F
Ex-Np5		2008	News report describing project H
Ex-Np6		2008	News report describes a partnership agreement to supply project A with central gas technology.
Ex-Np7		2008	News report describing a partnership agreement to supply project A with smart city technology.
Ex-Np8		2007	News report regarding installing of a new sales system
Ex-Np9		2008	News report regarding the features of project E
Ex-Od1	Official documents	2008	Company C registration certificate
Ex-Od2		2008	Registration certificate of a subsidiary company that supports services provision
Ex-Od3		2013	Company A registration certificate
Ex-Od4		2014	Company E registration certificate
Ex-Od5		2010	Company F registration certificate
Ex-Od6		2010	Registration certificates of a subsidiary company supporting real estate development investment
Ex-Od7		2013	HC registration certificate
Ex-Od8		2013	Company B registration certificate

4.3.2 Data Interpretation

After the organization of the secondary data, the analysis continued with the researcher getting a sense of the whole database. Specific types of information relating to service provision and servitization strategy were collected. In this stage, initial codes were produced by identifying interesting aspects in the data set. These interesting aspects were marked and offloaded in tables using Microsoft Word 2010. Here, initial codes were developed and interpretation was provided. For instance, the data analysis process sought to identify the types of services offered by the case studies' projects. The data analysis process reviewed several internal and external documents that describe the case studies projects. The initial codes were marked and interpreted as in table (4-4) below.

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Table 4-4: Document Analysis Sample

Document	Raw data	Initial codes	Interpolation
Company A Website 2014	Al Andalucia spreads over a plot of land that is 800,000 sqm in size. It is located 15 km away from the 7th circle towards Queen Alia International Airport and is the first "Gated Community" project in Jordan. The compound consists of around 588 villas constructed according to 10 varying architectural designs. The villas range from 312 to 661 sqm in size. The total built-up area takes 17% of the total project area. Those who choose Al Andalucia to be their home will also enjoy the facilities provided by the Andalucia health club, shopping centres, restaurants, coffee shops and parks. They will also enjoy indoor and outdoor swimming pools, a clinic and much more.	Gated Community	Gated Community
		10 varying architectural designs.	Mass customization
		will also enjoy the facilities provided by the Andalucia	Facilities management
		health club, shopping centres, restaurants, coffee shops and parks	Entertainment services
EX-Br1, 2007 A business report conducted by an external business firm	The company will be working in conformance to a strategy running through 2012 which outlines the introduction of Gated Communities, Industrial Parks, Commercial Centers and Mega Malls. The strategy also depicts a comprehensive expansion plan where Taameer will be offering mortgage loans, insurance and financing, and property management services. On the product level, industries will include wood, pre-cast concrete, iron and UPVC.	Gated Communities	Gated Communities
		Industrial Parks	Industrial Parks
		Commercial and Mega Malls Centres	Commercial and Mega Malls Centres
		Mortgage loans	Mortgage loans
		Insurance and financing	Insurance and financing
		Property management	Property management
In-Pp6, 2004 Introducing project A to governmental institutions for approval and potential investors	The company will Build a Secured Residential Area with flexibility and availability of producing different designs based on buyers wishes and needs, with the required facilities including a Club of 7,000 sqm including reception, saloons, tennis, volleyball and basketball courts, health club, cinema, kids' games area and swimming. The company will build 3 different designs of each villa type fully decorated and furnished for marketing purposes. The company will help clients with finance to buy the villas through a mortgage agreement with a group of banks.	A Secured Residential Area	Gated Communities
		with flexibility and availability of producing different designs	Customized Design
		required facilities including Club of 7,000 sqm	Entertainment services
		build 3 different designs of each villa's types fully decorated and furnished	mock-up models designs
		finance buying Finance	Finance service
		Mortgage	Mortgage

Data were analysed to determine general codes, these general codes were sorted and organized, whereby themes were identified. For instance, Gated Community and A secured residential area were aggregated into Gated Community services. During the analysis, several words and phrases used to describe the offered service were developed. These services were linked onto the extant literature and categorized furthermore based on pre-existing basic services, advanced services and system solution services.

In the final stage, findings were reviewed and validated with case studies' representatives. These findings are reported considering the purpose of data analysis and presented under the main theme using appropriate exact quotes from data sources to illustrate those findings. Additionally, different figures and tables were used to present these findings.

4.4 The Outcome of Secondary Data Analysis

The purpose of document analysis is twofold. It begins with the case studies' strategic analysis. The second part focuses on servitization strategy and service provision in the case studies, to gaining understanding of how the strategies emerged and how services were selected and operated in different projects. By which, the primary data collection will be more specific and more informed.

4.4.1 Case Study Companies Strategic Analysis

The analysis reviewed the companies' strategic information, project descriptions and market positions. The data have been obtained from internal and external sources. Internally, data was extracted from the companies' & projects' profiles and The HC websites. Externally, data was obtained from the companies' registration certificates, newspapers and external business reports.

4.2.1.1 Company A. (Andalucia Project)

A limited liability company was established in 2004. The company manages the development of the first project of its kind in Jordan, which introduces the concept of gated communities. This project comprises of 588 villas inside a closed residential suburb, with 10 different architectural designs and support facilities. The project is targeting the high-income segment of the country. The total built-up area is estimated to be 280,000 Sqm. The total investment is expected to reach 225 million US$. The project was designed to provide customers with safer private residences.

4.2.1.2 Company B. (Red Sea Resort Project)

A limited liability company was established in 2003. The company manages the development of an integrated residential resort. This project consists of 260 Villas with seven different designs. The project includes a health club, gymnasium, swimming pool and other entertainment facilities that were added to the project based on being a fully closed and private resort. The total built-up area is 67,705 Sqm. The total investment is expected to reach 60 million US$. Through developing a private high-class resort, the project is targeting customers who are looking for luxury.

4.2.1.3 Company C. (Al Gardens project)

A limited liability company was established in 2003. The company manages the development of a housing area as part of the development of a modern city project by a government institution. The project contains 253 semi-detached villas with seven different designs. The project targets a middle-income audience. The total built-up area is 60,198 Sqm. The total investment is expected to reach 30 million US$. Moving the inhabitants from the old Zarqa City, by offering new modern houses in a new city location with the ability of selecting the house type and location from different designs and different locations was the main idea of the project.

4.2.1.4 Company D. (Ayla Park project)

A limited liability company was established in 2003. This company was responsible to develop a comprehensive commercial centre in Aqaba city. This project was developed based on a long-term partnership agreement with a government institution. The project consists of two towers as office buildings; each building consists of five floors encompassing different office types and sizes. In addition, the project has four buildings based on a one-storage design that encompass different sizes and types of shops. These six buildings are spread over 22,000 Sqm of land. The total investment in the project was US$ 7 million. This was a business-to-business project, where the market segment is businesses interested in investing in Aqaba city centre based on an annual lease agreement.

4.2.1.5 Company E. (Al Jiza project)

A limited liability company was established in 2006. The company is responsible for managing the development of housing units that spread over 3,000,000 Sqm. The project offers more than 15000 units. These units are divided based on several buildings consisting of more than 14000 apartments from 80 to 180 Sqm and with 6 different designs. There are also 824 detached houses and 800 commercial offices and industrial workshops, plus different entertainment and public facilities. The total estimated investment was US$ 60 million. The idea of the project was to develop a full modern city offering different designs and with lower costs to provide decent housing for those on low and middle-incomes.

4.2.1.6 Company F. (Mansion Hills Project)

A limited liability company was established in 2007. The company is responsible for managing and developing a full tourist town in Aqaba based on a joint venture agreement. The project is designed to be built on a 200000 Sqm plot of land and with an expected total investment of US$ 1.5 Billion. The Mansion Hills Project is a high-end mixed use project to provide a tourist city with residential and commercial facilities. The project encompasses multi-purpose tourist accommodation and facilities such as villas, chalets, hotels, restaurants, shops, large shopping malls, parks, water sports and cinemas… etc.

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4.2.1.7 Company G. (Al Maha Project)

A limited liability company was established in 2006. This company was developed as a strategic coalition between three real estate development companies based on equal shares. Still, The HC has the leadership and strategic roles within this project. This company was responsible for managing the development of a residential area similar to project C but with more support facilities such as a central mall, parks, play gardens, commercial area … etc. Similarly, this project was part of developing a new, modern city in Zarqa, which is managed by a government institution.

4.2.1.8 Company H. (Al Mushatta project)

A joint venture agreement with The HC was signed in 2009 to develop one of the largest industrial cities in Jordan with the state- of- the- art infrastructure using world class standards. The city comprises more than 4 million Sqm. fully served with industrial infrastructure to comply with the international industrial zone standards. The city consists of plots sorted and ready for sale. It contains the supportive facilities for various industries such as banks, shops and government departments. The project is being created as an outcome of Jordan's promising investment environment. According to the agreement, The HC is responsible for the project development process that goes from project marketing, selling, designing, building and maintaining support facilities.

4.2.1.9 The Holding Company (HC)

The holding company, referred to in this study as HC, is a well-known Jordanian company that focuses on diversified real estate activities in Jordan and sets out to be one of the largest organizations in the real estate development sector at regional level. It is a publicly quoted company established in Amman, Jordan in 2005 with registered and paid up capital of US\$ 300 million. It emerged from a strategic alliance between the first four mentioned projects. The total investments of the HC exceed US\$ 1,253 billion. The HC aims to operate in the region with its headquarters in Jordan based on an integrated model through a group of wholly owned companies. These specialize in various areas of real estate development. The HC has a long list of subsidiaries that works within the value chain of real estate development (figure 4-1). This model enables the HC to better control cost, quality, and time; and to maximize the benefits from economies of scale.

Figure 4-1: The HC & its subsidiaries (Adapted from In-Ar2 p18)
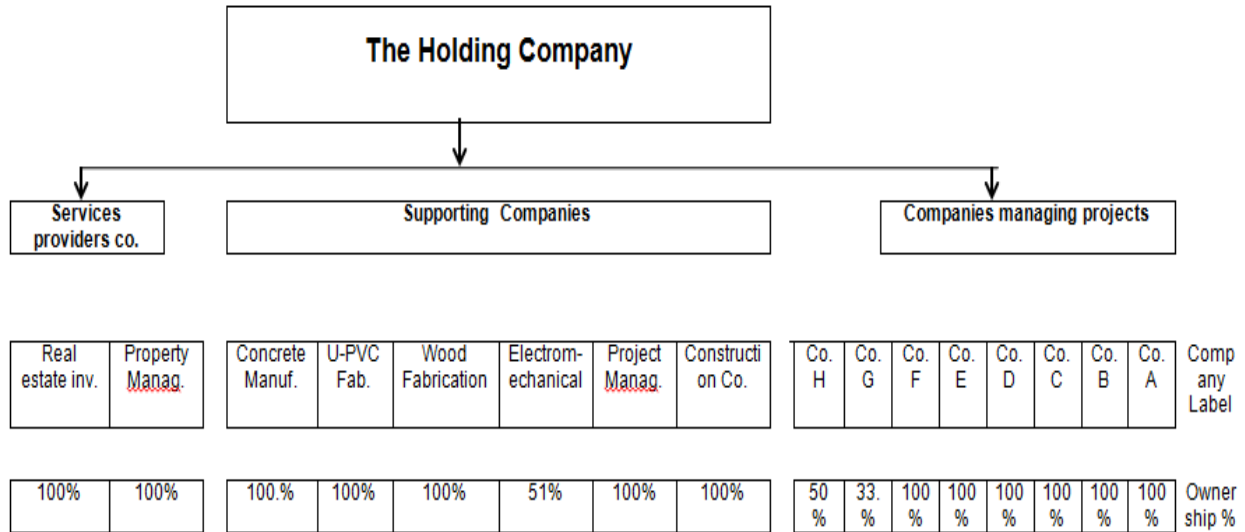
The functional structure is used in The HC and the subsidiaries as shown in figure (4-2). The tasks and roles are grouped based on specialization and the staff are grouped hierarchically on departmentalization. They report to one person who manages the function or the department.

Figure 4-2: The HC's organizational structure. Data were adapted from In-Cg1, In-Ar2 (p16) and In-Ar4 (p10).
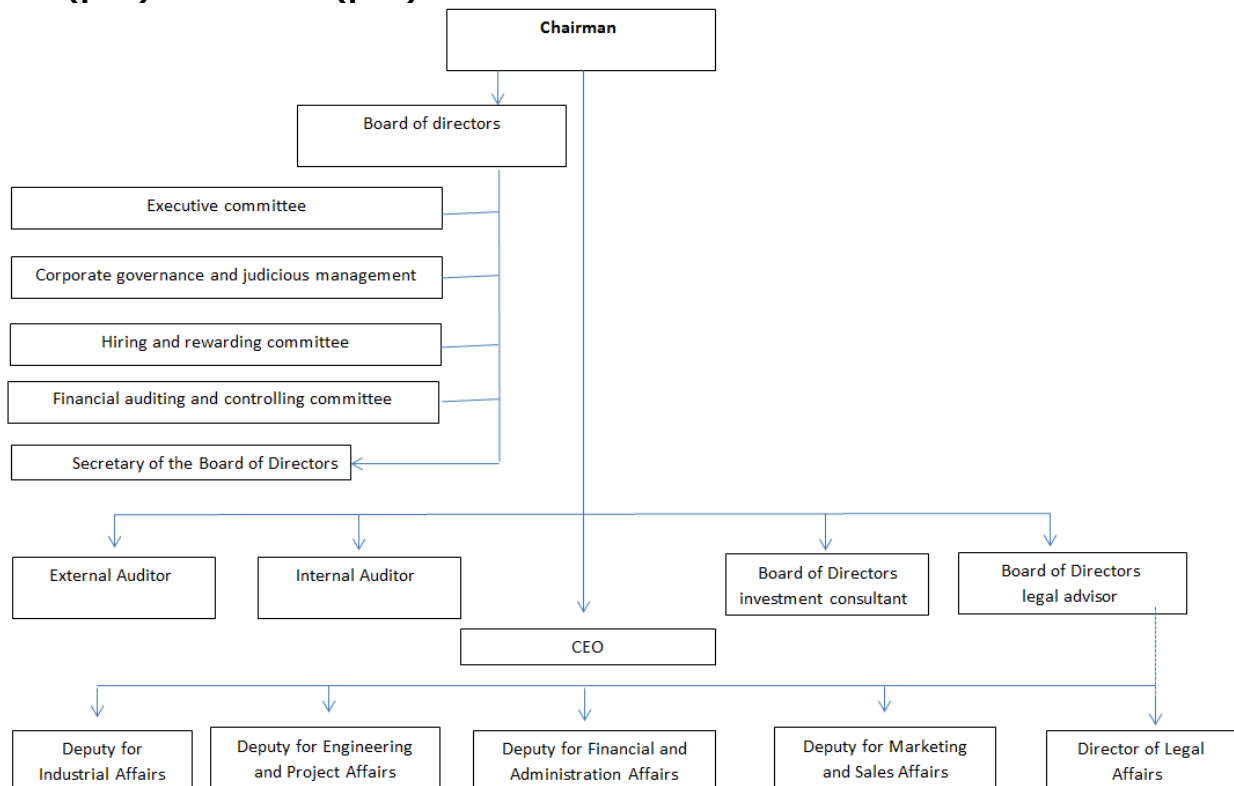
Each project was accomplished by a separate management team, as shown in figure (4-3) below.

Figure 4-3: Cross sectional of The HC organizational structure. Data were adapted from In-Hr2 (p24) and In-Ar6 (p22).
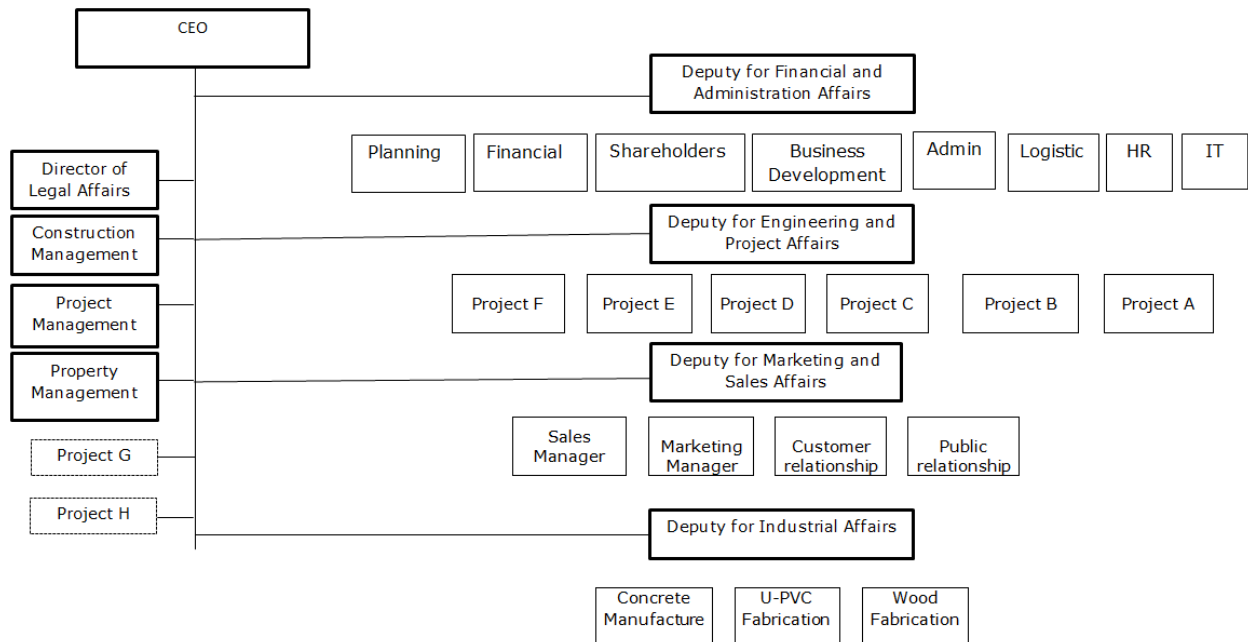
The functional structure is the common structure used in the subsidiaries as shown in figure (4-4) below, by which the project team, project performance responsibility and project communication channels are well identified.

Figure 4-4: Subsidiary company's organizational structure. Data were adapted from In-Ar7 (p23) and In-Hr2 (p24).
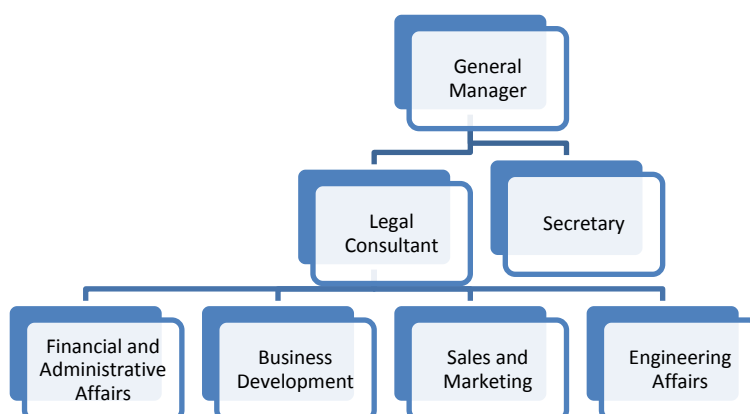
4.4.2 Offering Services within the Case Study Companies

The data analysis process analysed "offering services" activities to understand how the decision of service provision took place in the case study's companies. The study conducted a longitudinal analysis that covered data from 2004-2014, dealing with the growth of the projects and offering services over the years. Accordingly, seven themes emerged from analysing these data: the servitization strategic-decision making process; the entry mode; the services approaches; the services design and development approaches; the facility arrangement, the pricing policy and the cost of offering services.

4.2.2.1 Servitization Strategic-decision Process

The data analysis process was undertaken to understand how the companies' decisions were made to offer services integrated to the product. The data identified that services integrated to the project were mentioned as differentiation features. These were undoubtedly seen as a vital element of the project market proposition. The analysis process started from companies' registration certificates to find out whether providing service clauses was added into the company memorandum of association. The data analysis showed that service provision is mentioned clearly. For instance, the Ex- CC1 document stated in the clause of memorandum of association, "The Company has the right to offer property management services, leasing, consulting and advising services." Thereafter, the data analysis process looked at how the service element was viewed from internal and external perspectives. The analysis process reviewed the companies' and the projects' profiles to consider how the companies described their projects and the service element within these projects. For instance, document In-Pp15, p1, described the project A as "Gated and fully served residential Community." Also, from external perspectives, services were described as a vital component of the projects. For example, document Ex-Br1, p5, described the projects based on the main services offered under these projects "The Company will be working in conformity to a strategy running from 2012 which outlines the introduction of Gated Communities, Industrial Parks, Commercial Centres and Mega Malls. The strategy also depicts a comprehensive expansion plan where the company will be offering mortgage loans, insurance and financing, and property management services."

Next, looking at the expected contribution of service provision to the projects' revenue, the projects feasibility studies were reviewed. The data showed that offering more services was considered an important competitive edge and an essential for unit sales. For instance In-Fs2, p31 specified that this project (H) is "To achieve leadership in the industrial cities through providing advanced infrastructure and services that mimic the international specifications and requirements.''

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In addition, the data analysis process focused on the development of the ideas of offered services, and how more services and advanced services were offered. Data indicates that the added services were proposed by the executive management to solve or avoid potential problems and to create viable projects. For instance, document In-Wp4 presented several advanced services that essentially are needed to add to project (A). These services significantly influenced customers' purchasing decisions. They included power stations, water stations, entertainment facilities … etc.

Finally, the data analysis process was orientated to identify the external and internal factors that were incorporated into the service provision decision-making process and the evaluation of the probable effects of these factors on the companies' strategy. The search did not produce any documents stating that the case study's companies have done any studies, market audits or environment analyses conducted especially for the decision to provide service. The feasibility studies that had been done were studying the project and the offered services as part of the project. For instance, document In-Fs2 studied several external factors such as the Jordanian economy, law and regulations, the current industrial city in Jordan, the market size and competition. All these elements were studied with regard to the investment in industrial cities.

Finding number 1: Data designated that services were considered a complementary element of the projects' market proposition. The journey with servitization strategy started initially in a projects' design phase as each project was developed based on offering basic services integrated into the project. These services were there to address the need of a specific market segment. They were viewed as the competitive edge of these projects. The macro external strategic factors were not the main factor considered when deciding to offer services. The process of developing and offering more services was orientated toward problem solving. The decision to offer services was made on a case-by-case basis. The companies in our case study started offering services based on entrepreneurial decision, where the development of new ideas took place at the executive management level and the application of that idea came later by the project management team.

4.2.2.2 Entry mode

That data analysis process was oriented toward understanding how the companies introduced their services to the market. Several documents were reviewed. Analysing data exposed that the surrounding environment and the external culture were the motivation for service provision. The case study companies designed their projects around specific outcomes from the project and service system. For example, document In-Fs2 specified that the nature of the Jordanian real estate industry and the needs of then Jordanian public are

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inspiring the company projects. Additionally, document In-Pp14 p.3 stated that it was "Providing residences for 254 families, with entertainment & educational facilities, mosque & commercial area to meet the needs & leisure of inhabitants." In fact, The HC website and the projects' profiles described the projects and the ideas of the services offered within these projects. The data analysis indicates that each project was designed around offering those services that were related to basic customer needs. The common types of offered services were related to customers' activities and they were offered to entice customers to choose the company's product over its competitors. For example, document In-Pp13, p5 stated that this project aimed to fulfil the desire of Jordanian and non-Jordanians alike who would like to enjoy Aqaba Beach from an up market resort. Document In-Pp16, p3 stated that the company mission is "To create a real estate product (residential, tourism, housing, and industrial) that meets customer requirements." Document In-Pp18 p. 4 stated the project was "To create urban agglomeration distinctively and environmentally designed on the outskirts of Amman " Reviewing these projects' profiles, identified different services that were used as an entry mode, as illustrated in table (4-5).

Table 4-5: Entry modes (Data were adapted from the HC website and projects' profiles)

Co.	Project	Project design	Entry mode
A	Andalucia Project	Gated Suburb	Security and luxury services
B	Red Sea Resort Project	Private Resort	Security and luxury services
C	Al Gardens project	Modern City development	Social and urban development
D	Ayla Park project	Commercial Complex	An attractive business environment
E	Al Jiza project	New City development	Social and urban development
F	Mansion Hills Project	Resort Town	Luxury services & an attractive business environment
G	Al Maha Project	Modern City development	Social and urban development
H	Al Mushatta project	Industrial City	An attractive business environment

Finding number 2: Each project was designed to deliver a specific service as a market differentiation edge. The service element is introduced by conceptualizing the project around offering both general and basic services related to customer's needs and customer activities.

4.2.2.3 Services Approach

The data analysis process sought to identify the types of services that were offered by the case study's projects. Different types of services were offered, these services were inconsistent from project to project.

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The analysis showed that mass customization was the main service offered in all the projects even the industrial ones, but at various forms and levels. For examples, document In-Pp14, p3 describes the mass customization process in project C. "The land is divided into 127 plots with different areas varying from 480 m to 2-520 m2. Each plot contains a two floor detached duplex villa of 210 m2 – 230 m2 with each having car parking & attractive landscaping to soften the environment. Here seven different designs are proposed to meet the different tastes of customers for layout, and for each design two alternatives of elevation; the colourful cosy European style and the traditional domestic stone style. The company says "In that way we'll have two different atmospheres, which make the tour of such a district a refreshing experience for all." Generally, this service aimed at providing several choices for the customer by dividing the total plot into small, medium and large sizes and with different shapes to meet different customers' tastes. In addition, villas, buildings and apartments were designed based on several standard architecture plans that varied in terms of layout, space, and exterior design to suit most tastes and needs of different customers within the market segment. Consequently, customers can choose the plot and the villa design to fit with each other. Still, each design has its own finishing standard, such as the quality of marble, tile floors, bathrooms, doors, windows …etc.

Analysing several documents such as the HC website, the projects' profiles, the contracts and agreements, the feasibility studies, the working papers, the newspapers, and the external business reports identified the use of different services to suit the purpose of each project. Table (4-6) below illustrates these services. Furthermore, by tracking the processes and the times when these services were offered, the data analysis process showed that the offered services could be divided into three stages of the project life cycle; project initial design, project execution and after project delivery. Still, the service concept was embedded in the project design stage. Each project was designed with customers' needs in mind, such as the need for modern houses at a proper price; the need for more security and gated communities; the need for social status and luxurious lifestyles; the need for an attractive business environment; and fully served and equipped industrial cities.

Table 4-6: Type of Services offered

Basic Services	Project's brochure, Project's 3D Model, project's and villas' 3D virtual tour animation, mass customization, customer relationship management, electronic selling point, transportation, aesthetic aspects of design, maintenance.
Advanced Services	Consulting & advising service, financial service, customized design, interior decoration, equipment supplying, installation & supervision, insurance coverage, Co- development & Co-design services , mock-up models and home furnishing
System Solutions	Site management, Facilities Management, sustainable living, recreational services, technological service, property management services and business support services.

Table 4-7 : The Four Options of Servitization in Real Estate Development Projects

Project-orientated service	Gated community, elite residence and luxury service, modern city, attractive business environment and infrastructure services
Product-orientated service:	Project's brochure, Project's 3D Model, project's and villas' 3D virtual tour animation, mass customization, customer relationship management, electronic selling point, transportation, aesthetic aspects of design, maintenance.
Customer-orientated services	Consulting & advising service, financial service, customized design, interior decoration, equipment supplying, installation & supervision, insurance coverage, Co- development & Co-design services , mock-up models and home furnishing
Service-orientated	Site management, Facilities Management, sustainable living, recreational services, technological service, property management services and business support services.

Finding number 3: The companies offered different types and levels of services. These services vary between basic services, advanced services and system solutions. The services were offered in different stages of the project life cycle. Each project were

4.2.2.4 Design Approaches to service provision

The data analysis process sought to identify how services were developed, the practices of developing the service provision, the sources of services' ideas, the process of selecting the types of services that will be included within the system-offering package and the methods that were used to integrate these services into the projects. In order to answer these questions, several internal and external documents were reviewed. The data revealed several methods that were used to develop the service ideas. In the early stages of the project, the service development process is an internal process. Service provision is considered an organizational creativity approach and innovation process to deliver a unique project of combined products and services. These ideas were derived from the surrounding environment.

Document In-Pp4, p1 mentioned an "Entrepreneurial approach" as a project development methodology. Also, document In-Pp11 and In-Pp16, introduced the HC vision as a developer of creative real estate tourism, housing and industrial projects with an evolutionary concept. The study companies design their projects around an outcome that consists of both project and services. The company website described the mission of the study companies as " Strives to serve all segments of the community by catering to the real-estate related needs of an expanding client base and positively contributing to the socio-economic development of the communities it operates in." The ideas of basic services offered to create customer

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attraction such as the project's brochure, 3D Model, project and villas' 3D virtual tour animation, mass customization and electronic selling point were developed internally. For instance, document In-Wp2 offers a plan for promoting project C. The campaign includes services to attract more customers. In the advanced stage, different means were used to develop new services and more advanced ones such as customer feedback. For example, document In-Ag4 is a private contract for one of project B's customers, who would like to add a wooden pergola to his villa. This idea of adding a wooden pergola was admired by the executive management and added to the design of the project's villas. This was observed in project B villas' designs and photos based on the company website. Similarly, document In-Wp5 presented a new villa design in project A that was introduced by one of the customers. Furthermore, in order to fully utilise the projects customers' feedbacks, the company developed a feedback channel into the main website. According to Ex-Np8 report, the company installed an electronic system that handles potential customers' ideas, their requirements and feedback. Also, data indicate that the companies used the imitation to develop advanced services and new projects' concepts. For instance, document In-Pp5, p2, introduced project F as a "high end mixed use project that will encompasses tourist, recreational, residential, and commercial facilities along the lines of global resorts." Finally, more advance ideas were offered from a third party. For example, document Ex-Np6 and Ex-Np7 report two advanced solutions that were integrated into project A which came from external suppliers.

Finding number 4: Different development approaches were used to develop and design new service processes. The use of these methods and techniques vary based on the type of services and the project life cycle stage. Table (4-8) below illustrates these approaches.

Table 4-8: Services design approaches

Project Stage	Type of service	Sources for services development	Design techniques	Design system
Project idea development	Project outcome	Surrounding environment	Entrepreneurship approach	Jointed oriented
Initial design and planning phase	Basic Service	In-house ideas	Linear approach	Product oriented
During the Execution Phase	Advanced Service	Customer experience & Imitation strategy	Relational approach	Product - services design
After project Delivery Phase	System solutions	External professional Offers	Iterative approach	Service oriented

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According to table (4-8) above, customers need to play a vital role in services development, whereas a pioneer's ideas are derived from the surrounding environment to develop a successful project that meets customer needs. The company's executive managements need to play a vital role in developing basic services that link the customers' needs, service provision and project nature. In addition, learning from customers and worldwide projects influences the development of advanced services. These services were developed in alignment with the project to satisfy customers. Also, the companies don't have the capability to develop complex services, for which external parties and professional expertise were involved in the services' development process, where service innovation was the dominant factor.

4.2.2.5 Facility arrangement & Service price decision

The data analysis process pointed to a direct relationship between the sources of service provision and the service pricing policy. Results from the analysis demonstrated that multiple facilities decisions and multiple pricing policies were used by the study's companies to offer different types of services. Some services were offered from inside the company and based on project teamwork. For instance, document no. In-Wp3, p13 demonstrated the need of adding several departments and subsidiaries to develop the necessary competencies such as the customer services team. Analysing the HC annual reports, (particularly document In-Ar2 p4, 32 and 34; document In-Ar3, p4 and 28), the study found that the HC hired a number of qualified individuals to serve the customers and provide the support services to the subsidiaries. Also, the HC sent several employees on different training courses to prepare them to deal directly with customers and provide excellent services.

In the data analysis, no documents showed whether the companies were charging for the basic services or not Also, there was no specific revenue item in the income statement related to the services revenue, which indicates that these types of basic services were offered free of charge. Other services have been provided by two subsidiaries. For instance, document In-Wp7 summarized an agreement with one subsidiary company to provide different engineering services to project B based on cost plus pricing policy. On the other hand, more advanced services were outsourced and provided by specialized external companies. For example, document In-Ag5 represents an external engineering services agreement for additional design and engineering services to project A. This agreement was developed to manage the relationship between the customers of project A and the external provider and was based on a competitive market price. Finally, a networking and partnership arrangement was found also. For example, document In-Ag6 represents a strategic coalition agreement between four companies that were developing similar resort

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projects on the shores of the Red Sea. The parties to the agreement agreed to develop a beach club that served project B customers and those of other projects in the area. Document EX-Np6 reported a partnership contract to supply project A with gas at competitive market prices. In addition, specialized business units were developed to offer advanced services. For example, document Ex-Od2 is a registration certificate of a subsidiary company that provides different types of services to different projects. According to document In-Pp6 p7, these services will be offered depending on competitive pricing.

- ### *4.2.2.5.1 Facility arrangements for offering services*

Based on the above-mentioned analysis, the data analysis process indicates that the decision whether to perform the service in the operation process by either internal arrangement or external provider was determined dependant on three things. These were the scale and the scope of service; the degree of control needed by the HC or subsidiary; and by competencies required to offer service. Figure (4-5) illustrated these different arrangements.

Figure 4-5: Organizational facility arrangements for offering services
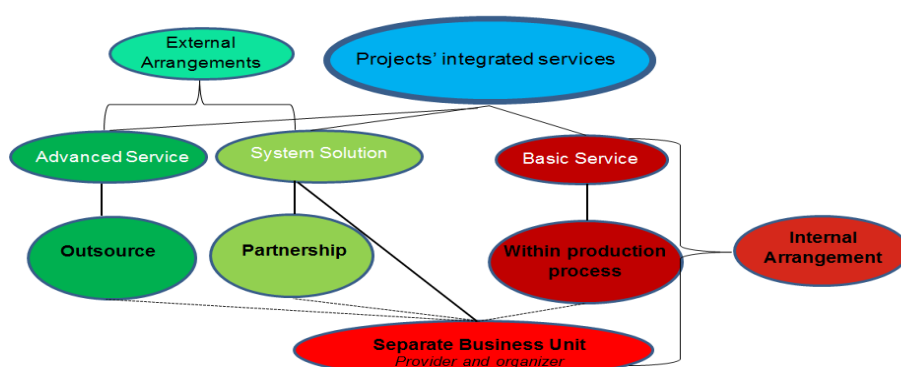
Finding number 5: Multidimensional facility arrangements are used to provide services. These arrangements varied from internal arrangements based on in-house production and separate business units and external arrangements using outsourcing and partnership strategies.

The internal arrangement based on in-house was the first consideration used by the study companies. The companies hired skilled individuals to provide both basic and advanced services within the internal operational process. Then, the companies used the outsourcing arrangement to offer services that require specialist knowledge, expertise, tools, or should comply with construction general instructions and regulations. In addition, the companies used collaboration, partnering and networking arrangements to offer services that require complex capabilities and have a specific operational process. The companies linked these

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services to the capabilities of external specialist organizations. There is the option of having two separate business units, one focused on the production process and the other to control and enhance the service provided. These include, a construction management unit and project management unit, which was developed to control and manage different projects. Also, they developed a full-scale separate service unit to provide services, particularly services offered after the project closing phase. One example of this is the property management services.

- ### *4.2.2.5.2 Service Price Decision*

Likewise, the data analysis process found that the services' pricing decision was determined by two factors, the facility arr11ngements and the type of service. Table (4-9) below illustrated these different relationships and pricing policy.

Table 4-9: Organizational Pricing Policies

Facility arrangement	Type of service	Pricing policy
In house production	Basic service	Free of charge approach
Separate business unit	Basic services and advanced services	Cost oriented approach
Outsource and network	Basic , advanced and complex services	Competitive marketing price

The price decision to produce basic services used two approaches. The first price was free of charge for services from in-house production and within the operation process, as this service was considered a basic part of the company commitment. The cost plus strategy was used in the case of more advanced and costly services provided by the company using a separate department or business unit. The price was based on the cost of the work with a profit element added to the actual cost to cover administration cost and a profit margin. In terms of outsourced services, whether basic or advanced services, the service pricing decision was based on a competitive market price.

Finding number 6: Different pricing strategies are used for service provision. These different strategies were selected based on two factors; the type of service and the organizational arrangements for offering these services.

4.2.2.6 Cost of Offering Services

The data analysis process was set to determine the cost of services provided. Analysing the companies' annual reports, there was no specific cost item in the income statement related to the cost of services offered. Likewise, analysing projects' feasibility studies, there was little detail on the cost of supplying services. The data analysis process revealed only a
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general set of cost categories, which were incurred when companies provided services. For instance document In-Fs1, (p4), categorized several services such as maintenances, cleaning and security under operating and administration expenses. Similarly, document In-Ar2, (p52), categorized different cost of services under administration expenses and sale and marketing expenses. Document In-Wp8 described the estimated cost of additional work in projects A, B and E, as an expenditure cost which included administration cost, staff cost, project monitoring and extra construction works. Finally, document Ex-Od2 described business activities of a subsidiary company established to offer advanced services and these activities indicated that the cost of service is the main cost driver.

Finding number 7: Only overhead cost is the main cost pool for supplying standard and basic services. This cost pool emerges as a result of extra administration works. Direct labour cost and operational cost that resulted from the changeover activities are the main cost pools for supplying advanced and more tailored services. Finally, when offering advanced and sophisticated services from a separate business unit, the service element becomes the main cost driver.

4.5 Section Summary

In this section, pre-existing data were analysed. These secondary data were reviewed to provide background information and detailed descriptions of the case studies companies. These were to form a clear baseline of primary data collection and to design a subsequent primary data collection process. The process of secondary data collection and analysis involved using documents from different sources and based on different perspectives. In this phase, several internal and external documents were reviewed using the document analysis technique. The data analysis process revealed several practices were used for a service provision strategy. In the next section, the Delphi first round of primary data collection will be presented.

4.6 Delphi Round #1

The primary data were collected in three waves, using the concept of the Delphi method. The first round of Delphi involved seventeen open-ended questions. These questions were developed according to the study's conceptual framework, the output of the secondary data and the pilot study. These questions were designed to solicit a broad range of responses and within the respondents' area of expertise. The questions were posed to the respondents based on email interview. The section starts with an overview of the first round respondents' characteristics. Based on the case study access approval, those potential respondents were identified in collaboration with the case study's companies. The questions were sent to 73 participants by email. 42 replies were received. The selected respondents were working on different projects, for different companies and different departments within the case study. They were involved both directly and indirectly with services provision. The respondents represented different managerial perspectives as they came from different organizational levels and different positions. Table (4-10) below provides an overview of the main characteristics of those respondents.

Table 4-10: First Round, Respondents' characteristics

Ref.	Position	Level
TC01	CEO (Chief Executive Officer)	C-Level
TC02	CFO (Chief Financial Officer)	
TC03	Deputy CEO For Industrial Investment	
TC04	Deputy CEO For Marketing and Sales Affairs	
TC05	Deputy CEO For engineering affairs	
TC06	Chairman Legal Adviser	
TD01	Business Development Consultant	Director
TD02	Business and Strategic Development Director	
TD03	IT Director	
TD04	Legal Affairs Director	
TD05	Projects Executive Director	
TAD1	Chairman Office Manager	Assistant Director
TAD2	Deputy CFO for Administration Affairs	
TSC1	Subsidiary Company Manager	Subsidiaries company
TSC2	Subsidiary Company Manager	
TSC3	Subsidiary Company Manager	
M01	Projects' KPIs Manager	Middle Management
M02	Purchasing Manager	
M03	Head of Investment Department	
M04	Quality Manager	
M05	Senior Strategic Planner	
M06	Financial Manager	
M07	Senior Strategic Planner	
M08	Sales team leader	
M09	Head of Legal Department	
M10	Accounting Manager	
M11	Webmaster	
M12	Senior Marketing consultant	
M13	Project's Budgeting & Treasury Manager	
M14	HR Manager	Middle Management
M15	Logistic and Administration Manager	
M16	Marketing Manager	
M17	External contractor	
M18	Project Manager	
L01	Architect	Lower Management
L02	Purchasing Officer	
L03	Administration Officer	
L04	Design Engineer	
L05	HR Officer	
L06	Financial Reporting Officer	
L07	Customer's Accounting Officer	
L08	Logistic Officer	

4.6.1 Data analysis

In this round, content analysis was used. Content analysis is an approach for the analysis of documents and texts. It seeks to quantify content in terms of pre-determined categories and in a systematic and replicable manner (Bryman & Bell, 2015). It is used for searching for content of previously identified themes to conduct more concentrated data analysis (Easterby-Smith et al., 2012).

In this round, the data analysis process will emphasize on identifying themes and categories relating to servitization strategy during initial coding, coding and the theme development process. The content analysis technique was chosen to identify the main cluster in the data to build-up a better model or map for the next stage. A qualitative content analysis process includes all those procedures to identified codes, themes and categories, but seeks to quantify these categories by means of frequency classifications (Kohlbacher, 2006). The process consists of three phases: the preparation phase, organizing phase and reporting phase. Each phase consists of several steps (Elo & Kyngäs, 2008).

4.6.1.1 Data Preparation

The preparation phase is the starting point that involves data familiarisation by reading through all answers several times. Data quality and validation were inspected, looking at completeness and reasonableness of the collected answers and elimination of erroneous values if there were any. Then, the data were downloaded using Microsoft Excel 2010 to make sure that every question was read and understood. Then, the data analysis process went through question by question until all the answers were gathered together. Finally, these answers were read and re-read to understand the data to obtain a sense of the whole data and generate general data perceptions. Notes and initial ideas were taken and the data analysis process was initially visualized. Also, the answers were sorted and read based on three organizational levels to discover if there was a gap between these different levels. A reference number was given to link the interviews to the respondents. The symbol included a number and a letter referring to the respondent's level in the organization. T, M & L were sequentially used to indicate top, middle and lower organizational levels. To cope with the nature of the case companies, the top level were reorganized into four levels C-level, directors, assistant director and managers of subsidiaries; where C , D , AD and SC symbols were used to indicate these four sub-levels within top management (See Table 4-8) above.

4.6.1.2 Data Organization

Data organization phase consists of several steps. It started by developing a coding matrix for more focussed content data analysis. The process seeks to quantify the data content in

terms of predetermined categories and previously identified themes. In this stage the data analysis was conducted to identify data related to the set of main categories below as an outline for the data analysis process. This was done so the researcher could find the best answers from the collected data. Still, the process gave space for themes that could emerge from the data set. Throughout the analysis, the process was guided by the following aspects and objectives.

1. Explore the perceptions of service provision.
2. Explore the motivations of a servitization strategy.
3. Explore the factors influencing the design of a service.
4. Explore the challenges of a servitization strategy.
5. Explore the requirements of a servitization strategy.
6. Explore the optimal extent of a servitization strategy.
7. Explore the outcome of a servitization strategy

For instance, to explore the factors influencing the design of service, the data were analysed to determine initial codes. Each response was read carefully searching for codes. Hand notes and initial codes were taken. Table (4-11) below provides an example of the initial coding development process.

Table 4-11: An Example of Developing Initial Codes

Main Category	Factors influencing the design of service	
Respondents	**Raw Data**	**Initial Code**
TSC01	For offering service, the company considered a number of factors, such as the competition in the market, the cost of offering services and how this cost would affect the final price. Also, consideration of the ability and viability to continue to provide these services.	Competition in the Market
		Cost analysis
		Organizational ability
TC01	The provision of services should improve the image of the company to the customer in comparison with competitors, with less effort and costs. Thus, the design of services was in relation to the requirements of the customer and their needs and what fitted with the market and organizational ability to provide service. Some services were deduced from particular customers' requests which were generalized to all the company's customers.	Customer requirements
		customer needs
		Market fit
		Organization ability
		Customers' requests
TSC03	Different factors were considered. Services were offered based on product types, in agreement with the customers' needs, and the company's ability to provide this new product or new idea, based on experience of the market place and market competition and the cost of offering services.	Customer need
		Organizational capability
		Market competition
		Cost analysis
TD05	Provide a variety of options to meet the needs of real estate clients. These services should be applicable within the standards and the local laws. As well, the nature of the project and the project design. And the company can by offering these services compete with other companies in the same field and to attract a larger number of customers	The needs of real estate clients
		Fit with standards and regulations
		Fit with the nature of project and project design
		Competitions
		Attract a larger number of customers

In the next step, these initial codes were collected together, reviewed and then re-categorized into main codes. Some of the initial codes stand as main codes by themselves. Other codes become sub-codes. Then, the data were sorted and organized by these general codes to identify patterns and bring meaning to the responses by which main codes were identified. These main codes were checked by tracing the process of code identification from the beginning. Also, some of the identified themes were verified by peer review. These initial codes and main codes were linked to develop the main category. Figure (4-6) below provides an example of linking the sub-code to main code and developing main category.

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Figure 4-6 : An Example of Developing Main Category

Sub-Code	Main Code	Main Category
Competition in the market / Market fit	Market Competition	
Customer requirements / Customer Needs / Customer request	Customer Need	Factors influencing the design of service
Organisational capability / Organizational ability	Organization Capability	
Standard and Regulations	Standard and Regulations	
Project Nature / Project Design	Project Nature	
Attract customers	Added value for customer	

Thereafter, the main themes were labelled by different letters. The initial codes were re-sorted and assembled by the label of the main codes to check the frequency. Also, in this step, the data analysis process looked for similar or overlapping categories. The numbers of initial codes raised in one theme were counted and rearranged into different shapes, to objectively view the data clustering points. These main codes were reviewed searching for more aggregate levels or extendable levels. Table (4-12) below provides an example of developing main codes after the reduction of the categories in the initial coding

Table 4-12: An Example of Developing Main Codes

Initial Code	Main Code	Code Label	Frequency
Competition in the Market Market fit Market competition Competitions	Market competition	1	4
Customer requirements customer needs Customers' requests The needs of real estate clients	customer needs	2	4
Organizational ability Organizational capability Organizational capability	Organizational capability	3	3
Cost analysis Cost analysis	Cost analysis	4	2
Fit with standards and regulations	Standard and Regulations	5	1
Fit with the nature of project and project design	Project nature	6	1
Attract a larger number of customers	Added value for customers	7	1

As a last data analysis step, the analysis process involved identifying themes and categories that 'emerged from the data. This involved discovering themes in the text and verifying those themes by searching through the data to identify further themes and categories.

4.6.1.3 Data Reporting

In order to show the relative importance of different themes, data were presented using different performance graphs such as columns, bars and pie charts. Also, in order to make the data more objective and more understandable, summary tables were provided to present the meaning of each theme based on the respondents' answers. Finally, these findings were validated with the case studies representatives.

4.6.2 The outcome of Delphi Round One

4.6.2.1 Perceptions of Offering Service

Initially, the data analysis process leant toward understanding who people were viewing offering service and what are their opinions regarding offering services. Data designated several views. The majority of respondents considered service as an essential marketing element for the company and its customers. For instance, respondent TD02 stated, "Offering service is important for both customer and company. Its supports the customer purchasing decision and enhances organizational adaptive capability." Secondly, service was viewed as an added-value element. For instance, respondent M01 argued, "Service becomes an important competitive element. Providing services improves economic value and creates

more value for the customer in terms of what they pay." Thirdly, offering services was viewed as a competitive advantage base. For example, respondent M08 mentioned, "Service becomes an indispensable element of some products as it, supports product differentiation." Finally, offering services was viewed as an innovation strategy. For instance, respondent TD01 mentioned, "Offering services develops creative ideas that help us to compete in the market place." Figure (4-7) provides an overview of how the respondents generally perceived service and service provision strategy.

Figure 4-7: general perceptions of service
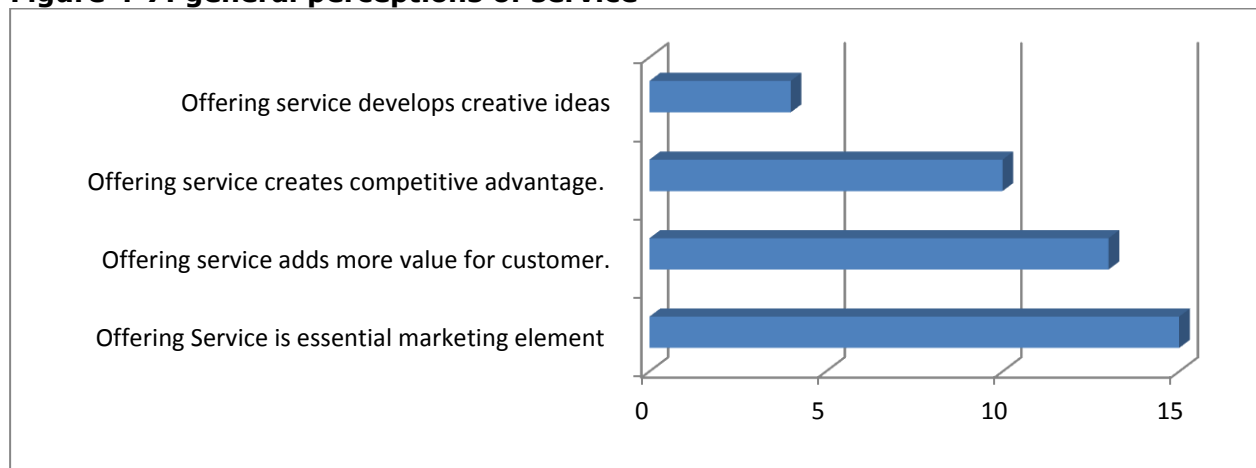
The majority of respondents considered offering services as an essential element of the project marketing success. This necessity of providing services comes from the characteristics of the service. For instance, respondent TC05 focused on the importance of services for customers as he said, "Service gives the customer the flexibility to choose the design he needs, and which is in line with his needs." Respondent TD04 focused on the necessity of providing services to meet customer's changeable needs, "rapid development has become a sustainable state in the world and to keep pace with the needs of customers has become a key requirement for the success of businesses. Adding service has become an essential requirement for real estate projects." Respondent TC04 focused on the necessity of offering service for the company and the customer, saying that services "Expand markets… differentiate products … and reassure customers."

Finding number 8: Providing service becomes an essential element of realty projects. It facilitates product development, adds more customer value and creates competitive advantage.

4.6.2.2 Explore the Motivations of a Servitization Strategy.

The second objective of the analysis was to understand the reasons for offering services, looking at the purposes and motivations of adopting a servitization strategy and the driving

forces behind the process. The respondents were asked why companies chose to offer services and what the special characteristics of service were. The data analysis process yielded 273 traits as broad open codes. These open codes were disaggregated into eight subcategories (Figure 4-8).

Figure 4-8: Reasons for Offering Services
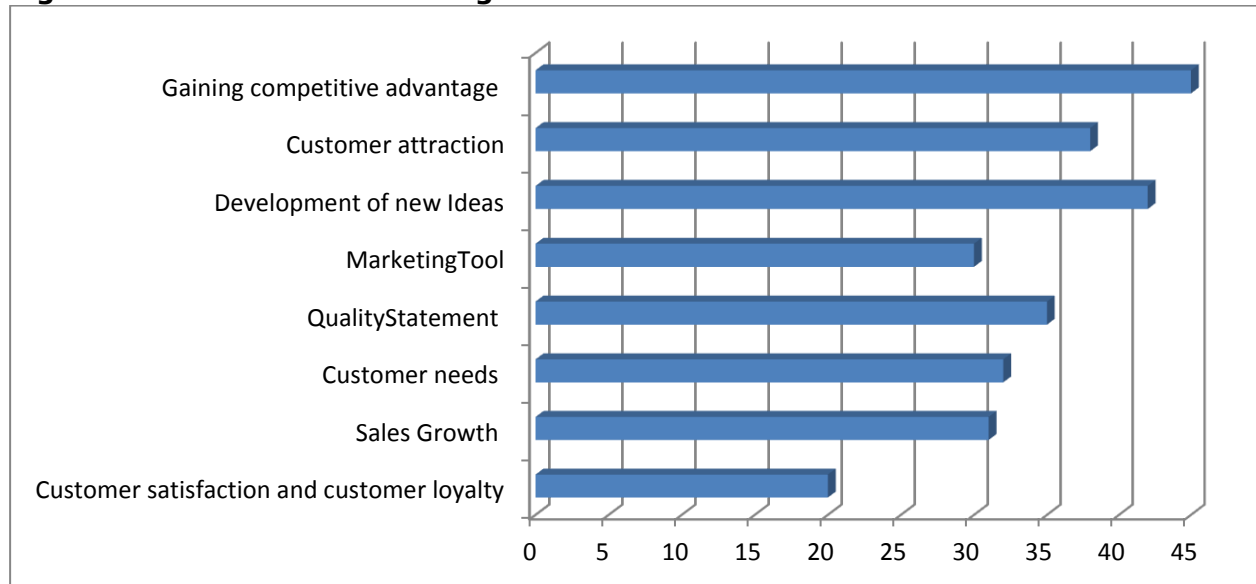
The study concludes that the companies offered services to attract customers and gain competitive advantage over competitors. For example, respondent M12 mentioned, "Offering service is an important element in some products such as the building industry to make it more appealing to buyers." According to respondent TC04, services were offered "To expand markets based on inspired consumer confidence and to target the increasingly larger market of busy professionals who need an entire job done from A_Z." The case study companies offered different types of services to outperform competitors and avoid price reduction. For example, respondent TC03 mentioned, "Offering service is a competitive advantage strategy to avoid price reduction and price wars." Also, services were offered to meet customer needs and increase their satisfaction. For example, respondent M07 argued that "Providing services satisfies customers and provides higher value to them". Interestingly, service was offered as an innovation strategy that required less time, effort and investment than product innovation. According to respondent TC01, "Service is an easy innovation process to develop creative ideas and meet customer needs". Also, services were offered as a marketing tool to promote the companies' products. For instance, respondent L06 mentioned, "Offering service integrated to the product creates a kind of marketing and advertising for the product". Other respondents mentioned, that services were offered as a quality statement that enhanced the product functionality and justified the product's higher price. For instance, respondent TD05 mentioned, "Services were offered to raise product

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quality and efficiency"; where TAD2 said that "Services were offered to justify the product's high price ". Generally, the respondents mentioned a combination of different reasons for offering services. The data analysis process indicates that a combination of marketing, strategic, innovation, and financial factors motivated the companies to offer services.

Figure 4-9: Motivations for the servitization strategy
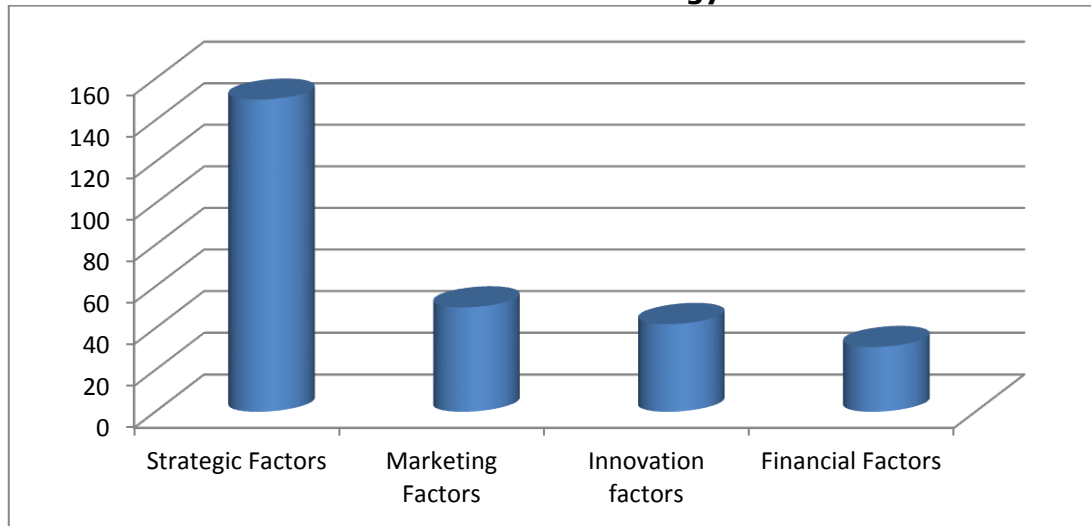
Therefore, the above-mentioned categories were re-categorized into four main categories as in figure (4-9). Also, these themes were described according to the respondents' answers in table (4-13).

Table 4-13: The respondents' description of the reasons behind offering services

Theme	Theme Description
Strategic Factors	Endorse the company's product selling by persuasion and convincing customers to buy the products and influence their purchasing-decision. Gaining competitive advantage by distinguishing the products from other products within the marketplace, and by offering service that improves the product's cost, or adds more value for the customer. Also, It is a quality statement enhancing functionality; reducing product cost in the eyes of customers or justifying the products high prices.
Marketing Factors	Companies' marketing activities to promote products and enhance the company's image , entering new markets , developing new ideas , creating a customer base , collecting market information and gaining new customers . Addressing customer's needs and meeting their requirements. Gaining customer satisfaction & customer loyalty by enhancing customer's attitudes toward the product and repeat purchases or promote the product to others
Financial Factors	Increase the amount of the sales volume of the company's products.
Innovation factors	Developing new ideas and activities needed for developing and offering services more easily and simply, relative to product development. Services are easy to be changed and/or modified to adapt to different customers' needs

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Finding number 9: Companies tended to offer different types and levels of services for a combination of strategic, marketing, innovation and financial reasons.

4.6.2.3 Explore the Factors Influencing the Design of Service

The third objective of data analysis was to gain understanding of how the offered service was designed and identifying the factors that influence the type and form of offered services. Thus, respondents were asked about the factors that influence the types of services offered. The data analysis process yielded 134 factor codes. These open codes were disaggregated within eight themes as in figure (4-10) below.

Figure 4-10: Factors influenced the design of service
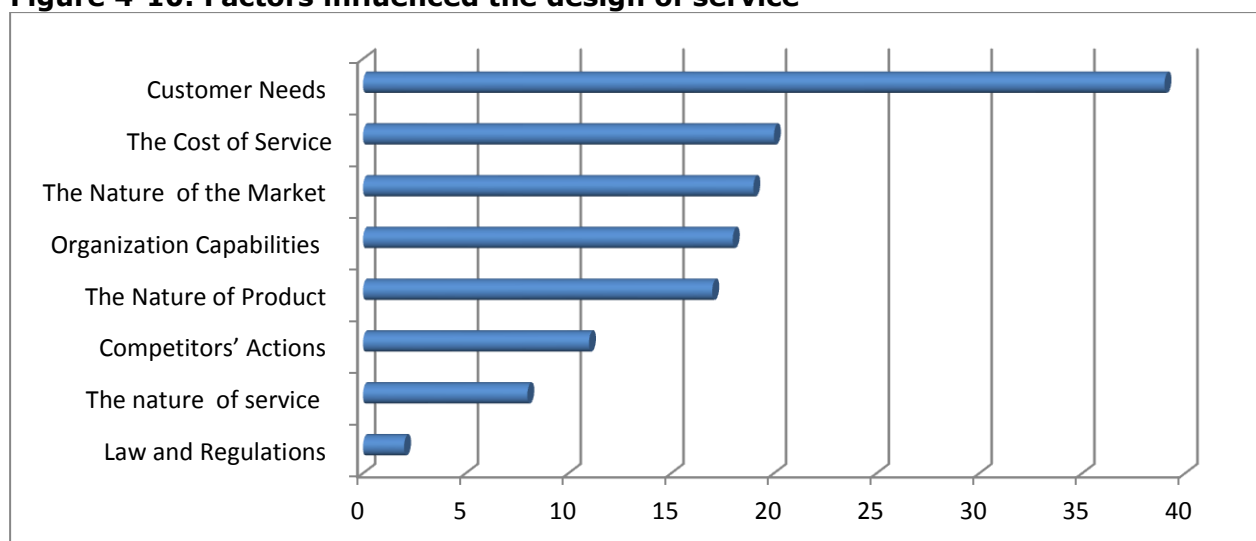
The data analysis found that the companies considered different factors for designing the services offered. According to respondent TSC01, "A combination of several factors influenced the type of the services offered." The data analysis process showed that the customer needs is the main factor that guides the types and forms of services. For instance, respondent TAD1 mentioned that services were designed to "Meet the needs of the target marketing segment and customer requirements and desires". The second factor is the cost of services. According to respondent M04, "It used to be designed as a separated product, not embedded in the product. The cost of achieving that was considered." Also, market competition influenced the services design. Respondent TSC03 mentioned, "The competition with other competitors" is one of the factors influencing the design of services. Also, organizational capabilities were considered when designing the services. According to respondent TAD2, "Organizational competencies should be examined and considered when offering services." Other factors were mentioned by different respondents such as the nature of the market, the nature of the product and the nature of the service. For example, respondent M01 mentioned, "Market demand and customer purchasing power affected the
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type of services offered." Respondent TC03 mentioned, "It is usually, designed around products that integrate vertically and/or as enhancement of the product to be sold." Respondent M02 added, "The nature of offered services and the extent of its success with customers" as one of the factors that influenced the service design. Finally, statutory compliance was also considered when designing the services. According to the respondent TD05, "The services were designed taking into account the project original designs, the privacy and the rights of neighbours, the project licensing requirements and the regulations of the authorized official bodies from the department of housing and building".

The data analysis process re-organized these factors based on both external factors and internal factors. The external factors are those out of the organization's control and the internal factors are considered to be under the organization's control. These internal and external factors were described according to the respondents' answers in table (4-14).

Table 4-14: Factors influenced the design of service offering

	Factor	Themes Description
External Factors	Customer needs	The companies' activities are geared to creating more value for customers based on customer preferences.
	Competitors' actions	The activities of rivals within the market are followed
	The nature of the market	The outcome of data evaluation regarding the local community, customers, traditions and the social life of the surrounding environment The economic situation and customer purchasing power
	Law and regulations	The system of rules and principles, designed to control and govern the activities of real estate development
Internal Factors	The cost of service	The amount spent to produce, offer and deliver services, and how this amount will affect the product's final price
	Organization Capabilities	The availability of resources to produce the service and the fit within the operation process;, the model; and organization's manpower
	The nature of project	Relevant to product type; management style; product operation process; quality; and customer segment
	The nature of service	The type and the form of service to be added to the product.

Although, the offered service is designed based on a customer-centric approach, the data analysis process found that the project and services must be designed simultaneously and systematically. This means that services should be incorporated into the project scope, and considered in the early stages of project design. Respondent TC04 argued, "There was no strategy per se, it was a series of scattered activities that did not come together to what amounts to be a strategy." Respondent TSC03 argued, "Services requirements have been dealt with according to the building stages". While respondent M01 argued that, "There is no doubt that the provision of services stimulates sales, and properly directs the company's

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outputs toward customers, but the company has to study these offered services and manage it well." Respondent TC06 linked organizational performance to more planning and coordination. In addition, respondent TD04 linked the success of services provision to the development of a Masterplan that incorporates both services and projects. Respondent TSC03 argued that in order to develop an effective service offering, "All should be regulated through a comprehensive, documented, and monitored management system." Respondent, TAD1 linked the challenges of offering services to the lack of earlier and more thorough planning. Where, respondent M02 argued that these challenges could be mitigated through correctly designing service provision by studying both product and services.

Finding number 10: It is necessary to consider both external and internal factors when designing an effective service provision. Generally, each added service should be well designed and made to fit with a specific market segment; customer needs; organizational circumstance; and project design. A parallel development to design a successful and effective offer of services is recommended, by which the design process should consider the inter-relationship between project and services.

4.6.2.4 Explore the Challenges of The Servitization Strategy.

The fourth objective was toward understanding the challenges associated with servitization strategy, looking at describing the main concerns when offering services integrated to the product in a project-based business. The respondents were asked about the main challenges or risks that facing the companies when offering different types of services. The data analysis produced 157 codes as general open codes. These observations were categorized into five general codes (figure 4-11).

Figure 4-11: The main challenges of offering services
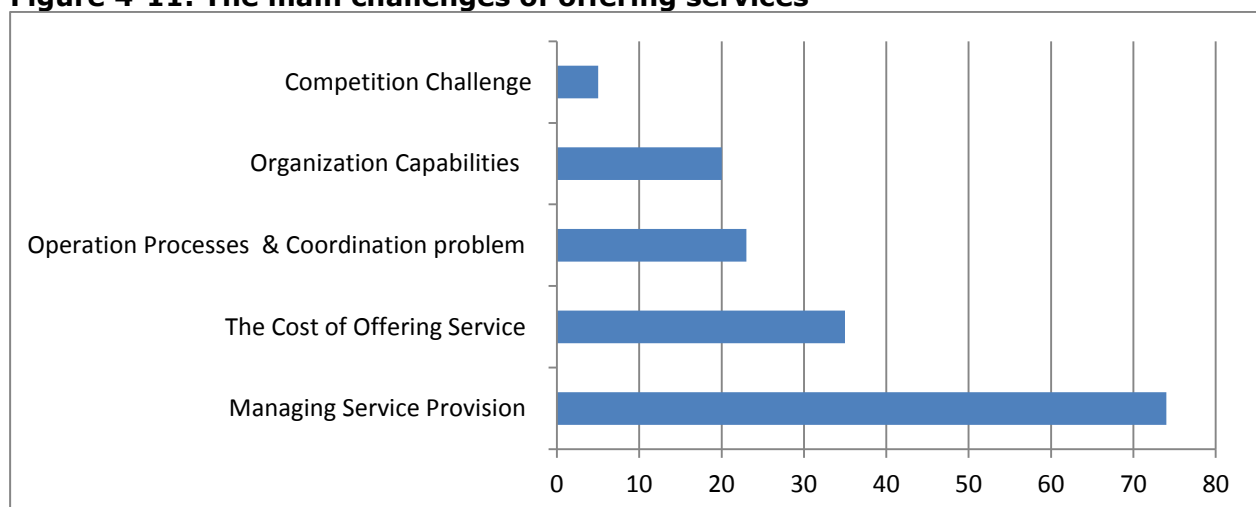
Figure (4-11) indicates that the companies faced several challenges when they offered services. Managing service products integrated into the project was the main challenge. The respondents often mentioned the great diversity of customers' needs and requirements as the main barrier resulting from service provision. For example, respondent TC01 mentioned, "The variety of services, as services are not fixed and vary from customer to customer. Also, customers ask for more than they have been offered and every customer has different needs from other customers. "Respondent M04 added, it is a challenge "guaranteeing that the service meets the customer's satisfaction." Respondent TD04 mentioned the lack of a master-plan to be the main challenge when providing services and obtaining customer acceptance of those services. Respondent L03 mentioned, "Enhancing sustainability and maintaining continuous support" as one of main challenges. Additionally, respondents mentioned that companies have to manage the risks resulting from offering services such as losing the project focus; hindering product innovation; expanding organization domain; and increasing organizational responsibilities. For example, respondent M05 mentioned, "It could be losing the product focus/concentration when moving from a manufacturing to a service company which in the end could affect the continuous innovation of the product its self."

Cost was another challenge when offering services. Here, respondents focused on the cost of services and the cost of change caused by meeting and implementing different customers' requirements in different stages of the project life cycle. For instance respondent TC04 mentioned the challenge of "Estimating cost accurately and being able to manage service Levels in view of a tight budget." Also, respondent M13 said "It was difficult to accurately calculate the cost of services".

Another striking problem is the traditional project operation process and the synchronization and integration of project activities. Adding services altered the project's operational process and activities, which required robust coordination schemes. Also, the excessive customer involvement associated with a service offering strategy required coordination of different parties of the project. For instance, respondent TC03 mentioned "Misrepresentation or misunderstanding coupled with the absence of synergy." Respondent TC02 mentioned the "Re-organization of product lines, staff, and operating model." Also, respondent L06 mentioned "The difficulty of continuous coordination between the company's internal departments which creates a barrier of meeting customer needs." Additionally, the lack of the organization's capabilities was another challenge, particularly as human resources needed to handle different aspects of the customer relationship. For example, respondents M14 mentioned, three challenges and these were; "The provision of qualified human resources; staff training on how to deal directly with customers and: training

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courses for staff working on the projects". Finally, respondents mentioned competitors' activities as a service provision problem. For example, TSC03 mentioned, "Offering services increased the product cost and affected project competitiveness." In addition, TD01 mentioned that "The ability of competitors to imitate the company's ideas and services and to provide it better" was an issue. Table (4-15) describes these challenges according to the respondent's answers.

Table 4-15: The main challenges of offering services

Challenge	Description
Managing Service Provision	Planning, designing, organizing and executing the optimal level of services offered that create more value for customers, reduce operational process variety and meet the divergence of different customers' needs and preferences and reduce organizational risk
The Cost of Services	The increased cost of making changes as the project is moving forward and how this cost will affect the product's final price.
Organization Capabilities	The availability of skilled manpower, and financial resources.
Competitions Challenge	Rivals' activities within the market, their products' price and quality. Also, their imitation of the organization's services offered.
Operations processes & Coordination problems	The impacts of the service process on the operation process. The lack of coordination among organizational people, activities, functions, departments and project site

Finding number 11: Offering services integrated into realty projects encounters several challenges. Managing service provision is the outstanding challenge. The organization has to plan, design, organize, and execute the optimal level of services to create more value for customers and yet still reduce the variety of different services. Other challenges regarding the cost of service provision, the operation process, the required capabilities, and competitors' actions are other challenges to servitization.

4.6.2.5 Explore the Requirements of the Servitization Strategy

The fourth objective was to understand the requirements of a servitization strategy, whilst offering services successfully. The question was designed to capture the different organizational requirements and the features of these requirements. The respondents were asked to describe the required changes in terms of organizational capabilities, organizational structure, organizational culture, and the operations process. Besides, the respondents were asked to add any other requirements that they thought were needed when offering services.

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In general, the data analysis recognized that the different aspects of organizational capabilities, structure, culture and operational process needed to be aligned with the service provision strategy. According to respondent L03, servitization "Transforms the entire organization in terms of individuals and teams, evolving new mind-set, integrating new systems and fostering capabilities". Respondent TC02 mentioned, "Enhanced communication between management and staff about the objectives and benefits are essential to the successful change; Staff training and continuous improvement with the provision of a career path; clarity of procedures (SoPs) and continuously updating the services offered and the adaptation to change." These different organizational aspects are described in more detail below.

- ### *4.6.2.5.1 Organizational Structure*

The data analysis realized that the companies had to change organizational structures. For instance respondent TC03 mentioned, "The organizational structure has to be in line with the offering, whether it is manufacturing or service." Respondents mentioned several characteristics of the required organizational structure. For example, respondent TD01 mentioned that the company needs "open communication and a fast and right decision making process. " Respondent M08 mentioned that the organizational structure should "provides decentralization, promotes authority delegation and emphasises on tasks specialisation." According to respondent M11, the organizational structure should promote flexibility. Respondent M10 mentioned that the structure should promote "Team work and correct distribution of tasks." Respondent TSC02 emphasised a comprehensive control system, while respondent TC04 emphasised coordination and integrated communication as major issues. He said "…. link the effort to all other functions of the company". These characteristics were collected and regrouped to form the characteristics of the organizational structure that fit with a servitization strategy. These characteristics are summarized below:

- More clearly defined authority with clear chain of command and more decentralized decisions.
- Less management layers with a wide manager's span of control.
- Delegation of authority, and the decision making process should be assigned clearly according to specialty and expertise of individuals.
- The structure has to link different organizational tasks, increase the coordination between different functions, and provide a different control mechanism.
- The organizational structure should promote the process of taking the right decision at the right time. It should be flexible promoting fast responding and should be able to manage different actors within the value chain.

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- A separate quality control or quality assurance unit should be created within the organizational structure.
- The structure should enhance listening to customers' voice and promoting the importance of the customer that means customer relationship management has to be embedded into the organization chart by creating a specific position such as chief customer services officer.

Finding number 12: The services provision requires an organizational structure that has both the characteristics of flat and tall structures with more organic structure.

- ## *4.6.2.5.2 Organizational Capabilities*

In terms of organizational capabilities, the respondents describe several types of capabilities needed to adopt a servitization strategy. Among these capabilities, respondents focused on four major capabilities as shown in figure (4-12).

Figure 4-12: Offering Services Capabilities
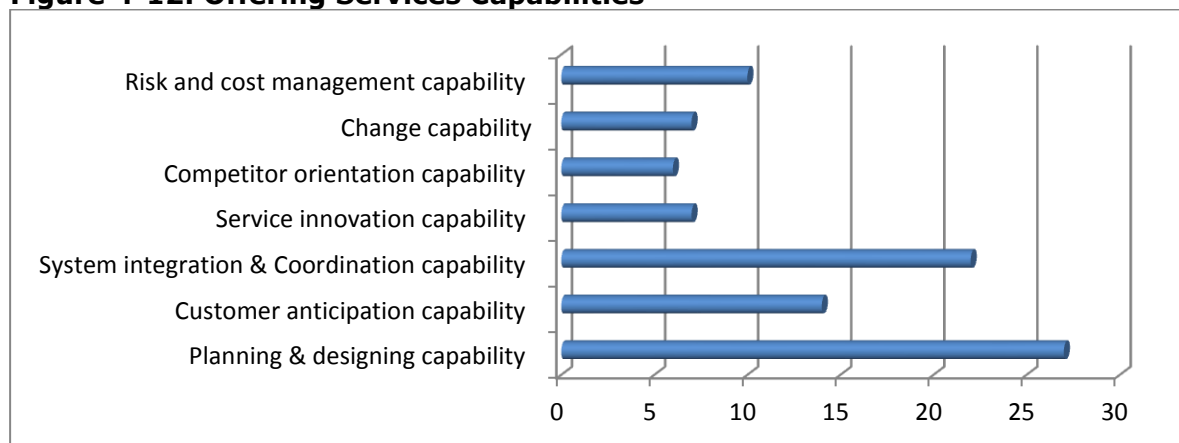
The planning and designing capability was the outstanding ability needed when offering services. According to respondent M07, "Any company has to be ready for the change before doing it as it requires prior investment in all aspects prior to launching a new service. Therefore, the company must dedicate a team to launch and operate the new service. This team must handle developing the idea of project-services system right up to launch." The second capability is system integration and coordination needed to direct and support the strategy to offer services and to support organizational activities to integrate service, people, activities, processes, and skills required by the new system. According to respondent TC04, the companies need to "Link the effort to all other functions of the company." Customer anticipation ability is also important so that one must think like a customer and develop new services that meet customer needs in future. For instance respondent TC02 mentioned, "For a company to adjust towards services it must focus on a

deeper understanding and response of customer needs and expectations through-out the process."

Another factor here is risk and cost management capability was considered a key competency to identify and assess the risk and cost of offering services. For example, respondent TD02 mentioned, it is necessary to "Conduct a comprehensive feasibility study on the impact of added services and its implications." Also, respondents mentioned different capabilities for offering services such as the ability to change, service innovation capability, and competitor orientation capability. Change capability is needed to support company change and developing the service operation process. Service innovation capability is needed for continuous development of services. Finally, competitor orientation is required to analyse the competitor's strategy, movements, and activities.

These above-mentioned capabilities could be developed incrementally. According to respondent M05, "We believe that going beyond product related services is the strategic and optimal objective…. However, it's recommended that be done gradually until the service business unit is stabilized." Accordingly, these capabilities were categorized into two main classifications: reactive capabilities and proactive capabilities as in table (4-16).

Table 4-16: Proactive and Reactive Capabilities

Proactive Capabilities	Reactive Capabilities
Planning and designing capability	Competitor orientation capability
Risk and cost management capability	Service innovation capability
Customer anticipation capability	Change capability
System integration and Coordination capability	

The proactive capabilities need to be developed in advance to better control service provision activities. These capabilities include planning and designing, risk and cost management; customer anticipation; system integration and coordination capabilities. The reactive capabilities need to develop in response to the service provision sequences. These capabilities include competitor orientation, change and service innovation capabilities.

Finding number 13: Offering services requires developing two sets of organizational capabilities. These are proactive capabilities that need to be developed before offering services, and reactive capabilities that need to be developed gradually.

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- ### *4.6.2.5.3 Organizational Operational Process*

According to the respondents, the companies have to redesign their operational process. For example, respondent TC06 mentioned that the company has to "Develop new and different operations systems and hire competent staff to deal with customers"; where respondent TSC02, described the features of this product and services operation process as "a comprehensive, documented, and monitored management system. Internal and external audits help periodically to ensure the commitment of the organization to its policy and objectives".

Respondents mentioned several features of the required operational process. The respondents argued that the company must create a specific division for offering services which provide effective communication, flexibility and an organizational ability to understand customer needs within a fast response time. For instance, respondent TD04 mentioned, the need for "Establishing a specialized company or department that manages service provision." Respondent TC05 mentioned, "Procedures and governance are enlarged to take care of the different services given." Respondent TSC02 mentioned the need for the development of a control system and a quality policy, which must be embedded in the operations process by a separate quality assurance or quality control department. Additionally, group work could be used from time to time to solve different complex problems. According to respondent TD05, the process overlaps and the contradictions between the added work and the original work should be identified and systemised. According to respondent M18, the whole process should be documented. Following the required approvals, the necessary funds should then be allocated. Finally, the implementation, supervision, follow-up and the coordination should be assigned to a relevant competent person.

An explicit operation process when offering services was suggested by respondent TSC01. The organization has to develop several standard modules; study customers' needs; create an inventory system of all customer requirements; study the feasibility of these needs and requirements; determine the timetable; and determine the costs of implementation of those requirements. The final product would be modified and installed to meet individual customer needs.

Finding number 14: Servitization alters the operational process to fit with service provision. The new process should be clearly defined, flexible and have the ability for greater customer interaction and involvement as well as being able to reduce service variability.

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- *4.6.2.5.4 Organizational Culture*

A few participants mentioned the organization's culture. For example, respondent TC04 mentioned "For services, a greater level of customer focus is needed which requires the customer service arm of the company to have a greater say in driving the production / manufacture than engineering or finance". Still, none of those respondents clearly mentioned how these changes could be carried out. This could be attributed to the implicit characteristics of the organizational culture from which it can't be easily recognized. However, the organizational culture will be addressed explicitly in the next data collection wave.

Finding number 15: Servitization strategy requires a new organizational culture that fits with offering services.

4.6.2.6 Explore the Optimal Extent of Servitization

The fifth objective of the data analysis was to determine the level of services the organization should offer, looking at exploring the optimal extent of services provision. To identify the ideal level of services provision, the respondents were asked to estimate the optimum level and extent of services that should be offered. Data showed that there are several views relating to the extent to which services should be provided among the respondents as shown in figure (4-13) below.

Figure 4-13: The Respondents' Views Regarding the Extent of Services Provision

The Extent of Servitization

- 55%
- 2%
- 21%
- 22%

■ Not offering services at all

■ Offering only Basic & Standard Services

■ Offering more Advanced Service is Necessary

■ Offering more Services with Certain Conditions
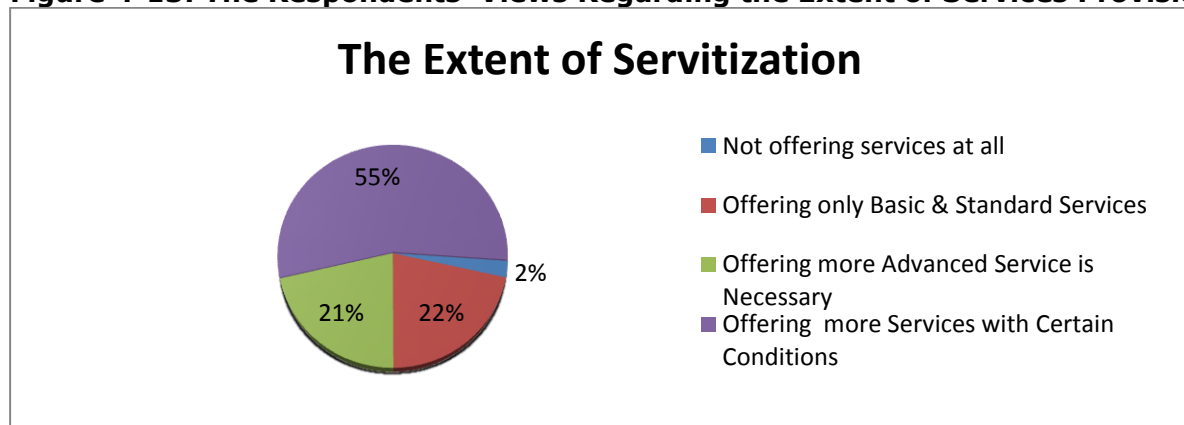
Only respondent TC04 argued that the company should focus on producing high quality product and not offering any type of services at all. According to respondent TC04, "Services and credibility are the best tools for market penetration for superior goods and far more effective than price differentiation. He added that, high quality products would reduce the need for post sales services or sales related services. As a company working in real

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estate, the high quality product would "sell itself" and as such, no additional "sweeteners" would be needed. I think that by doing so, the demand for additional services would not arise of its own accord."

Other opinions argued that the company ought to settle with offering more general and basic services that can be simply managed or outsourced. For instance, respondent TAD1 argued that the company should "Offer general and basic services only." The third opinion argued that companies could not stop the continuous move to offer more advanced services even if they wanted to. For example, respondent TC01 argued, "Offering more services is compulsory." Finally, the large proportion argued that offering more advanced services is the convenient option. It is an essential requirement for organizational existence, because the market is rapidly changing and constantly evolving with the presence of both new and many competitors. As such, the company should enhance their service offering with more advanced ones and thus compete at that level. Yet, this moving forward is conditional., For example, respondent M07 said "In the line of services nothing is enough so if you were the market leader, competitors will follow you, therefore, you need always to create something new with value added to be a step ahead of competitors and to provide the customer with an adequate experience. Still, this movement is depended in the output of pervious stage and company strategic plan".

The data analysis extracted a set of principles for offering services and service expansion based on respondents' views. These principles have been classified as shown in figure (4-14).

Figure 4-14: The characteristics of strategic decision of offering service and more advance services.

Figure (4-14) above shows the conditions for offering more advanced services. At the outset, a clear plan and a properly thought-out strategic move are essential for service expansion. This plan should consider several factors such as expansion risk, expansion cost, and organizational competencies. For example, respondent TAD2 mentioned, "Offering more

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advanced services needs careful planning and several considerations." On the other hand, Offering advanced services should be designed based on customers' needs. This design should be linked to the general needs of customers; it should fit with large portions of the market segment and avoid any design toward specific needs of individual customers. According to respondent TD01, "Customer needs are the true measure when deciding which services to offer. Whether one offers simple or complex services should be based on the potential customer desires." Likewise, offering services should fit with project. For instance respondent TD04 argued that "Offering services should be carefully designed and within a project master-plan". In addition, the ability of services innovation and new services development is a vital component of services expansion. For instance, respondent L06 mentioned, "Services are linked to customers' tastes and desires which continuously fluctuate. …. . Therefore, the company must offer flexible, easily modified and easily renovated services based on customer desire."

Finding number 16: Companies tended to offer various forms of services, ranging from basic services, to more advanced services and to complex services and finally, to full system solutions.

4.6.2.7 Explore the Outcome of Servitization Strategy

The data analysis was oriented toward exploring the different outcomes of a servitization strategy, to recognize the benefits resulting from offering services. Several questions were asked in order to understand the outcome of the servitization strategy in terms of tangible and intangible benefits. The data analysis process found, to some extent, a debate among respondents on the impact of offering services on organizational performance. In general, the respondents' answers lay within three themes as shown in figure (4-15) below.

Figure 4-15: The respondents' views regarding the Outcome of Servitization Strategy
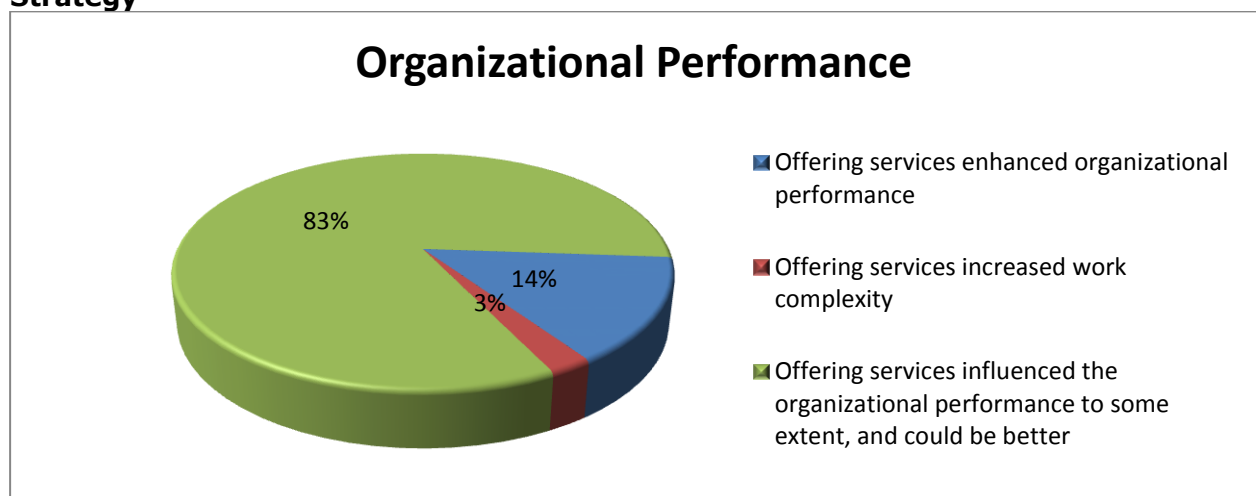
The first theme argued that, servitization increased the work complexity and interrupted the organization's overall performance. For example, respondents TC05 described the outcome of servitization as "needing more manpower and work production outlets to service the requirements." The second theme argued that offering services met the objectives it was designed for, and enhanced the organization's overall performance. According to respondent M13, offering services "Facilitated marketing of project units, increased sales, increased the size of the project and its profits and covered fixed cost. Through these additional services, the company has taken important steps towards becoming the best in the market. It compliments worldwide changes and strengthens its ability to be more innovative and thus be more competitive. Good Policy, which positively affected the company." The third theme argued that the servitization strategy influenced the organization overall performance with mixed results. This influence could be better with more careful strategic planning to offer services that are manageable. For example, respondent TD01 mentioned, "Services offered are an essential element of the project's success. The company could not separate the project and this service as it is the main key success factor and but at the same time, it is the key failure factor if it is not managed properly. He stressed that what is needed is planning, planning, planning, and commitment to what has been planned".

Generally, the respondents used different criteria to evaluate the offering services strategy. These criteria were categorized within four main categories as in figure (4- 16) below.

Figure 4-16: Offering Services' Key Performance Indicators
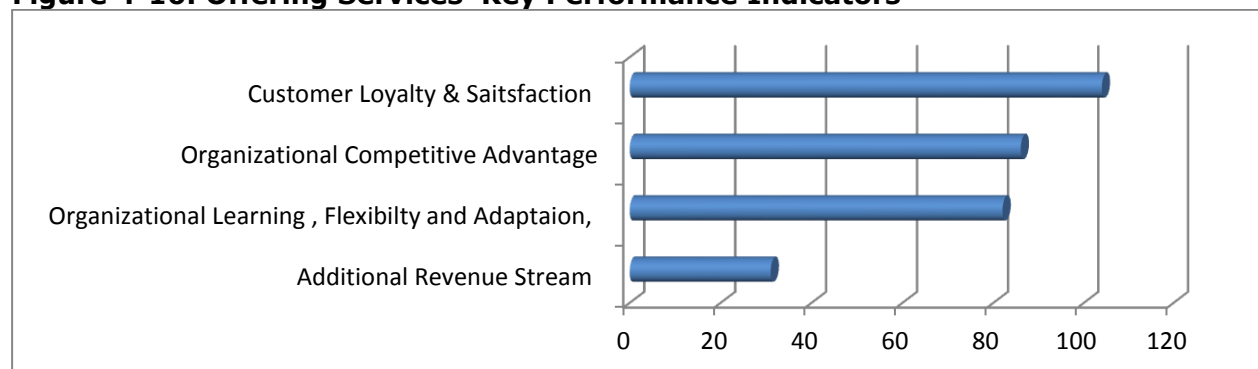
The common views of what providing services should do were to gain market competitive advantage by attracting new customers, improving the company's sales, enlarging the market share and outperforming competitors. According to respondents M04, "We have a competitive advantage by offering services; the companies are putting themselves ahead in the market and competition." Also, respondent L03 mentioned that offering services "Increases the number of customers, increases revenue, increases the frequency of transactions per customer and increases customer satisfaction." Improving customer

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satisfaction and loyalty was the second common view used by respondents. According to respondent TC03 "Offering services improves customer satisfaction and thus the wellbeing of the company and its product. Increased interaction with the market and clients, thus improve quality, give higher customer satisfaction and improve performance."

Likewise, offering services positively affected the organizational learning curve, increased organizational knowledge, improved its innovation capability, and enhanced organizational flexibility and adaptability. For example, respondent M11 mentioned, "I think that this experience has improved the company's ability to adapt; it is more creative and there is more learning." Improving the financial revenue was another indicator to assess offering services. According to respondent L06, offering services "Increases the volume of sales and achieves a better income for the company."

Finding number 17: Offering services becomes a foundation of competitive advantage, adds value for customers, creates additional revenue and enhances the organizational learning curve.

4.6.2.8 The Paradox of offering services

Analysing the data revealed a new service paradox in realty projects that might arise from service provision strategy, as the strategy does not deliver the expected outcomes in the short term. The competitive advantage paradox as a short-term paradox is applicable to project-based businesses. Offering services is expected to enhance project competitive advantage, attract customers, increase sales and create a new revenue stream. According to respondent TD05 services were offered to "Raise the product quality and efficiency supports product marketing and to maintains an appropriate competitive selling price." However, offering services decreases the organizational performance. According to respondent TC06, "At the beginning, it had a bad impact. The cost, the time and the efforts increase, but, at the end of the day the customers of many of the projects supported the company during difficult times". Respondent TC01 mentioned, "Direct relationships with customers has caused confusion in the work processes in some departments in the company"

Finding number 18: The companies confronted implementation issues of a service provision strategy, by which the company's competitive advantage temporarily decreased in the short-term.

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4.6.3 Section summary

The above section presented the results of the Delphi first round data analysis. The data were collected from forty-two participants via email interview. Fundamental objectives drove the type of data collected and the subsequent data analysis process. The Exploratory function, general understanding, and gaining common knowledge were the main objectives of this round. A broader view of servitization was developed to clear the path for a more in-depth study. In this stage different themes were identified such as the different perceptions of servitization; the motivations behind servitization; the factors influencing the design of services; the challenges of servitization; the requirements of servitization; the optimum level of services to be offered ; the outcome of servitization and the service paradox. The outcome of this stage was verified with the companies in the case study. The respondents' answers were also aligned with outputs of the previous stage and several findings were confirmed as shown in Table (4-17) below.

Table 4-17: Linking the Results of Secondary Data Analysis to the Delphi first Round

Secondary data analysis	Delphi Round one
Service is a complementary element of a project's market proposition.	Findings 8 : Offering services becomes an essential element of a building project
Internal and external information sources were used to develop new services	For instance, respondent L06 mentioned, company's executive management, international projects and customers were the sources of ideas to develop new services.
Hybrid facility arrangements for providing services	For instance, respondent TC01 mentioned that the company hired professionals to provide services. Other services were offered through external arrangements. Respondent M12 mentioned that the company outsources some other services
The ambiguity of service costs	For instance, respondent TC04 mentioned, that estimating cost accurately was one of the main challenges of service provision

In the next section, the result of analysing the collected data through the Delphi second round data will be presented.

4.7 Delphi Round #2

The second round involved six main questions and one sub-question forming the semi-structured interview. The questions were designed as a mean individual discussion, aimed at gaining more clarification and in-depth understanding. These questions were developed to reconstructed different events related to the servitization strategy; to find significant information; to fills in gaps of existing information; to investigate the findings that emerged from other sources; and to confirm these findings or reconstruct them accordingly. Each interview was conducted personally by advanced technology. In each interview the recapitulation of research objectives, research process, initial findings and debate were briefed to each respondent. The discussion was the main theme of these interviews, by which different perspectives, opinions and initial findings were discussed. This discussion mode generated a deeper level of information.

This round involved interview with 23 respondents, 15 of those answered the questions in the first round and eight of them were not. Most of those who only participated in the second round were from marketing and sales departments so they could "represent the customer's voice. In addition, this round was oriented more toward decision makers or individuals who have influence over the decision making process. 13 respondents were from the top management level, 8 from the middle level, one sales officer and one sales agent. A reference number was given to link the interview to the respondents as shown in table (4-18) below. This symbol included a number from one to twenty-three and a letter referring to the respondent's work position, where H, S and P were used to indicate to the HC's executive management, the subsidiary executive management and the project manager or executive team.

Table 4-18: The Characteristics of respondents who participated in round two

Ref	Respondent title	Company	Ref.	Respondent title	Company
1/H	Chairman office manager	HC	13/S	Senior Strategic Planner	Subsidiary
2/H	CFO (Chief Financial Officer)	HC	14/S	Senior Strategic Planner	Subsidiary
3/H	Deputy CEO for Industrial Investment	HC	15/S	Senior Marketing consultant	Subsidiary
4/H	Deputy CEO for Marketing and Sales Affairs	HC	16/S	Sales Officer	Subsidiary
5/H	Projects executive Director	HC	17/S	Public Relationship Manager	Subsidiary
6/H	IT Director	HC	18/S	Subsidiary Company Manager	Subsidiary
7/H	Business development Manager	HC	19/S	Logistic & Admin. Manager	Subsidiary
8/H	Marketing Director	HC	20/S	Sales agent	Private firm
9/H	Sales Director	HC	21/P	Project manager	Project
10/H	Purchasing and logistic Director	HC	22/P	Quality Manager	Project
11/S	Projects' KPIs manager	Subsidiary	23/P	Project manager	Project
12/S	Financial Manager	Subsidiary			

4.7.1 Data Analysis

To make sense of the collected data, (Braun & Clarke, 2006) the thematic analysis approach was used. Thematic Analysis is "a method for identifying, analysing and reporting patterns (themes) within data" (Braun & Clarke, 2006, p.6).

4.7.1.1 Data Familiarization

All the interviews were recorded and transcribed for analysis. First of all, the researcher listened to the record of each interview to make sure that all the data had been recorded, and was understandable, and clear. Then, a reference number was given to link the interviews to the respondents. This symbol included a number from one to twenty three and a letter referring to the respondent's position, where H, S and P were used to indicate levels of employee i.e. HC executive managers, the subsidiary executive managers and the project managers (See Table 4-15 above). Each interview was then transcribed using Microsoft Word 2010 after it was listened to several times. The listening and transcription processes helped the researcher to become more familiar with the data and what it entailed. During the process, hand notes were taken with specific attention being paid to patterns and ideas. Also, at this stage the analysis process was orientated toward identifying any differences among participants' profiles to determine the direction of the analysis.

4.7.1.2 Generation of Initial Codes

From the previous stage, the initial analytical interest was developed. Data analysis was orientated toward configuring a building project's internal operations with a service

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provision strategy. This interest was carried out by finding the compatibility and contrasts among the different viewpoints to develop operational activities that are consistent with long-term strategic intentions of a servitization strategy to contribute to competitive advantage. Based on this analytical interest, the analysis process was undertaken question by question. Each question's answer from the twenty-three respondents was read and re-read several times. The important data within the answers were marked. Implicit and implied meanings were written in the margins. These labelled passages and data were linked together to form initial codes based on a conceptual and linguistic meaning. Table (4-19) below provides an example of the initial coding development process.

Table 4-19 : An Example of the Initial Coding Development Process

Interviewer: Could you perceive providing services integrated to products as a viable business option?			
Respondents	**Text**	**Initial code**	**Sub-code**
Respondent 5/H	Adding services becomes a necessary strategy in the field of real estate development industry. These services attract customers and add value and spirit to the product, on which customers can distinguish between the existing projects on the market. As a real estate developer, It became that you cannot only sell the product to the customer and ends your responsibilities. With the complexities of life additional services became important and should began to be added to the project to help meet more demanding customer needs. For instance, a maintenance problem at home could be a big problem, however if we as a developers provide maintenance services, it will become a smaller problem for the owner, involving just one phone call to the facility management dept. The problem will be solved within hours and at less cost. We are the company which builds the house, we knows what we do and how to do it. Therefore, now customers often prefer living in a house integrated with the provision of after sales services.	Adding services becomes a necessary strategy in the field of real estate development industry.	attract customers
			add value and spirit to the product
			distinguish between existing projects
			you cannot only sell the product to the customer and end your responsibilities
			Customer satisfaction
Respondent 3/H	Providing service is very important, because when you do real estate and sell real estate, one of the most important things is to do the service both before the sale and after the sale. Before the sale services encourages the client or the investors to buy a cretin real estate, like an apartment or villa. Those people need attention; they need to give them the proper attention, because at the end of the day, it is not only about the price of villa or the price of the square meter or the price of the apartment or of the living space. Those people are investing in you which mean they have to be able to trust you. , you have to give them the follow-up, you have to answer their concerns, you have to provide all required services that will encourage them to keep the deal and become a customer and also get their friends to buy from you .	Providing service is very important,	encouraging the client
			people need attention
			it is not only about the price of a villa or square metre price of the apartment
			give them trust
			the follow-up, you have to answer their concerns
			services that will encourage them to keep a deal
			and encourage their friends to buy also
Respondent 8/H	Service is becoming very important. The real estate development companies not only in Jordan, but on the level of real estate development companies throughout the region have to come up with new ideas and new strategies and services that distinguish them from individual companies and change the real estate development industry from focusing on time and quality to provide services. In fact, this new concept of real estate development started as a contrary to the nature of the existing method of developing real estate projects in Jordan and indeed this was the reason for the market success. The Real estate development companies have to attract customers and convince them that they will get more and full satisfaction compared to the value that they paid	Service is becoming very important.	new ideas and new strategies
			distinct from other companies
			market success
			Added value element
			Customer satisfaction

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4.7.1.3 Themes Searching

The initial codes were gathered and classified into more advanced codes and organized in wide groups with a similar meaning. These advanced codes and groups were reviewed and integrated into main focused themes that meaningfully expressed the designated codes. Table (4-20) below provides an example of the final coding development process.

Table 4-20 : **An Example of the Final Coding Development Process**

Initial Codes: Why providing services becomes very important for real estate development industry?	Final Code
Add value and spirit to the product	Added Value element
Added value element	
encouraging the client	
Attract customers	
It is not only about the price of villa or the price of the square metres or the price of the apartment	
New ideas and new strategies	Innovation thinking
Customer satisfaction	Customer satisfaction
People need attention	
Customer satisfaction	
The follow-up, you have to answer customer concerns	Customer Trust
Give them trust	
You cannot only sell the product to the customer and end your responsibilities	
Services that will encourage them to keep the deal	
Also get their friends to buy	Marketing Tools
Market success	
Distinguish between existing projects	Competitive advantage
Distinguish from other companies	

4.7.1.4 Reviewing Themes

Codes, groups, initial themes and core themes were reviewed, looking at how the data were originally assigned. In this stage the data allocated to each theme were reviewed and improved. At this time, some themes were merged with others whilst other themes were divided. Also, some of the identified themes were verified by peer review.

4.7.1.5 Developing Categories

Accordingly, final themes were constructed and re-ordered into new categories based on determining the aspects of each theme. At this stage, the data analysis process reviewed all the findings and how these findings emerged to make sure that those findings were coherent and consistent and able to deliver the whole picture. Accordingly, in this stage the data analysis identified four main themes, with each theme including a number of relevant sub-themes.

1- The prominence of the servitization strategy in real estate development
2- The characteristics of the strategic decision to servitize
3- Managing Servitization Change
4- Servitization Quality Control System

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Figure 4-17: An Example of linking the sub-code to main code and developing main category
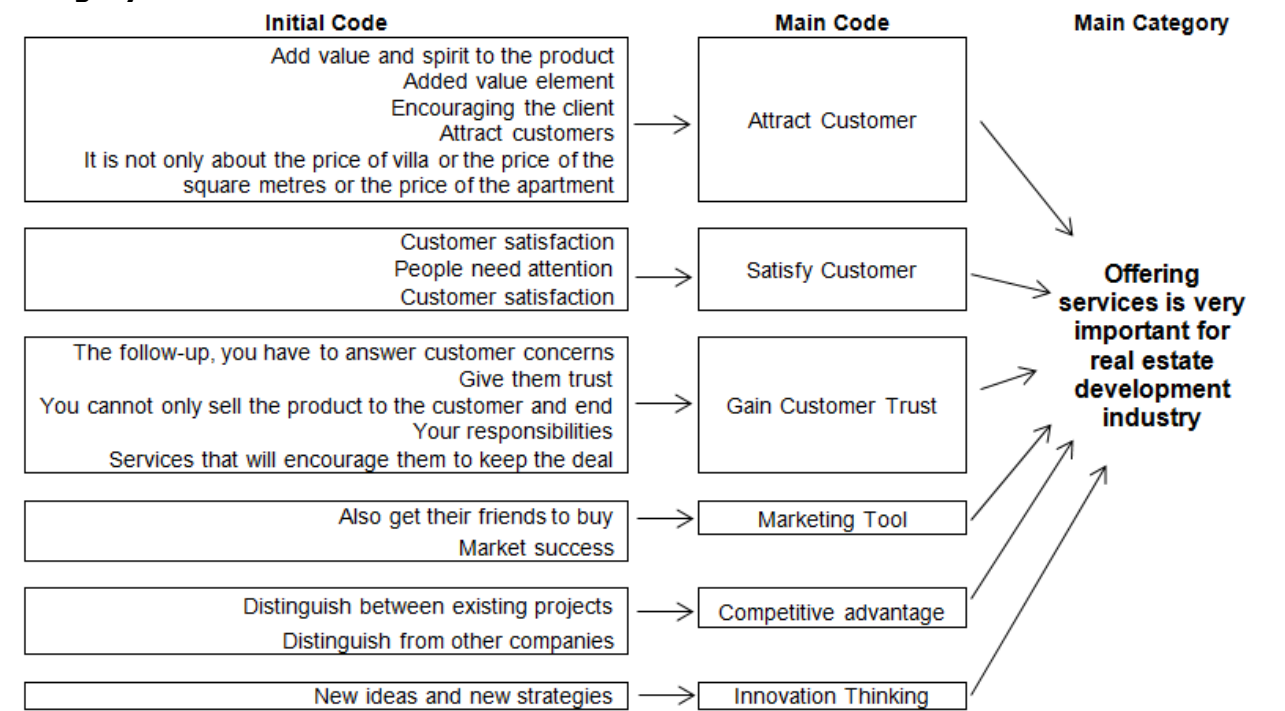
The process of code identification and some of the identified themes were verified by peer review. Furthermore, these themes were verified with the case studies representatives and research participants.

4.7.1.6 Defining concepts

The core themes were demonstrated to reflect the research questions. In this context, the four main themes were addressed in different sections. Each of these sections discusses the theme development process and its underlying sub-themes. Several evidences from the respondents' original answers were used.

4.7.2 Initial Data Analysis

The second round of Delphi involved different respondents' profiles. These profiles were explored in the initial stage of data analysis to highlight any differences between respondents who participated in the first round and those who did not; respondents from executive management and those from middle management; and between respondents with

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a business perspective and others from a project management perspective. Generally, the data analysis indicated that there are no substantial differences among the above-mentioned groups, which significantly affect the development of consensus knowledge or the adoption of a servitization strategy by the real estate development industry.

4.7.2.1 The viewpoints of respondents who participated in the first round and those who did not

The process begins with respondents who participated in both rounds and who only participated in the second round. There were no significant differences between those two types of respondents regarding the servitization strategy and service provision practices. In fact, their views are compatible with each other and with the output of the previous stage, as they emphasised the importance of the service element and project operations management to the real estate development industry. For example, respondent 8/H added added "Offering tailored services enhances company image, brand and market share". Rrespondent 10/H added, "Offering services is a marketing tool based on word of mouth for sharing and exchanging experiences between people". Respondent 17/S argued " The added services concept has become widely prevalent even in small real estate projects, where you could see an apartment building topped with a lush garden with a small area for barbecues. This replicates an internal park for residents". Respondent 20/S argued "These days, people are not only looking for a prime location and good architectural design, but also they want a safe place for children to play, a safe parking area and a reliable maintenance services". Table (4-21) shows the main themes in this stage, where all respondents agreed.

Table 4-21: Respondents who participated in the first round and who did not

Aspect	Opinion
Service Dimension	Essential element
service provision practices	Starting from customers and based on careful planning
Service strategic decision	Directional decision linked to the project strategy
Managing servitization change	Balancing the focus between project and services

4.7.2.2 The Viewpoints of Top and Middle Management

Although the second round was mainly oriented toward decision maker, it involved two management levels. Accordingly, the data analysis looked at different viewpoints of respondents from top management compared to those from the middle. The data analysis also indicated, there were no significant differences affecting the adoption of a servitization strategy. The collected data inferred that the respondents from the top level look at services provision from a long-term perspective, whereas the view of respondents from the middle level is narrower. Table (4-22) summarizes these perspectives.

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Table 4-22: Top-level management and middle level management viewpoints

	Top level	Middle Level
Organizational focus	strategic directions and long-range vision	Customer Satisfaction
Balancing service provision with project management	Increase synergy and Reduce complexity between project and services for more business success	More productivity through coordination and collaboration
Service Dimension	Market requirements and Competitive strategy	Added-value to the customer flexibility offering which helps the sale of units

4.7.2.3 The point views of Business executive management and project management team

Also, the second round involved respondents who would have more of a business perspective and others more of a project management perspective as shown in table (4-23) below. In addition, there were no substantial differences among respondents to affect significantly the adoption of a servitization strategy or service provision activities. Respondents from a project management perspective focused more on the operations and achieving project objectives; whereas those with a business perspective focussed on both service and the project to deliver business success. Still, aligning project operations and service activities was agreed as important by all respondents, irrespective of their roles.

Table 4-23: Business executive management and the viewpoints of project management team

	Business perspective	Project Management
Organizational focus	Business strategic objectives	Project objectives
Service Dimension	Offering services is very important for both the company and the customers	Offering services is very important for the customers
service provision strategy	Practices manipulation, Where employees have to understand that offering service becomes a complementary element of the project	Services manipulation, Where executive managers have to effectively align services with the project scope
service provision process and dealing with customers	Collective responsibility and an integration process across all departments	Sales and Marketing department

4.7.3 The prominence of a servitization strategy in real estate

Respondents agreed that the business environment requires a new way of thinking and offering more value to customers is one of the ways to do this. The necessity of providing services was the main theme that emerged from the data. The data analysis gave an insight into different trends related to servitization from respondents. From a project operations' perspective, respondents argued that offering services is important for customers, yet,

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services increased project time and cost and disturbed the project works. For instance, respondent 21/P said, "Services definitely are important for customers, but based on these services, each unit within the project turned out to become more than 40 projects." Respondent 5/H argues, "we can't produce units that we cannot sell and we can't offer services that lead to a loss. Offering services is essential for realty business; however, it needs to be related to the customers' needs and fit with organizational capabilities." From a strategic management and marketing perspective, the respondents argued that with fierce market competition, we have to offer more and more services to differentiate ourselves from competitors. Respondent 20/S argues, "Today the housing business in Jordan is widely known as a job for those who don't have jobs. Offering services is the differentiation characteristic that supports competitive advantage and supports the level of sales." Respondent 8/H argued, "Offering service is the new concept in real estate development, by which companies have to come up with new ideas to distinguish themselves from what already exists in the local market." Generally, the data indicated that there is consensus among respondents that offering services integrated to the product is considered indispensible and strategically essential for real estate development companies. Service is offered to add customer value and gain competitive advantage. Customers' needs become the core of the service provision regardless of services or products on offer. However, offering service is a more logical move for the real estate developer for several reasons. These reasons were collected and summarized according to the respondents in table (4-24) below.

Table 4-24: The characteristics of services making them more attractive in real estate projects

Added Value element	• Services are considered the vital part of the value added that customer perceived.
	• Services add value for customer and attract customers
Innovation Thinking	• Services offer more opportunities for innovations and developing distinguishing ideas.
	• Services offer the realty business more flexibility in their offers.
Growth opportunity	• Services are an important strategic decision for future growth in projects based business.
Customer satisfaction	• Service offers a customized option for customers
	• Offering service satisfies customers
Customer Trust	• Services become a part of real estate developer responsibilities
	• Services assure customer, add confidence and encourage customer-buying decision.
Marketing Tools	• Services gives the company the opportunity to demonstrate the importance of the customers and reinforce the buyer
	• Services clear the project portrayal and enhance project branding.
Competitive advantage	• Service creates a competitive edge distinguishing the real estate offering in the market

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Finding number 19: Service becomes an essential element of a successful real estate project and marketing tool to offer more value to customer

4.7.4 The characteristics of the strategic decision to servitize

Data indicated that the companies realized that adopting marketing orientated and customer approach led to better performance in the market place. According to respondent (1/H) "Organizations have to continuously improve and develop in all areas whether in tangible products or intangible services, and they need to focus strategic priorities on customers." Correspondingly, the companies realized that customers are at the heart of a marketing orientation strategy and there is a clear interdependency between offering services and customer satisfaction. For instance, respondent (18/S) mentioned that "Real estate development is turning into a service sector; we are not selling a piece of land, bricks, cement and steel anymore; we are selling value for our customers." The data showed that, a servitization strategy was a central strategic decision that governed the organization's general direction. From this, it set organizational general procedures, rules and principals, which become oriented toward marketing and created superior customer values. For example, respondent (3/H) mentioned, "You have to show people that service is an important element, because you have more projects and more vendors, more apartments and more real estate to sell later on. As a development company if you gave the implication that your main interest is in the services and in customer satisfaction your project and your future projects will be successful." Also, a service provision strategy affects the entire organization and the operational process. According to respondent (2/H), "Strategically … it has an implication on the design it has an implication on the legality, on the contract and in the way you sell your products."

Nevertheless, a project's schedule, cost, quality and scope, are essential elements to maximise the potential of that project's success. According to respondent 6/H "Customer satisfaction is a result of focusing on project constraints e.g., time, cost and scope. " The data indicates that a project management approach should be introduced to steer and influence the project managers to work with certain practices, to improve the likelihood of project success, by clearly defining the scope, objective and outcomes. In addition, responsibilities and accountabilities and setting the control system over the project activities need to be established. For example, respondent 8/H maintained, "The Company should evolve around the service concept. Still, the board of directors should set a clear map for the project, project task, project outcome, and responsibility." Therefore, offering services integrated to the product should be considered at an earlier stage of a project's development. For instance, respondent 13/S maintained, "This sector is still improving…
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and, I think service is becoming the key factor and it should be taken into account at the start of the plan along with the cost and implementation."

Finding number 20: servitization is considered as an organisation's rational strategic decision that needs careful planning. Servitization has a clear intention toward consumer orientation and should be addressed at the corporate strategy level. Although offering services supports the project's differentiation strategy by the uniqueness of the service characteristics; a project's schedule, cost, quality and scope, are also essential strategies to maximise the projects' success. Figure (4-18) illustrates the relationship between servitization strategy as a directional strategy and others strategic levels within the organization.

Figure 4-18: Servitization Strategic Decision Level
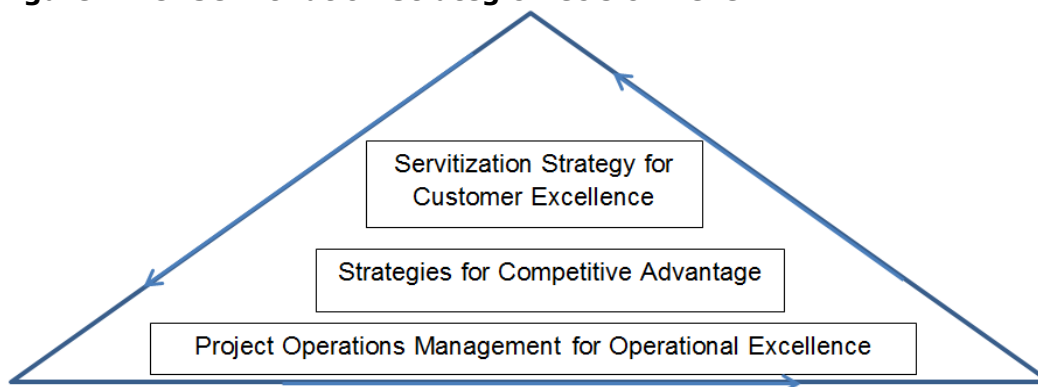
4.7.5 Managing Servitization Change

Data indicated that being customer centric is a significantly important approach for real estate development organizations. For instance, respondent (2/H) said, "Real estate development is a life time experience for the buyers, buying a house is a decision that often lasts a life time …. As a developer, you are either protecting brand or building brand, so you really ought to take care of your customers ". Moreover, respondent (21/P) argued that customers do not have the skills, experience, tools, and knowledge compared with professional companies in terms of product building and innovation. Still, the respondents argued that offering services is challenging and having a focus only on service orientation and customer satisfaction will disturb the project and cause project failure. For example, respondent (18/S) said, "Customers' needs should be defined at the beginning of the project …. Customer satisfaction is a must actually, but up to a certain point, after that it has to stop. … It will disrupt the project life cycle, it will deviate the project from the original plan and it might become a failed project." Furthermore, respondent (6/H) implied that the relationship between customer's orientation and project management tools such as quality,

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time, and cost is indispensible, as customers are not satisfied with low quality and high cost products. Customers should be added to the three project constraints of quality, time, and cost".

Generally, respondents emphasized that considering both project orientation and customer orientation by balancing the focus between customers and projects as a more desirable way of addressing customers changing attitudes and needs. At the same time this leaves time for effective operation by which companies achieve customer satisfaction. For example, respondent (7/H) mentioned, "Project qualities are evolved from customers … the parallel focus is more preferable in real estate development." Similarly, respondent (14/S) mentioned, "You need to balance both … because the project will fail if you exceed the budget or the timing." The data analysis pointed out several things that could help the realty companies to achieve the required balance between customer orientation and project orientation.

Within the data, respondents point to several techniques to balance provision of services, customer orientation, and project operations management. For instance, this can be by taking advantage of new technology and computer-based methods as a powerful source to carry out the service strategy. According to respondent (12/S) "Companies can use technologies, can enhance processing in a way that they can provide integrated services without having a significant effect on the project time and quality." More importantly, the organizational culture has to be adjusted around customer needs when providing services and effective project management tools is a primary means to meet those needs. According to respondent (16/S) "A Project is our capital investment that we have to protect, and customers are our profits that we need to gain and maintain." Additionally, allocating customer relationship management to a specific unit or department needs to be in place for managing communication and coordinating activities of services and customers and project management. For instance, respondent (6/H) indicated that to reduce resistance to change and for employees to accept change, "the company should establish a special unit for service provision." Moreover, a strategic management planning that involves project design, execution, direction and transformation must consider the service elements from the beginning. For instance, respondent (15/S) said, "I think this is a key factor to have the services from the beginning and to plan it from the beginning. When we start our project we need to plan for service provision at the beginning so that time and cost and all limitations can be built into the project … the project scope should cover the product itself and the services you are providing. In this case you are creating the balance between providing the services whilst having considered the services, the time and the cost. Finally, developing a

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set of rules and procedures to allow for more controllable changes and modifications from the customer within an acceptable budget and timeframe that not affecting the project's success criteria. For instance, respondent (19/S) said, "You have to establish a system of rules and regulations and pre-prepared forms." These recommendations are summarized in table (4-25) below.

Table 4-25: Balancing the organizational focus between service orientation and project operations management

Advanced Technology	Computer based method provides fast and high quality information. The advantage of fast data collecting and analysis from wide sources support organizational decisions.
Dual business focus	Combining services orientation with project operations management leads to better performance. Where offering services contributes to organizational competitive advantage, and project operations management contributes to successful organizational performance.
Customer focus	introducing a customer focussed department to manage customer relations and coordinate internal communications across all activities
Strategic link	Developing an explicit link between the servitization strategy and project operations management that supports both service provision and project operations
Control system	An integration system, that brings together the rigidity of project management and the flexibility of offering services.

Finding number 21: In real estate development projects, a better balance between customer approach and project management is more desirable. It will lead to more success.

4.7.6 Servitization Quality Control System

In terms of quality control and evaluation criteria of a service strategy, the participants indicate that the customer is the important element in this system. According to respondent 17/S "The evaluation system is a process that starts from customers and ends with customers". Thus, the control system should involve criteria related to customer satisfaction and interaction. For example, respondent 22/P argued, "If you want to integrate services you must concentrate more on humans and seek the sequence of the interaction with the customers that may involve dealing on a one to one basis at times. … . This requires paying more attention to behaviour and skills of the current workforce to satisfy customers." Still, this system should fit with the nature of the project. Respondent 6/H argued, "There is substantial difference between service and project, as the project ends at a certain point,

but providing services can continue for many years. This re-iterates the project KPIs should differ within three constraints (time, cost and scope) and be more geared to project quality, risk and resources." Respondent 15/S argues that this system should involve criteria related to both product and customer. Where respondent 8/H adds, "These criteria should be measurable."

The data analysis deduced general criteria that described the project and service evaluation system. The system should involve criteria regarding customer interaction. This system should be flexible to help companies to adapt and adopt different procedures and schemes in term of what sort of services are offered while at the same time they should be control mechanisms built into the system. The system is developed based on reasonable objectives able to be measured and achieved, which also should have an affective feedback channel to learn more from customers. The system should promote employee empowerment for fast decision-making and problem solving. The system must be continuously assessed against the criteria. Finally, a separate service quality control department purely for dealing with quality is preferable, taking into account cost consideration. These criteria are summarized in table (4-26) below.

Table 4-26: The Characteristics of product and services quality control system

Customer Relationship	The system is expected to manage the interaction between the organisation and its customers effectively and fruitfully.
System Flexibility	The system is adaptable to change based on different quality criteria and requirements
Reasonable Objectives	The system is designed to provide a reasonable assurance to achieve service provision and the project's objectives
Feedback Channels	The system has the ability to receive different feedback from different resources and act accordingly
Fast Decision Making	The ability to select a logical choice of services from different available options that positively affect customer satisfaction and project operations
Employee Empowerment	The process of sharing knowledge and information, by which the employees have the power to take initiative, solve problems and make decisions to improve services and business performance
Interpersonal Skills	The set of skills and abilities enabling employees to interact effectively, properly and positively with customers
System Evaluation	The system is examined and improved continuously
A Quality Control Department	A quality control function that supports the development of project and services systematically

Finding number 22: Offering services integrated to the project requires a set of procedures to ensure that the performance adheres to a defined set of quality criteria related to effective project management, customer relations and customer needs.

4.7.7 Developing Consensus Knowledge

The Delphi study was conducted to achieve category saturation and develop a mutual agreement from multiple viewpoints regarding service provision practices in realty projects. The study followed different procedures both at the time of analysis and after. Several indicators point to the development of consensus knowledge such as respondents words, post rounds and iterations process. More important the data analysis was geared to realizing whether consensus knowledge had been achieved by linking the output of the first round and those of the second. The first round of Delphi involved 42 interviews, by which 11 findings were concluded from the data, summarized in table (4-27) below.

Table 4-27: Summary of key findings from Delphi first round

01.	Offering services becomes an essential element in realty projects. It facilitates product development, adds more customer value, and creates competitive advantage.
02.	Companies tended to offer different types and levels of services for a combination of strategic, marketing, innovative and financial reasons.
03.	Combinations of external and internal factors are considered for designing effective service provision. Generally, each added service should be well designed and fit within a specific market segment, customers' need, organizational circumstance and project design.
04.	When services are integrated to the project several challenges are encountered. Managing service offering is the greatest challenge, as organizations must plan, design, organize and execute the optimal level of service to create more value for customers and reduce the variety of different customers' needs.
05.	Offering services requires an organizational structure that has both characteristics of flat and hierarchical structures with a more organic structure orientation.
06.	Providing services requires developing two sets of organizational capabilities; the proactive capabilities to be developed before offering services and reactive capabilities that need to be developed gradually.
07.	Offering services alters the operational process. The new process should be clearly defined, flexible and have the ability to deal with more customer interaction and involvement
08.	Servitization strategy requires an organizational culture that suits service provision.
09.	Companies tend to offer various forms of servitization. Ranging from basic services to advanced services yet more advanced services and full system solutions.
10.	Offering services become a foundation of a company's competitive advantage, added-value to customer and enhancing organizational learning curve.
11.	The companies confronted implementation issues of a service provision strategy, by which the company competitive advantage temporarily decreased in the short-term.

The second round of Delphi involved 23 interviews, by which four main findings were concluded and summarized in table (4-28) below.

Table 4-28: Summary of key findings from Delphi second round

01.	Service becomes an essential element of a successful real estate project and organizational marketing proposition to offer more value to customer
02.	Servitization is considered as a rational strategic decision consisting of careful planning but capable of adaptation and fast reactions.
03.	In real estate development projects, the balance between the customer approach and project management approach is more desirable and will lead to more success
04.	Offering services integrated to the project requires a set of procedures to ensure that the performance adheres to a defined set of quality criteria related to effective project management and customer relations.

These outputs from the Delphi's first and second rounds were linked together, looking at consistent and inconsistent points, as well the points that added extra value as shown in table (4-29) below.

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Table 4-29: Linking Delphi First Round and Delphi Second Round outputs

	Delphi Frist Round	Delphi Second Round
Offering Service perception	Respondents approached service provision and services expansion from various perspectives. Still, the majority of respondents considered service is an essential element of a company's competitive advantage	Offering service is an essential element of a company's competitive advantage
	Offering service becomes an essential element of building projects. It facilitates product development, adds more value for customers, and creates project competitive advantage.	Services offer more opportunities for innovations and developing distinguishing ideas. Services are a part of a real estate developer's responsibilities. Services are considered the vital part of the perceived value added by customers. Services are an important strategic decision for future growth in project based businesses.
Drivers of service provision	Companies tended to offer different types and levels of services for a combination of strategic, marketing, innovative and financial reasons.	Innovation thinking, Market positioning, and differentiation.
Service Dimension	Selling more units and attracting more customers	long term success through understanding the new concept of building projects
Participant focus	Careful planning of both services and project	Strategic planning and balancing both service and project
Service design	Service design is customer driven. The Offered services must be considered in the earlier stage of project development and be systematically incorporated into the overall project.	The process of offering services starts from customer needs. The Offered services must be considered in the stage of project development and systematically incorporated as a part of the overall project.
Critical success factors	Careful planning and an effective services design	Understanding the mutual relationship between the success of service provided and the success of the project overall
The extent of offering services	Customers' needs , Market conditions & Competitors' actions	Gaining customer trust, & Influencing customer long- term purchasing decisions
Organizational Culture	A greater level of customer focus (Few answers)	Balancing the focus on both customer needs and project management
The expected outcome	Organizational competitive advantage	Organizational long term competitive advantage

From table (4-29) above, it is noticeable that there is a mutual agreement toward the importance of the service element and the imperative need to provide services in

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construction projects. Actually, this importance of service provision is more profound in the second round where services are expected to develop overall sustainable competitive advantage rather than just project competitive advantage. Here, service provision is linked to the company image and customer trust to influence customer's complex purchasing decisions of long-lived assets. Nevertheless, in order to successfully deliver the project as well as successfully provide services, the respondents in the second round emphasized the strategic management alignment and balancing both service provision and project management operations. This consensus knowledge evolved from the Delphi process is summarized in table (4-30) below.

Table 4-30: Consensus knowledge evolved from the Delphi process

Offering Service perception	Service becomes an essential element of successful real estate project.
Service Dimension	The key motivation for Offering services creates organizational sustainable competitive advantage
Service Element	The key expectation from offering service was stated as an added value to the customer
Offering services Strategic decision	Servitization is a directional strategy that needs to be linked and fully integrated into the whole organization and its functions
Organizational focus	Strategic planning and need to balance both provision of services and project operations management
The extent of offering services	Offering service is essential to meet customers' needs , gain customer trust, & influence customer long-term purchasing decisions
Servitization requirements	Offering service requires a set of changes and procedures to ensure the success of both project and services
Offering services practise	Effectively co-ordinate the activities of providing services and project management

4.7.8 Section summary

The above section presented the results of the second round data analysis. The data were collected from the twenty-three participants. The interviews involved several participants' profiles, which could shape different perspectives for offering services. Accordingly, an initial data analysis was conducted to understand the differences between these different profiles that could affect the adoption of a servitization strategy. This round was designed to investigate the findings that emerged from other sources in order to confirm the findings or reconstruct them accordingly and to fills in gaps of existing information. In this stage, findings were aligned with the findings of the previous stages to develop mutual agreements. The outcomes were discussed and verified with the case study's companies,

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particular the C-level management. Next, the results from the collective data analysis are presented.

4.8 Delphi Round #3 and Collective Data Analysis

The fundamental objective of this third stage of data analysis is threefold and includes understating the role of offering services in a real estate development context; developing a map of a servitization to guide the deployment of a servitization strategy into real estate development; and identified the critical success factors of service provision in this sector. In this stage, initial models were developed to address the above objective and these models were validated with the case studies' representatives and research participants based on Delphi round three.

The objective of Delphi round three is twofold and includes validating different models of the findings chapter and gaining deeper clarification and in-depth understanding of the role of service provision in the real estate development industry. In this round, different models were developed and sent to the respondents via emails. Next, those respondents were contacted by interactive video conversation (Skype). This round involved interviews with 11 respondents with different backgrounds. Those respondents are from executive management, project management, marketing and sales and strategic management. Table (4-31) below provides an overview of the main characteristics of those respondents.

Table 4-31: The Characteristics of Respondents who Participated in Third Round

Ref	Respondent title
1	Chairman office manager
2	Deputy CEO for Industrial Investment
3	Deputy CEO for Marketing and Sales Affairs
4	Projects executive Director
5	IT Director
6	Sales Director
7	Purchasing and logistic Director
8	Senior Strategic Planner
9	Projects' KPIs Manager
10	Project manager
11	Project manager

Based on this third round some of the developed models were validated, other models were modified and some models were rejected. The respondents' comments were also reflected in the data analysis process. In this stage, the data accumulated during the research were rich and needed to be summarized and presented in a clear accurate format. Therefore, the template analysis was used.

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4.8.1 Template analysis

Template analysis is a particular way of thematic analyses. Template analysis emphasises the role of priori codes. The process involves the development of a coding template that summarises themes identified by the researcher and organising those themes in a meaningful and useful manner. In template analysis, codes or themes can be identified or developed before the data are examined. The process is twofold, developing hierarchical coding based on priori codes and analysing the data set according to this hierarchical coding (King, 2012).

4.8.1.1 The Hierarchical Coding

The development of this hierarchical coding starts with priori codes (or pre-defined) codes that have been discovered and developed during data exploration and relevant to the required analysis. These codes could be modified based on template analysis. For instance, a number of key factors that determine the success of a servitization strategy were identified during previous data analysis processes. The researcher noticed that these critical success factors were linked by respondents to three main elements. Those are customers, service provision and project operations. The study identified these critical success factors in each round and conducted an overall analysis to capture all the activities that needed to ensure the success of servitization in real estate development. Accordingly, a hierarchical coding was developed. Figure (4-19 below) provides an example of hierarchical coding development, and Table 4-32 below provides an example of priori codes identification

Figure 4-19 : An Example of Template Analysis Hierarchical Coding

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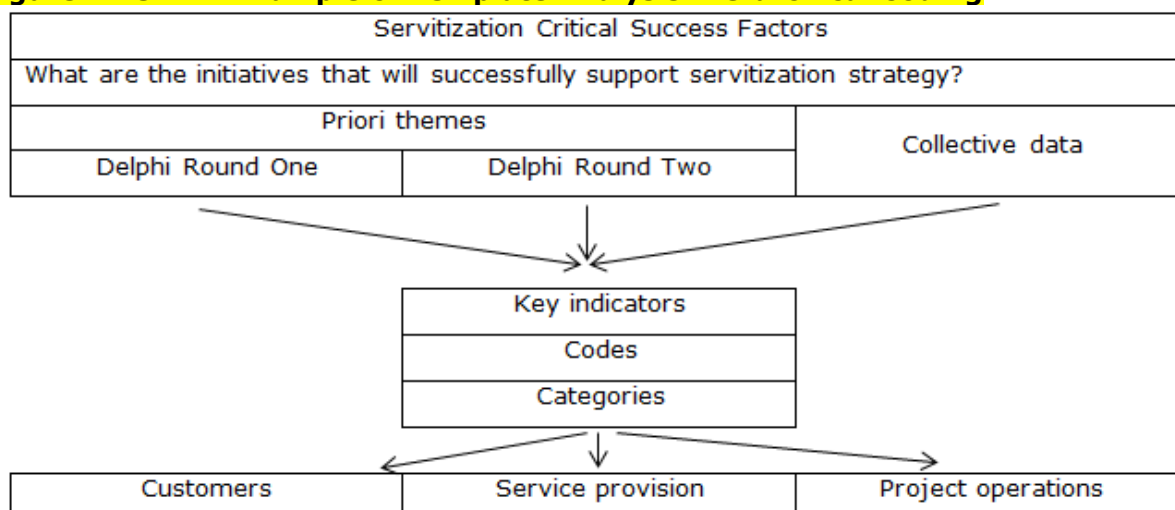
Table 4-32: An Example of Template Analysis Priori Codes Identification

	Delphi Round One	Delphi Round Two
a Priori theme	Servitization strategy influenced the organizations overall performance with mixed results. This influence could be better with more careful strategic planning. Services are an essential element of the project's success. The company could not separate the project and this service as it is the main key success factor but at the same time, it is the key failure factor if it is not managed properly. What is needed is planning and commitment to what has been planned	There is a mutual relationship between the success of service provision strategy and the success of the project overall. This mutual relationship includes a commitment towards project goals and objectives. The company can't separate the real estate development project and the provided services within that project, because they go together. If this provided service succeeds the project will be a success too and vice versa.
Key indicators	Strategic planning Systematic development	Mutual relationship between service and project
Main Code	Expanding services systematically through strategic planning and effective services design	Developing a matched configuration between servitization strategy and project operations
Category	Service Provision	Service Provision

4.8.1.2 Data Analysis

The data analysis process is similar to thematic analysis as the researcher could analyse the data by identifying the open and axial coding (King, 2012). The template analysis is aligned with Braun & Clark's (2006) data analysis approach in terms of flexibility and the focus on developing a hierarchical coding structure (Brooks et al., 2015). In this stage Braun & Clark's (2006) data analysis were used to identify the main themes. The process started with reading all the collected data during the different research stages. Here, notes and marked quotes from the text were identified and the initial codes were identified. For instance, table (4-34) below sets an example of how the initial themes were identified.

Table 4-33: An Example of Initial Coding Development Process

Participant	Raw Data	Initial Codes
2/H	The critical thing is the clarity with customers to manage their expectations. Because at the end of the day we are still developing the concept it is just not ready. The legal framework is not set properly. The people knowledge and practices are not used to this kind of practices. The key thing is to be clear upfront what services to expect, what cost will be paid, what options do you have and what you do not have. The customer must be given the opportunities which it's clearly mentioned in a transparent manner upfront where transparent communication and expectation management is the key. The other thing is to have the right staff with the state of mind to understand the legality and complexity of this kind of service. Meaning, it is more than just one department providing services, there is a lot of inter-departmental coordination needed rather than just a pre-sales representative offering something that the client ends up dealing with many departments tracking different individuals. An important impact on the company is having the right systems and tools, whether it is a computer system or the legal support or financial procedures to really respond to the different aspects of the process.	Managing customer expectations.
		people knowledge and practices
		Learning and development of the concept
		Training
		Added value
		Customer value
		Communication
		Co-ordination
		Human resources
		Systems and tools such as computer and procedures legal support or financial procedures
1/H	Currently, we can't separate the real estate development project and the provided services within that project, because they go together. When this provided service succeeds the project will succeed too and vice versa. From my point of view, the ease of getting to the real estate sector makes a lot of people think it is too easy to succeed and that this industry is an easy way to make profits. But on reality, the business of building projects is hard, the process is complex and accurate, you need high control and strong planning process as well as a strong management style and qualified human resources as these plays a great part in the success of building projects. Also, coordination and integration among the company's departments plays a major role in the success of the service provided, and thus the success of the project.	high control and planning process
		management style
		qualified human resources
		coordination and integration
L03	I supposed that our future strategic decisions about offering service will be enhanced through more accurate strategic planning, setting better business plans, building a solid base of trust and offering best services. Marketing research, adapting new trends and ideas, promoting products and services and re-organizing activities and priorities	Accurate strategic planning
		offering the best services
		Market research
		adapting new trends and ideas,
		Re-organizing activities and priorities

Those initial codes were gathered and classified into more advanced codes and organized in wide groups representing a similar meaning. These advanced codes and groups were reviewed and integrated into main focused themes that meaningfully expressed the designated codes. Table (4-34) below provides an example of the final coding development process

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Table 4-34 An Example of The Final Coding Development Process

Initial Codes	Codes	Categories	Main Category
Managing customer expectations.	Managing customer expectations.	Managing customer	
Added value to customers			
Customer value			
Learning and development of the concept	Service design and development	Service provision	Servitization Critical success factor
adapting new trends and ideas,			
offering best services			
Market research	Marketing research		
people knowledge and practices	Human resource management		
qualified human resources			
Training			
Human resource?			
Accurate strategic planning	Strategic planning		
planning process			
management style	Organization design	Project Management	
Communication			
Co-ordination			
co-ordination and integration			
high control			
Systems and tools such as computer and legal procedures			
or financial procedures			
Re-organizing activities and priorities			

4.8.2 The Role Servitization Strategy

According to finding (no. 3), the case studies offer different type of services. These are offered in three stages of the project life cycle. The stages are; project initial design, project execution and after project delivery. Based on findings (no. 5 & 6), these services are offered based on multiple facilities arrangements and multiple pricing policies. The table below (4-35) Links the types of offered service to project life cycle, facilities arrangement and pricing policies

Table 4-35 : The Types of Offered Service and Project Life Cycle, Facilities Arrangement and Pricing Policies

Type Of Services	Stage Of The Project Life Cycle	Facilities Arrangement	Pricing Policies
Basic Services	Project initial design	in-house production	Free of charge
Advanced Services	project execution	Out-sourcing	Cost orientated approach
System Solutions	after project delivery	Networking & partnership	Competitive market price

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These types of services were categorized into four categories of servitization in real estate development, which are project-orientated, product-orientated, customer-orientated and service-orientated. According to Finding no. 10, these services varied from project to project based on the project's nature and target customers. Table below (4-36) links these different types of services to the case studies' projects.

Table 4-36: Different Types of Services Offered by the Case Studies' Companies

Project A:	
project-orientated service	The project outcome is a gated community. The idea was developed to attract people from high-incomes to live within a fully closed and fully integrated residential suburb "Gated Community."
Product-orientated service:	The project offers different types of basic service that support the product selling such as mass customization, where ten different villa designs were developed and the project was divided into small, medium and large sizes and within different shapes to meet different customer tastes. In addition, the project develops a brochure, a 3D Model, a 3D virtual tour animation and villas' 3D virtual tour animation.
Customer-orientated services	The project offers customized design by enabling construction modifications based on co-development and co-design. Also, the project offered consultation and advisory services, insurance and financial services, mortgage services, interior decoration, landscape design, mock-up models and home furnishing.
Service-orientated	These services were added to support project functionality and make customer life easier. These services have a significant impact on the customer purchasing decision. These services included site management, facilities Management, sustainable living, recreational services, property management and smart city technology. The project developed a health club, shopping centres, restaurants, coffee shops and parks. It also provides indoor and outdoor swimming pools, a health clinic among other things. These services are provided by the company in corroboration with third parties based on charging residents annual fees.
Project B:	

project-orientated service	The project outcome is an integrated villa resort.
Product-orientated service:	The project offers different types of basic service that support sales such as mass customization, where ten different villa designs were developed and the project is divided into small, medium and large sizes in different shapes to meet customers' tastes. Also, the project developed a brochure, a 3D Model, 3D virtual tour animation and villas' 3D virtual tour animation.
Customer-orientated services	The project offers customized design by enabling construction modifications based on co-development and co-design. Also, the project offers consulting and advisory services, insurance and financial services, mortgage services, interior decoration, mock-up models and home furnishing.
Service-orientated	After sales services included site management, facilities management, sustainable living, recreational services and property management.
Project C:	
project-orientated service	The project is founded as part of efforts to organize the Zarqa city housing district. The project outcome is to develop an integrated modern residential area and encourage middle income residents in the old city to move to this modern city.
Product-orientated service:	The project aims to provide a variety of housing alternatives, where seven semi-detached villa designs were developed. Additionally, the project provides its brochure, 3D model, 3D virtual tour animation and villas' 3D virtual tour animation.
Customer-orientated services	The project offers consulting and advisory services, insurance and financial services, mortgage services, interior decoration, mock-up models and home furnishing.
Service-orientated	After sale included developing gardens and parks, clubs, places of worship, schools, health centres social and commercial centres and commercial markets. These services are the responsibility of the developer in corroboration with the city council.
Project D:	

project-orientated service	The project was designed to develop a comprehensive commercial area that attracts businesses by providing free entertainment facilities for customers such as a garden and park, kid's play area and car parking.
Product-orientated service:	The project aims to provide a variety of investment spaces such as offices, shops and restaurants. The project consists of two office tower buildings providing different types and sizes of offices and shops. In between these two buildings another four buildings based on one floor design that encompass different sizes and types of stores were built. The project promoted this commercial area through its own brochure and 3D model.
Customer-orientated services	The project offered finishing and interior decoration, consulting and advisory services, insurance and financial services and mortgage services.
Service-orientated	The project provided supporting services for investors by creating an administration office at the site. This office was responsible for ensuring functionality of the project and the attached entertainment facilities.
Project E	
project-orientated service	The project outcome is a full size modern city.
Product-orientated service:	The project provides a variety of housing. The project offers more than 15000 units. These units are divided based on of six different buildings designs that consist of apartments varying in size from 80 to 180 sqm. The project has its own brochure, 3D model and 3D virtual tour animation.
Customer-orientated services	The project offered finishing and interior decoration insurance and financial services and mortgage services.
Service-orientated	the project offers an integrated system of service facilities and utilities. This included developing gardens and parks, clubs, places of worship, schools, health centres, social and commercial centres, commercial markets and transportation. These services are the responsibility of the developer in corroboration with the city council.
Project F	

project-orientated service	The project is a part of the national development programme of Jordan. The project outcome is to create an attractive business opportunity to attract foreign direct investment. The idea of the project is centred around managing a networking alliance to develop an international tourist town that will encompass tourist, recreational, residential and commercial facilities along the lines of global resorts.
Product-orientated service:	An initial design of the whole project idea. The project has its owns brochure, 3D virtual tour animation and investment proposals
Customer-orientated services	The project offered more advanced design, consulting and advisory services, insurance and financial services and construction services.
Service-orientated	The project provides support services for investors and end users. These services include site management, facilities Management, property management, banking services and supporting technology.
Project G	
project-orientated service	The project is part of efforts made to organize the Zarqa city housing district. The project outcome is to develop an integrated modern residential area to encourage low income residents in the old city to move to this modern city.
Product-orientated service:	The project provides a variety of housing alternatives offering apartments vary from 80 to 180 sqm. The project develops project's brochure and project 3D model.
Customer-orientated services	The project offers finishing and interior decoration, insurance and financial services and mortgage services.
Service-orientated	After sale services included developing gardens and parks, clubs, places of worship, schools, health centres social and commercial centres and commercial markets. These services are the responsibility of the developer in corroboration with the city council.
Project H	
project-orientated service	The project is being created as part of Jordan's promising investment environment. The project outcome is an industrial city using world class standards to create an attractive business opportunity.

Product-orientated service:	An initial design of the whole project idea. The projects plots are sorted and ready for sale. The project develops project's brochure, project's 3D virtual tour animation and investment proposals.
Customer-orientated services	Customer-orientated services: the project offers customized services and customized advanced design, consulting and advisory services, insurance and financial services and construction services.
Service-orientated	the project provides supportive facilities for various industries such as banks, shops and government departments. The project includes industrial blocks, commercial blocks, residential blocks, recreation blocks and administrative block. The project provides support services for investors. These services included site management, facilities management, property management, banking services and support technology.

The case studies offered different types and levels of services. These different types of services become a part of the building projects' scope and are considered an essential element of the project marketing success. Adding service has become an essential requirement for real estate projects." This was confirmed in Delphi round 3, as the respondent agreed that services are offered to raise the building project marketing criteria. For instance the project executive director mentioned "We have begun the idea of adding services to our projects to raise the level of Jordanian real estate development and to set new criteria for competition in the market." In round three, all the respondents emphasised that the outcome of servitization strategy in real estate projects does not come from the sale of services, but rather comes from the ability of services to promote and sell the project. Table (4-37) below identifies the role of services in real estate development according to the respondents

Table 4-37: The Role of Services in Real Estate Development

Basic service	Basic services attract customers and support project sales.
Advance service	Advance services satisfy customers and distinguish the product. These advance services are forming the new basis of order winning criteria of Jordanian real estate development marketing
System solutions	System solutions services support project functionality, gain customer confidence and stimulate customer purchasing decisions. These services have an influence in winning orders.

Basic services are popular services within the case study projects and likely to be commoditized with every project. These basic services are added as additional elements to

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support project sales and to enhance the projects viability. For instance the administration office in Delphi round one document L03 mentioned that "Companies are adopting service provision to their products mainly to promote sales of the product. These basic services are offered to attract customers. According to the Marketing Director document 8/H from the Delphi second round real estate development companies have to attract customers by offering services. These basic services have become an important element of building project marketing tools. Also, in Delphi round 2, the project executive director (document 2 5/h) said "These services attract customers and add value and spirit to the product. " This also was confirmed in Delphi round 3 as respondents agreed that these basic services are offered to attract customers. For instance a project manager said "providing imaginary plans like 3D animation raises customer's opinion of the company product." Likewise, the deputy CEO for industrial investment mentioned that "based on offering basic services, customers got to see the various property designs that enabled them to "picture" their future home, which added more value for them. The project executive director also mentioned that "Offering basic services increase marketing value."

Advanced services are designed to satisfy customers and distinguish the product. These advance services are forming the new basis of order winning criteria of Jordanian real estate development marketing. For instance, the deputy CEO for engineering affairs (Delphi round one document TC05 described advanced services as "These services give customers the flexibility to choose the design which is in line with his needs." Likewise, the senior strategic planner in Delphi round one document M07 mentioned that "Providing these services satisfies customers and provides higher value to them." Furthermore, in Delphi round two the project executive director mentioned that "based on these services, customers can distinguish between the existing projects in the market." This was also confirmed in Delphi round three. Respondents agree that offering advanced services leads to higher customer satisfaction. For instance, a project manager mentioned "clients are more satisfied if they make their own touches." Likewise, the deputy CEO for industrial investment mentioned that "Customers were allowed to have their modifications on the layout to satisfy their needs, taste and requirements during the construction phase, enabling them to add their own touch at little or no extra cost." The chairman office manager said "We had to contract with several banks to provide customers with several finance alternatives to satisfy different customers' needs."

System solution services are offered after project delivery. These services are offered to support project functionality, gain customer confidence and stimulate customer purchasing decisions. These services have an influence in winning orders. For instance the business and

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strategic development director in Delphi round one document TD02 argued that after sale services "Give the sense of security to the customer that the product that he purchased has a reliable follow-up service to ensure quality, which enhances the consumer purchasing decision." This also was emphasised in Delphi round 2. For instance, the deputy CEO for industrial investment in Delphi round 2 (document 3/h) mentioned "you have to give customers the follow-up, you have to answer their concerns, you have to provide required services that will encourage them to keep deal and get also their friends to buy". This also was confirmed in Delphi round 3 as respondent agree that providing after sale services has become part of the real estate development business. According to the Deputy CEO for marketing and sales "after project delivery services like property management and sustainable living recreational services are provided to gain customer confidence and assure customers of reliable support when needed. They also influence their purchasing decision." A project manager argued that presenting property management services to run and maintain the project increases purchasing.

Finding 23: The real estate development companies offer different types and levels of services for different purposes. Offering basic services make the offers more valuable to customers. These basic services raise the order qualifier of Jordanian real estate development marketing that traditionally focussed on project time and cost. Offering advance services tailored to customers' needs satisfy customers and distinguish the project offering from other projects. These advanced services are forming the new basis of order-winning criteria of Jordanian real estate development marketing. Finally, offering after sales system solution services support project functionality, gain customer confidence and stimulate customers purchasing decision. These services have an influence in winning orders.

4.8.3 The Map of Servitization Strategy

The section was oriented to develop a map of a servitization strategy to guide the mobilization of a servitization strategy into real estate development. The process is threefold and includes developing a framework guiding the organization around its plan to achieve the strategic goals; enabling management to understand the required actions and decisions; and deciding the level that these decisions need taking at. This map was developed by restructuring the collective study's findings from different resources.

The data analysis found that providing services becomes an essential element of marketing by adding more customer value. For example, The Senior Strategic Planner (document M05 from the Delphi first round) mentioned, "Service becomes an essential element of successful

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project innovation and marketing proposition." This was confirmed in the Delphi first and second round findings no. 8 and 16. Also, the collected data showed that the companies offered different types and forms of services for different reasons. According to the Projects' KPIs manager (document M01 from the Delphi first round) "The reason behind offering services are because of competition in the market and thus the need to provide more customer value by offering better services. Whenever there is better services are offered there is greater customer satisfaction, which will surely lead to an increase in the volume of sales and a bigger market share." This was also confirmed on the Delphi first round finding (no.9).

Nevertheless, offering services is a challenging process. For instance, the Sales team leader (document M08 from the Delphi first round) mentioned, "The most important challenges are the costs of providing the service, the availability of skilled labour to provide these service and the company's ability to commit to what has been agreed with customers." This was also confirmed on the Delphi first round finding no. 11, where offering services integrated into the project creates several challenges. Managing the service provision is by far the biggest challenge. Therefore, the respondents emphasized both careful planning and strategic alignment for a service provision strategy. For instance, in the Delphi first round based on document TAD2, the Deputy of CFO for Administration Affairs mentioned, "Offering more advanced services is a decision dependant on careful planning and several other considerations." Respondent 3/H argues that services should be considered in early stage of a project's development. This was confirmed in different findings such as 15, 16, 17, 20 and 21.

On the other hand, the data showed that a services provision strategy starts from customer needs. According to the Quality Manager (document 22/P from the Delphi second round), "If the company wants to change the trend toward becoming services oriented. They should start from customers themselves and go back to customer perception of whether the provision provides good value." This was confirmed in findings no.10. According to The Chairman Office Manager (Document 1/H from the Delphi second round), the proper stepwise process of servitization is "by pre-planning, where the company identified target customers; identified their needs and translated those needs into certain services that will be provided via projects. One must consider the economic value of these projects and linking it to future strategy and its expansionist tendencies in order to ensure the continuity of the company in the local market." This was also confirmed from findings no. 2 and 10. Thus, The servitization strategy starts from offering basic and standard services which should be conceptualized at the project's initial design stage. For instance, The Projects Executive Director (Delphi first round document TD05) mentioned, "Offering services should

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be carefully designed from the initial project stage." Also, according to The CFO (document TC02 in the first round of Delphi), "The company normally starts with services directly related to its products then gradually moves towards creating a full scale service unit (speed may depend on organizational ability to adapt)". This was confirmed in findings (no. 2 and 3).

Nevertheless, the data indicated that a servitization strategy is considered to be an incremental process. For example, The Senior Strategic Planner (Document M05 from Delphi first round) mentioned that "We believe that going beyond product related services is the strategic and optimal objective as long as a company has its own service provision unit. However it's recommended to do that gradually until this unit is stabilized." Also, data showed that the projects were designed around specific outcomes based on product and services which were offered in three phases of a project life cycle; the initial design, the execution phase then project delivery phase, . According to the CFO (document 2/H from the Delphi second round), "Offering services start at an early stage of the project … the customer would appreciate receiving some assistance at the decision making level to come in or not… The company can also work with customers later on the interior design or some other designs, on construction and developments; … the company can add value by providing additional finished services… up to maintenance, down the line to facilities management and assets management etc… So, basically, it really starts when somebody enters the door looking for a place to buy and live and after they move in."

The stages of offering were acknowledged based on findings no. 3. Moreover, the collected data indicated that offering services extends the project life cycle. According to the Deputy CEO for Industrial Investment (document 3/H from the Delphi second round) "It continues with the life style of the project. You give it to a real estate management company that will continue doing this as long as the building exists and that goes on for years and years." Accordingly, the case study company established a subsidiary company supporting real estate development and offering advanced and sophisticated services (document Ex-Od8 from the secondary data). In addition, the HC signed several partnership and collaboration agreements to provide advanced services after the delivery stage of the project (document Ex-Np6 and Ex-Np7 from the secondary data). This also was acknowledged based on finding no. 5.

Findings 24: Servitization strategy is an incremental expansion process that begins with offering standard and basic services and moving towards offering more advanced services and integrated system solutions. This incremental process should be conceptualized into the project design. Also, Service provision extends the project life cycle as services can be

provided at three stages of the cycle: the initial project design, the project execution phase and post project phase.

The findings throughout the previous phases of this study explained the process of servitization. For example finding no.1 found service provision to be a complementary element of realty projects. Finding no. 2 confirmed that the process starts from the initial stage of project design by offering standard and basic services. Finding no. 3 linked several approaches, types and forms of services to three main stages of the project life cycle: initial phase, execution phase and post project delivery phase. Based on finding no. 4, these different forms of services are designed and integrated into the project using several approaches such as Co-design, and imitation strategy. According to finding no. 23, the servitization strategy is an incremental process. Finding no. 21 outlined the basic steps of managing service provision. Finding no. 2 identified the optimal starting point for offering services. Finding no. 9 explained the motivation for offering services and findings 3 and 4 presented the types of services that could be offered and the design approaches for these services. Finding no. 10 identified the relevant strategic factors for designing an effective service. Finding no. 5 identified the optimal organizational arrangement for offering services. Finally, finding no. 17, and finding no 23 identified the role of offering services. Accordingly, the strategic map for offering services was developed as shown in figure (4-20) below.

==Figure 4-20: Servitization strategy roadmap==

Project life cycle	initiation phase	Execution phase	After project Delivery Phase
Strategic purpose	Gaining Customers	Differentiation advantage	Selling long-life services
services type	Offering basic service related to customers' needs	Offering advanced service satisfying large proportion of customer segment	Offering technological and non-technological solutions
Design approach	The cognition of the surrounding environment	Co-design, and imitation strategy	Collaboration
Relevant strategic factors	Clear planning	Balancing customer orientation and project orientation	Strategic Fit
Organizational arrangement	In-house production	Outsourcing approach	Strategic alliance
Strategic assessment	Customer attraction	Sales satisfaction	Customer trust

This strategic route of servitization strategy links the incremental process of adding basic, advance services and system solutions into three stages of the project life cycle.

4.8.3.1 Project Initiation Phase

In this stage, the project objectives, scope, purpose and deliverables are planned and clearly defined. The project plan should include service provision, and should be developed around offering a package of products and services as being the expected outcome of the project. Services are offered to support the project's idea. Services provided determine the project's market position based on customising the project to a similar group of customers with similar needs and purchasing requirements. The potential strategic choice of offering these services will be enforced by the surrounding business environment, from which businesses benefit from the cultural familiarity of the environment to design the project with appropriate services. In addition, at this stage, simple and standard services could be offered to create an entry point for customers. In this stage an effective planning is the critical strategic factor. Whereby, companies have to identify the general direction and develop an agreement around the project's outcomes. They need to allocate resources, guide the implementation process and determine the actions and alternative actions to achieve the intended outcomes and match the organization capabilities to reach these outcomes. In this stage, services are produced based on internal arrangements by hiring skilled individuals to provide general and basic services. In this situation, companies have more control over the project and services. Also, they get closer to the customers. In terms of strategic evaluation, gaining competitive advantage and attracting more customers are the main criteria used to evaluate a service provision strategy.

4.8.3.2 Project Execution Phase

At this stage, the project moves from the planning phase to activities implementation where competition is the challenge and offering attractive services is the solution. The strategy has to move from offering service to support project to offering project and service approach looking at identifying he synergy of project and service to enhance customer satisfaction. Here, service elements are expanded and become more important to increase the differentiation edge. In this stage, more advanced services are needed to tailor particular project features to the specific needs of individual customers. Accordingly, customer satisfaction will be fulfilled, service development will be promoted and the companies' ability to compete will be enhanced. Also at this stage, companies are closer to their customers and have the ability to recognize the types of services that could capture their interest. Co-design and imitation are different approaches used to capture unique aspects and design of services. Balancing the project's tangible elements and intangible elements is a critical strategic factor when offering more tailored and advanced services. Outsourcing is the

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preferable solution when offering more advanced services as they can require complex capabilities, specialist knowledge/expertise and tools. Finally, improving customer satisfaction is the main criteria used to evaluate the servitization strategy in this phase.

4.8.3.4 Post-Project Delivery Phase

In this stage, the company offer service to support the project functionality. The Companies looking at supporting the project concept, improving the customers' life experience and making their life easier and more enjoyable from within the project by offering more advanced services or new technology gadgets via networking and strategic alliance. This stage allows companies to lock in their customers, get meaningful feedback, build close and long term relationships, which in turn, facilitate new project designs, selling and success. Providing more advanced and sophisticated services depends on a proper alignment of project nature customer segment and customer preferences or needs. Still, the companies have the opportunity to introduce new services and new technologies into the marketplace through service innovation and the development process.

4.8.4 Servitization Critical Success Factors

Respondents in Delphi round 2 emphasis that there is a mutual relationship between the success of service provision strategy and the success of the project overall. The company can't separate the real estate development project and the provided services within that project, because they go together. If this provided service succeeds the project will be a success too and vice versa. The servitization strategy worked differently based on the type of project, the type of offered services, and the targeted market segment. The study identified the organization performance of the projects. For instance project A is more than 95 % complete to date with all structures in place. The project is 100% sold. The after sales services are provided by the company and in co-operation with third parties. Project B is under construction and more than 70% is completed with all structures in place. 62% of the project is sold. Partial after sales services are provided by the company. Project C is divided in two phases to be completely delivered in 2025. 40% of the first phase is completed and 5% of that phase is sold. Project D is 100% completed and 100% sold. The project's after sales services is outsourced. Project E is divided into 5 phases. The project is in the infrastructure phase and expected to be delivered in 2020-2025. The project will be open for sales soon. Project F is under construction. The project attracted several local and international companies. Project G is divided into three phases. 70% of the first phase is completed and 60% of that phase is sold. Project H is under construction and 40% of the units are sold. Partial after sales services such as administration services are provided by the company and third parties. The strategic fit of a service, project nature and market

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Many important matters came out in the previous stages of this study. A number of key factors that determine the success of a servitization strategy were identified, particularly from the two rounds of Delphi. The respondents in the first round of Delphi emphasised the importance of strategic planning and an effective services design. For instance, The Purchasing Manager (document M02 from the first round of Delphi) argued that the most important critical success factor is" Proper planning and logical expansion." In the second round of Delphi the respondents considered the mutual relationship between the success of the service strategy and the success of the project overall. This mutual relationship includes a commitment to a project's goals and objectives. Whereby, developing a matched configuration between servitization strategy and project operations is critical to the success of a servitization strategy. For example, respondent (1/H) said, "Currently, we can't separate the real estate development project and services in that project, because they go together. If this service succeeds the project will succeed too and vice versa." The data analysis outlined different factors that could be classified as critical success factors of a servitization strategy. The Delphi two rounds and the previous findings from one to twenty-three were reviewed. Evidence indicates that different initiatives are responsible to deliver successfully servitization strategy. These initiatives are a combination of factors related to service provision, customers and project operations management. These critical success factors are summarized in table (4-38) below.

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Table 4-38: Critical Success Factors of a Servitization Strategy

Service provision	• Systematic method of services expansion based on pre-defined objectives • Jointly strategizing ahead and deliberately planning for the project and the services. • Linking service provision to the organizational capabilities and arranging for developing the additional capabilities needed for service provision. • Executive management commitment and communicating to other organizational members, the importance of meeting customer satisfaction by providing services.
Managing Customer	• Market research to measure the feelings and preferences of customers, addressing genuine customer needs and identifying the market segment. • Managing customer expectations based on clarity and transparency of the offered services • Developing customer long-term relationship • Managing Customer interaction based on creating reliable customer management. • Implementing knowledge management • Customer satisfaction based on co-development and co-design
Project Operations	• System and organization flexibility • Internal consistency • An effective communication and coordination • Balancing product innovation and service innovation and benchmarking best practices. • Minimize task variation and scope change by the use of an effective change control process. • Better control of the project timescales, budgets and progress.

Finding number 25: Several factors contribute to the success of services in realty projects. These factors support the synergy between service provision, project operations, and a customer-centric approach.

4.8.5 Section summary

In this section the strategic roadmap for offering services was developed using a template analysis of the accumulated data, findings and different output of this study. Particularly, the development of servitization roadmap's prototype involved several themes such as: the motivation to offer services; the types of services; the service design approach; the servitization strategic factors; the organizational arrangement; and the strategic evolution system. In addition, different critical success factors deduced from the previous data analysis and findings were presented.

4.9 Findings Consolidation

The outcome of the case study and Delphi technique identified the scope of servitization in real estate development and contributed to understanding the servitization process and service provision in real estate projects. This was done by focussing on real estate

development as a specific environment to explain the different process for adopting servitization. The findings tackled important questions of how to successfully deploy servitization in realty projects to create competitive advantage, and described the practices that contribute to the success of the project-service system. Throughout the chapter, the findings clear-up ambiguity around several aspects of servitization strategy in real estate development. Because of the comprehensiveness of data analysis results, the main themes are summarized by contextualization these findings into the strategic management model, as shown in table (4-39).

Table 4-39: Contextualization of the study's key findings and emergent themes into the strategic management decsion model

Understanding strategy	Observation
Servitization Strategy Perception	Offering service integrated into a project is viewed as a fundamental element of the market offering.
The prominence of servitization	Providing services has become a responsibility of the real estate developer
Strategic decision level	Offering services is a directional strategic decision orienting the entire organization toward marketing and customers
Servitization approaches	The realty projects offer different types of service. These services vary between basic service, to a more advanced service and yet more advanced service that can be offered at various stages of a project's life cycle.
Strategic factors	Service provision is a complementary element of the projects' market proposition. Organizational internal factors are the main drivers of service provision decision-making.

Strategic Formulation	Observation
Offering purpose	Service is considered as an innovation strategy to gain competitive advantage. Offering service is enforced by external factors and stimulated by several strategic, marketing and financial benefits.
Scope and extent	Offering services covers the entire project life cycle and extends beyond the project delivery with limited services. At the initial stage, offering basic service creates an attractive entry point for customers. At the execution phase offering advanced services tailored to specific customers enhances customer satisfaction; and after project delivery , offering sustainable services increase customer confidence
Entry mode	The service element is introduced by conceptualizing the project around offering general and basic services related to customers' needs and customer activities to gain a competitive edge.
Factor effecting services design	External and internal factors affect the design of offered services, wherein, a parallel design of the project and the service is a critical success factor.
Design approach	Different types of services could be systematically developed and offered within different phases of the project life cycle based on different sources of service development, different design techniques, and integration systems.
Organizational arrangement decision	External and internal arrangements facilitates arrangement for offering services based on hybrid approach
Price decision	Different pricing policies for different types of services based on the cost of services and the sources of services offered. i.e. internally or externally offered

Strategic Implementation	Observation
Capabilities Requirement	Organizational capabilities play a significant role in adopting the servitization strategy in the real estate development sector. These capabilities are categorized into proactive capabilities that need to be developed prior to offering services, and reactive capabilities vital to cope with implications of service provision
Organizational Structure	a hybrid organizational structure that directs the whole organization towards being customer orientated with increased work tasks coordination and collaboration between functions. The system balances the focus between services and operations
Organizational Culture	An organizational culture that balances the service focus, (encompassing process innovation, customer importance, problem solving and flexibility), with project operations management, (which involves productivity and efficiency, based on time, cost and quality factors).
Operational Process	A combination of operational practices that support both offering of services and project operations management, to focus on the value of a joint product and services system. This is more efficient and delivers superior customer value in realty projects.
Quality control	A quality control system that combines both tangible and intangible characteristics and balances the focus between product and services
Servitization Challenges	Plan and design the optimal level of service provision that creates more value for customers, reduces divergence in the operational process, meets a variety of customer needs and reduces organizational risk. These are the main challenges of offering services.
Managing organizational change	An incremental development through apparent change process is more convenient to balance the service orientation and project operations management in terms of organizational culture, structure, and operating processes that support a servitization strategy
Strategic Evaluation	**Observation**
Servitization Outcome	Offering services stimulates sales by adding more value to customers and enlarges the company market share. Service provision enhances customer satisfaction and loyalty; builds close customer relationships; and enhances organizational opportunity to learn more about the market and customers' needs. Providing additional service supports innovation activities to create services satisfying customers' needs at an economical cost. Finally, offering services extends the project life cycle and opens up a long-term business opportunity
Service Paradox	Offering service temporarily reduces the project's competitive advantage in the short term
Offering Services Cost	Services cost categories are changed based on the types of services and the incremental process of servitization.
Critical success factors	A combination of factors relating to service orientation and project operations management are the initiatives supporting a the adoption of a successful servitization strategy

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4.10 Chapter Summary

This chapter presented the results of the data analysis. Exploration was the fundamental goal that drove data collection and analysis. In order to ensure a coherent data set, the data were collected and analysed based on incremental multiple stages, where each stage depended on the results of the previous one. These data were collected from different sources, using different tools. They were then processed in response to the research problems based on different analytical approaches. The complexity of the research topic and the interplay between the literature and the empirical data underpins the rationale behind the data collection strategy. The chapter started by presenting the findings obtained from the case study companies' secondary data analysis, which was conducted at the beginning of the research project to clear the road for more in-depth study. The primary data was collected via interviews based on three rounds using the Delphi approach, whereby 42 interviews were conducted in the first round, 23 interviews were conducted in the second and 11 interviews were conducted in the third round. The empirical saturation was reached and there is no need for another round.

Different data analysis techniques were used at different stages. In order to analyse the secondary data, document analysis was used, and to analyse the primary data, contact analysis and thematic analysis were used. Finally, template analysis was used to analysis the collective data. The data analysis process reports several themes related to a servitization strategy in real estate development. These findings and emergent themes were contextualized into a strategic management decision model. The next chapter will present the discussion of the study results and findings.

5. Chapter 5: Discussion

5.1 Introduction

Several studies are promoting servitization strategy as a means of achieving competitive advantage. The purpose of this study is to examine whether adopting servitization strategy within Jordanian real estate development organizations is a fundamental element capable of developing a sustainable competitive advantage. An in-depth investigation of the aspects of servitization was carried out to identify the servitization strategic decision formulation, implementation and evaluation that will deliver that competitive advantage. Through this investigation, the research looked into the modes of applying the servitization strategy and the obstacles facing it application, in order to come up with a model for better application of servitization in the real estate development sector as a mean of developing sustainable competitive advantage. This was fulfilled by a qualitative case study research strategy. The study was able to achieve a mutual agreement and reach categories saturation by the use of the Delphi technique concept based on an incremental research process. This involved secondary data research followed by three rounds of primary data collection. The previous chapter presented the study findings. This chapter provides a concluding discussion of these findings in relation to the research's aims, objectives and questions. Still, to provide a clear structure for the discussion, this chapter has been arranged based on the research's conceptual framework (figure 2-6), which was developed at the end of chapter two.

Consequently, the chapter has been divided into several sections. Section one discusses the importance of servitization strategy; then, the strategic formulation of servitization strategy is discussed, followed by the strategic implementation process and thereafter, the strategic evaluation of servitization strategy. The strategic roadmap for servitizing building projects allowing this sector to improve competitiveness is also discussed. Finally, the discussion chapter ends with a conclusion and summary. The conceptual framework is reconfigured based on the empirical findings. The next section discusses the necessity for servitizing in the real estate development sector.

5.2 Servitization Strategic Decisions

The strategy that businesses adopt is a reflection of business environment (Johnson et al., 2013). Recently, servitization is evolving as a new and alternative strategy of competitive advantage. The servitization strategy is showing a strong growth opportunity (Baines, 2013). It becomes a significantly necessary strategic decision (Roos, 2015), to respond to the dynamic change in the business environment (Brad & Murar, 2015). This aspect will be

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discussed in more depth in the final chapter. This section discusses four main themes related to the role of servitization strategy in the real estate development industry.

1. The Prominence of Servitization Strategy in Real Estate Development
2. The Characteristics of Servitization's Strategic Decision
3. Servitization Strategic Approach
4. The Factors Influencing the Adoption of Servitization Strategy

5.2.1 The Prominence of Servitization Strategy in Real Estate Development

The role of services in sustaining organizational competitive advantage is much discussed from a broad range of academic perspectives (Baines et al., 2009b and Lightfoot et al., 2013). Traditionally, service was viewed as an additional cost to cut out (Pawar et al., 2009). It was added as an additional part of marketing strategy not as a value creation system (Baines et al., 2009a). However, service has become the main source of market differentiation and the main part of the value creation system (Neely et al., 2014; Brad & Murar, 2015). Forces such as globalisation, de-industrialization, commoditization, deregulation, and advanced technology are combining in a way that significantly increases business environment complexity and creates fierce competition (David, 2013). This dramatic change requires a fundamental shift to the value proposition by adding services (Roos, 2015; Brad & Murar, 2015). Organizations have to develop services alongside products as a core of their operation, to secure long-term business prosperity and to sustain a competitive advantage (Neely et al., 2014). The high level of customer contact from offering services helps to build a close long-term customer relationship (Schmenner, 2009; Vendrell-Herrero et al., 2014). This close customer relationship contributes significantly to the organization's survival through steering marketing offerings to meet customers' needs. This close relationship also promotes a prompt response to dynamic changes of the business environment (Baines et al., 2009a; Neely et al., 2011a; Gebauer et al., 2012a; Wallin et al., 2015).

Traditionally, the real estate development industry focuses primarily on cost reduction (Horta et al., 2013). The industry focuses exclusively on the project delivery phase as the value centres (Galera-Zarco et al., 2014).

This study highlights the growth of the service element in the real estate development industry. The case studies emphasise the project-service system of their businesses, whereby the service concept was embedded into the project design stage. Each project was designed with customers' needs in mind, such as the need for modern houses at a

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reasonable price; the need for more security and gated communities; the need for social status and luxurious lifestyles; the need for an attractive business environment; and fully served and equipped industrial cities. The case studies offered different types of services during the project life cycle. This necessity of offering service is twofold

First, the findings indicate that in building projects service is not just a supporting element any more. It becomes the responsibility of real estate developer. The importance of services emerges from the nature of the industry's products and the nature of the real estate purchasing decision. Offering services becomes crucial to satisfy customers' specific needs coupled with an external pressure to gain competitive advantage over rivals. The necessity of providing services in building projects is justified by the characteristics of the services. The study highlighted these characteristics, which found an underlying logic to the provision of services for several reasons. These come from the pressures of the business environment, where customers have become more conscious, more demanding and their needs are more diverse and mutable. Providing a variety of services gives customers more flexibility to choose what suits them and what fits with their needs. Moreover, services offer more opportunities for innovation and development of inspiring ideas through fostering close customer relationships and value co-creation. Finally, offering services becomes a part of a real estate developer's responsibilities to support the product's long-term life. Offering services inspires customer confidence and assures customers of reliable support when needed.

Secondly, offering services is perceived to be important for property companies and the service element is seen to be a fundamental value added factor. Offering services allows real estate developer to create value across the entire project life cycle. Offering services addresses customer's unique needs, enhances market offerings, and improves the project's overall value. The case studies concentrate on the service aspect of their operations to establish a differential advantage in the marketplace. In essence, these companies, which used to compete by marketing tangible products, have now switched their competitive focus to the provision of unmatched, unparalleled project-service system.

5.2.2 The Characteristics of Servitization's Strategic Decision

Debate among scholars has emerged regarding the strategic level of the servitization decision. In literature, the servitization strategic-decision can be discussed at three strategic levels; the corporate level, the business unit level and the operational level. Some scholars consider servitization strategy to be a directional strategic decision at the corporate level, by which servitization significantly affects an organization's direction (Turunen & Toivonen,

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2011; Nuutinen & Lappalainen, 2012). According to Nuutinen & Lappalainen, (2012), who study servitization based on a case study research, product orientation is deeply embedded in the manufacturing culture, structure, management style and operational process. Consequently, supporting this strategic change requires a holistic change toward being more customer-orientated and having a value based culture. It is imperative to make the service provision strategy the clearly dominant factor to facilitate the necessary change (Nuutinen & Lappalainen, 2012). Other scholars consider servitization as a competitive strategy taking place at the business unit level (Gebauer et al., 2010b; Kinnunen & Turunen, 2012), where there is no need for the entire organization to adopt the service approach and develop service capabilities at the expense of product capabilities. Thus, servitization should be pursued at the business strategic level and run by a separate business unit (Kinnunen & Turunen, 2012). Finally, servitization also considered an innovation strategy at operational level that enhances operational process efficiency and effectiveness (Van Halen el al., 2005).

However, the success of servitization depends on using proper adoption methods (Vendrell-Herrero et al., 2014). These adoption methods vary among industries (Lay, 2014). A project-based process differs from a product manufacturing process, as the project addresses specific goals and objectives based on a short life-cycle provision and long lifetime outcome (Galera-Zarco et al., 2014).

This study highlights the importance of conceptualizing the real estate development project around product and service as a vital element of marketing success. The case studies realized that customers are at the heart of a marketing orientation strategy and there is a clear interdependency between offering services and customer satisfaction. Guided by the study findings, the decision to incorporate services took place at the corporate strategic level. The servitization strategic-decision is mainly addressed as a central strategic decision that governs the general direction of the organisation and sets the general procedures, rules, and principals. It orientates the entire organization and project toward marketing and customers to create superior customer values. The overall organizational culture is re-developed around the service concept and the significant role of services as a source of organizational success. Thus, the market and customers are the starting point in project development. Nevertheless, the findings pointed to the importance of project operations management as an effective tool employed to maximise the potential of the project's success, which is eventually the platform for providing successful services. The case studies emphasise the project's schedule, cost, quality and scope as essential elements to maximise the potential of the project's success. Therefore, the project management approach should

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be introduced to steer and influence project managers to work using certain practices, to improve the likelihood of project success, by clearly defining the scope, objectives, and outcomes of a project-service system.

The findings indicates that the project nature of real estate development businesses implies that when offering service a firm needs to run effectively two key activities simultaneously to deliver its outcome successfully. These are customer relations and project management. Therefore, it is vital that real estate firms develop a balanced focus on service provision and efficient project management. According to the findings, an effective strategic alignment has a significant influence on the project's overall performance. Balancing service innovation and project operations is a focal point of offering services in realty projects. The uniqueness of service supports the project's differentiation strategy, and the added-value element supports customer satisfaction. Also, while servitization influences the practices of project operations, an effective project operations management supports the success of servitization.

5.2.3 Servitization Strategic Approach

Organizations offer different types of services integrated to their products aiming at shifting from selling abstract products to selling outcome and system solutions (Baines et al., 2009a). A successful service provision should be capable of adding more value as well as meet customers' needs (Ping & Jia, 2010). The service offering consists of three main elements. These are the product, the service, and the integration system (Tukker, 2004). These services could be added relating to organizations' products, customers' activities, or none of them (Mathieu, 2001a). Various categories of service have been described in literature, where product-oriented, use-oriented and result-oriented are the three common categories of a product-service system (Neely, 2008). These categories were developed based on different levels of integration between products and services, and in tandem with the incremental movement of servitization (Baines et al., 2009a). Each category contains different services and different system features (Tukker, 2004). Neely, (2008) identified twelve separate kinds of services and extended the three main categories above into five categories by adding the integration-oriented approach and the service-oriented approach. According to Frambach et al., (1997), these different services would be offered within three time-periods, which are before the sales process, during the sales process and after the sales process.

The findings of this study showed that the case studies adopted servitization and offered different types and range of services. These services were offered in three periods of the

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project life cycle: the project initial design and planning phase; the project execution phase; and post project delivery phase. At these different phases of the life cycle, the case study companies gradually offered basic services, advanced services and system solutions. These different types and range of services are used to develop the four categories of servitization in the real estate development industry, which are namely; project-oriented, product-oriented, customer-oriented and service-oriented (See table 4-7).

The project-oriented approach involves conceptualizing the project design to deliver general standard services, where additional basic services directly related to the project concept are provided. Here, the service concept was embedded early in the project's design. Each project was designed around satisfying general customers' needs within a specific market segment. These included the need of development modern cities within a reasonable price range; the need for more security and gated communities; the need to cater for people who enjoy a high social status and luxurious lifestyle; the need for an attractive business environment and fully served and equipped industrial cities. These services were offered to place the project in a particular perceptual position within the mind of the customers.

The product-oriented approach involves offering basic services related to product to enhance product sales. The product-oriented systems involve offering basic services. The services offered during project planning and initial design were designed as an attractive customer entry mode such as 3D animated tours on projects building villas. These basic services add value to customers and improve the minimum level required from the real estate development firm to operate its business

The customer-oriented approach involves offering advanced services related to customer activities offered to enhance customer satisfaction. These services offered during the execution phase were designed to keep the customer satisfied by producing more customized and tailored output. These services help building firms to be more competitive and support customer-purchasing decisions. These advanced services are considered as the base of order-winner criteria.

Finally, the service-oriented approach involves offering more advance services and system solutions. These services are designed to enable sustainable living and day-to-day running of the project facilities. It is offered to gain customer trust and influence their purchasing decision of what is a long-term expensive asset. These services offered after project delivery. These system solution services are designed to provide a safe, compliant, and clean living or working environment and were designed to gain customer trust and influence

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their purchasing decision of a long-term asset. The system solutions services make customers more confident with their purchasing decision develop unique competencies and shape the order-winning criteria.

5.2.4 The Factors Influencing the Adoption of Servitization Strategy

Traditionally, several internal and external factors must be considered when selecting a new business strategy (Johnson et al., 2013). Today, organizations are increasingly adopting a servitization strategy. Still, the question of how different external factors affect the adoption of a servitization strategy is not well researched (Turunen & Finne, 2014). Scholars argue that only organizational capabilities are considered for adopting different approaches of servitization (Oliva & Kallenberg, 2003; Baines et al., 2009a; Gebauer et al., 2012a). Those capabilities are related to the organization's ability to sense business opportunities, transforming organizations from product-oriented organizations into customer-oriented organizations (Gebauer et al., 2012a). Recently, Turunen & Finne, (2014) conducted a theoretical analysis to investigate the influence of environmental factors when adopting a servitization strategy. Conceptually, their study concluded that external environmental factors do not affect the adoption of a servitization strategy in different industries or countries and the adoption process is a contingency transformation.

The practices of the case studies were found to be in agreement with the above arguments, where the service decision took place on a case-by-case basis and the macro external factors of the business environment were not considered as significant when the decision of offering services was made. The project is only under pressure from dynamic customer needs to deliver more customer value. According to the case studies, the servitization journey started with the project design phase, as each project was developed to offer basic services integrated to the projects to address a need of a specific market segment. These services were seen to offer a competitive edge to the project. The case studies offered services based on entrepreneurial decisions, and the process of developing more advance services was orientated toward problem solving, where the development of service ideas took place at executive management level and the application of that idea came later by the project management team. These services were offered to add more value and to address customer needs.

5.2.6 Section summary

Service provision becomes an imperative and fundamental element in real estate projects. Offering services adds value for customers and supports a project's competitive advantage. External strategic factors were not mainly involved in the decision to offer services. Real

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estate development organizations need to offer different types and levels of services during the project life cycle to gain competitive advantage and influence the customer-purchasing decision. Offering basic services add value to customers and improve order qualifiers criteria. Advance services are the base of order winning criteria, these services satisfies customers. System solutions services support customer confidence and shape the order winning criteria. Still, linking servitization strategic decisions to project operations and balancing service provision and project management maximizes both services and project outcomes.

5.3 Servitization Strategic Formulation

Servitization consists of different approaches (Oliva & Kallenberg, 2003; Tukker, 2004), and different industries need to follow different routes (Rajala et al., 2013; Lay, 2014; Kim et al., 2015). A solid strategic design is required for providing services successfully (Ohvanainen & Hakala, 2014). This section discusses the strategic design process of servitization in the real estate development industry. Seven themes related to servitization strategic formulation process are presented as follow:

1- The motivations for providing services
2- The scope and extent of offering services
3- The entry mode of servitization strategy
4- The factors influencing the design of services
5- The design approach of services
6- The facilities arrangement for offering services
7- The prices decision of offering services

5.3.1 The Motivations for Providing Services

Servitization is becoming a worldwide trend (Turunen & Finne, 2014). Still, organizations are disconcerted about the strategic goals and objectives of servitization (Raddats & Burton, 2011). The literature suggests several factors and drivers motivating organizations to offer both product and service. It indicates that servitization strategy is being forced by the business environment, as this environment yields different threats and prospects (Vandermerwe & Rada, 1988), whereby providing services becomes a necessary move for all firms to create competitive advantage (Kujala et al., 2013). Other scholars consider intrinsic rewards as the main drivers for adopting a servitization strategy (Nordin & Kowalkowski, 2010). Businesses are inspired to adopt a servitization strategy based on marketing, strategic, and financial motivations (Mathieu, 2001a). However, other scholars maintain that both the external environment factors and the expected advantages when offering services drive the adoption of a servitization strategy (Tether & Bascavusoglu-

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Moreau, 2012a). Nevertheless, the utilization of the intrinsic rewards of providing services remains the outstanding factor encouraging organizations to added services to their product (Lay, 2014). Tether & Bascavusoglu-Moreau, (2012a) conducted further analysis to study the motivation of servitization using a bespoke survey, collecting data from 256 companies. They found that organizations are offering services not for one specific reason, but for a combination of strategic, marketing, and financial reasons.

The findings of this study indicate that service provision is mainly driven by customers and aimed at outperforming competitors by attracting customers, meeting customers' needs and gaining customer trust. A mix of external and internal factors is motivating service provision in real estate development projects. Customers' needs are dramatically changing, they have become more conscious, exacting and more ambulant. Offering services is imperative to meet customer needs. Service offers more value to the customer. It provides customers with more flexibility to make changes during a projects' execution phase. This flexibility improves customer satisfaction. As well as, offering sustainable service builds customer trust, inspires customer confidence and assures customers of reliable long-term support. On the other hand, the case studies offered services for a combination of internal factors are the basic ideas behind the adoption of a servitization strategy. These motivations were categorized based on the work of Mathieu, (2001a) and Lay, (2014) into four main categories: marketing, strategic, innovation, and financial incentives (Figure 4-8).

The case studies offered services for a combination of interconnected reasons, one of which for example, was to attract more customers and stimulate project sales. This is a differentiating element to gain a competitive advantage by offering more value rather than reducing costs. Besides, service is intangible and hard to imitate. These objectives are described as the strategic rationale. Services were also offered to promote projects in the marketplace and enhance the customer perception of these projects. Adding service enriches customer value whilst the service itself is perceived as a personal customization. Additionally, service provision creates a closer relationship between organizations and customers. These objectives are described as marketing rationale. As well as, service provision increases the project sales. This objective is described as the financial rationale. Finally, the innovation rationale involves the ability to develop new ideas based on services provision, the ability to learn from customers and from the company's previous mistakes. Nevertheless, the ease and simplicity of developing and offering services played a significant role in motivating companies to excel in the market place by providing services. The case studies were motivated to attract more customers using a simple innovation method to outperform competitors and increase market share and unit sales. This was based on service innovation rather than product innovation. This is reasonable when linked to the

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available construction technology in developing countries, as service innovation is more flexible, requiring less sophisticated technology, less research and development activities as well as less complex actions than product innovation. Besides, as service is labour intensive and it does not require a significant capital investment. The findings showed that the motivation factors for service provision are inter-connected and that there is a clear overlapping of them.

5.3.2 The Scope and Extent of Offering Services

The decision to offer services is complex and associated with a high degree of uncertainty (Benedettini et al., 2015a). Businesses could offer services either related or unrelated to the company´s current business, customers and market (Galbraith, 2002; Fischer et al., 2010). A strategic challenge emerges from the level of service provision strategy and the degree of customer-oriented approach to be applied (Baines et al., 2009a). Understanding the extent to which a service provision strategy will mature is challenging (Baines et al., 2010). Debate among scholars has emerged regarding the extent of services provision (Baines et al., 2010). A servitization strategy has different forms and dimensions (Oliva & Kallenberg, 2003; Tukker, 2004). Each dimension includes different activities and elements of product and service systems (Sakao & Lindahl, 2009). Each dimension has its own outcome and impact on organizational performance and each dimension has its own set of difficulties and requirements (Martinez et al., 2010). Scholars argue that it is more difficult for firms to benefit from servitization by adding services than might be expected (Gebauer et al., 2005). Focusing on high value-added service could lead to bankruptcy (Neely, 2008). Other scholars argue the positive impact of servitization happens when providing one high value-added service to customers (Visnjic et al., 2012; Min et al., 2015). Generally, previous studies specify different results regarding the impact of various extents of servitization on organizational performance (Benedettini et al., 2015a). There is also limited practical guidance related to the scope and extent of offering services (Baines et al., 2010).

The study's findings indicate that offering service becomes an important pillar of the real estate development industry. The nature of the building projects influenced the extent of service provision as the main value of a project becomes within the whole project life cycle. Moreover, the outcome of real estate projects are long-life units and the purchasing decision requires heavy investment from customers. Consequently, it is imperative for customers to have a high level of comfort with their decision. This requires a long-term commitment and relationship between customer and supplier, whereby businesses have to deal with the long term challenges of the real estate project by offering sustainable services.

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The findings argue that in realty projects, servitization is an inter-dependant and interconnected process covering the whole project life cycle. Providing life-cycle services is critical to gain full customer satisfaction. Realty firms have to offer basics, advance and system solutions services during the project's life cycle. Each dimension has its own outcome and impact on project's performance. However, these dimensions shape the benefit of servitization. Services should be continuously enhanced with more advanced ones. These services should be related to the project's nature, customer needs, and fit with the market segment. In terms of service scope, the findings recommend a limited scope of services to reduce task variety and decrease project uncertainty. The study points to different features that guide the service provision process. Addressing customer needs through careful planning and incremental development are imperative components of a servitization strategy (Figure 4-14).

5.3.3 The Entry Mode of Servitization Strategy

Identifying the entry mode of offering services is highly significant (Lerch & Gotsch, 2014a). The methods of introducing services into the market creates a strategic debate among researchers (Gebauer et al., 2008a; 2008b) about whether to offer services related to products or offer services related to customers (Mathieu, 2001a). The trade-off between these alternative models is between reducing the risk of offering services and gaining competitive advantage. Offering a basic service bounded around organizational capabilities and related to product functionality reduces service expansion risk and supports sales of the product. Offering services related to customer activities are more sophisticated and riskier, but more strategically rewarding (Baines et al., 2010). It is more notable, perceptible, and appreciable by customers and more strategically fruitful (Martinez et al., 2010). It is the best way to add more value for customers (Antioco et al., 2008). Other scholars argue that different entry modes into servitization are acceptable as long as the offered services at this stage are simple, standard, add more value to customers and fit with a large segment of the organization's customers (Boyt & Harvey, 1997).

The study found that the companies under investigation engaged with servitization strategy by designing their projects around general customer needs that were based on offering simple services related to customer activities. The case studies offered project- oriented services. The service element is introduced by conceptualizing the project around offering general and basic services related to customer's needs. These services place the project in a particular perceptual position within the mind of the customers. These services are simple, standard, add value to customers, and fit with a large segment of the organization's customers. The study found that offering services directed toward customer needs and

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related to project outcome captures customer attention. Interestingly, the study found that there were no differences in modes of market entry among the case studies. They manage different types of building projects, target different types of market segments and offer different types of services. This could be attributed to the ease and low cost of services development and to the resources and technology available in the operational environment. The study found that designing building projects toward offering basic and offering standard services related to customer needs attracts customer and is a key criteria making the project more valuable and qualified for customers as a source of purchase.

5.3.4 The Factors Influencing the Design of Service

Businesses are shifting from offering only products to offering system solutions by adding services (Oliva & Kallenberg, 2003). Still, service is vague, wide, complicated and hard to characterize (Slack, 2005). Developing a successful design of a product and services system is a complex and challenging task (Sakao et al., 2009, and Kujala et al., 2011). A debate among scholars emerged regarding factors influencing the design of an effective service provision. The widespread literature on servitization strategy argues that services should fit with the organization's core competences (Oliva & Kallenberg, 2003). Other scholars focused on the customer and customers' needs as the most important factors affecting the design of services to be offered (Boyt & Harvey, 1997). Other scholars considered that both external environmental factors and internal organizational factors affect the design and the success of a servitization strategy (Windahl & Lakemond, 2006; Pawar et al., 2009; Lertsakthanakun et al., 2012). Nevertheless, few researchers specifically study the factors influencing the design of a successful service provision.

This study acknowledges the challenge of designing an effective service provision. The findings emphasise the parallel development of project and services to mitigate this challenge. The findings of this study showed both external and internal factors must be considered when designing an effective services package. The services were designed with the needs of customers in mind. These results support the notion of a servitization strategy as a market driven approach. Still, the project and services must be designed simultaneously. Services should be incorporated into the project scope and considered in the earlier stages of project design. Companies have to consider several factors when designing effective services to create value for customers. Some of these factors are beyond the organization's control, where the offered services should be culturally relevant, match customer needs, fit with the nature of the market and business regulations. On the other hand, other factors are under organizational control, where the services design should be

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competitive, carried out at an economical cost within the organization's current or potential capabilities.

Influenced by the work of Lertsakthanakun et al., (2012), these factors influencing the successful services design were grouped into external and internal factors (Table 4-14). Within that context, customers are the most influential external factor, as the value will be evaluated by customers, meaning that service should be both acceptable and appreciated by customers. Cost structure and organizational capabilities are the most important internal factors. Offering services extends a project's scope and involves a significant number of customised modifications and changes, after which the project cost is increased. Respondents also considered monitoring rivals' actions and the market nature such as economy, culture, technology and legal environment as important factors affecting the services offering design. The economic situation and cultural issues are one of the sources of service innovations. The level of advanced technology available has a significant effect on the type of services offered, whilst another determinant is law or regulations. This attention to the external macro factors when designing services is unlike previous studies. It could be justified by the difference and variation of the study's respondents based on the economic situation, the industry type, the nature of the operational process and the characteristics of the final product.

5.3.5 The Design Approach of Services

Businesses incrementally incorporate complex services to become a solution provider (Artto et al., 2008). An efficient development of service is a critical success factor. The failure to design and introduce an attractive offer leads to loss of organizational competitive advantage and market failure (Bamford & Forrester, 2010). A service design approach therefore, is required to deliver better value to the customer (Sakao et al., 2009), for which several approaches, tools, and processes have to be considered to deliver a successful service (Clayton et al., 2012). Mainly, the product service system consists of three main elements. These are the product itself, the service, and the systems. These three elements should jointly have the ability to fulfil customers' needs (Goedkoop et al., 1996), and profitably contribute to the business (Pawar et al., 2009). Conventional product development approaches or service development methods are not appropriate for designing an integrated system of product and service (Clayton et al., 2012). The question is how to design a service that produces a competitive integrated system (Baines et al., 2009a). Despite the substantial growth of servitization research, few empirical researchers studied the methods of designing a combined successful service and product system (Pawar et al., 2009; Clayton et al., 2012). Scholars argue that service is difficult to be systemized, and

the development of service "just happens" (Gebauer et al., 2008b; Biege et al., 2012). However, Kindström & Kowalkowski, (2014) argue that in order for organizations to offer successfully a product and service system, a systematic approach has to be adopted. This systematic approach of services development improves organizational performance (Shekar, 2007).

Evidence from the case studies indicates that the services development process evolved gradually and took place on a case-by-case basis. However, the respondents emphasised the significance of the pre-planning approach to reduce uncertainty, mitigate risk when designing successful services. The data analysis facilitated the development of a framework that describes the potential design approach of a product and services system in building projects (Table 4-8). The framework acknowledges the incremental growth of the services component into the project life cycle, which is in turn linked to the incremental growth of the customer centric approach based on the servitization strategy. The works of (Artto et al., 2008; Nordin & Kowalkowski, 2010; Biege et al., 2012; Clayton et al., 2012; Visnjic et al., 2013) formed the basis of the developed framework.

The developed framework by this study demonstrates that within different phases of a project's life cycle, different sources of services development and different types of services could be systematically grown and offered to customers. For instance, at the project conceptualization phase, the project and services are developed to address general customers' needs based on a pioneering idea. Here, the focus is more orientated toward the project's long-term outcome as the synergy between project and service is the central element at this stage. The internal expert's opinion and decision makers' preferences are used as the source for developing the services ideas based on their experiences and knowledge of the surrounding environment and market needs. In the project's initial design phase, services are also developed based on in-house ideas. Usually, this approach happens in the earlier stages of project development. When the project is designed, the basic services are added on by identifying customer needs and finding the best solutions to these needs. Here, the services are integrated based on a product-oriented design aiming to attract more customers and sell more units.

In the executions stage, where more advanced services are provided, different sources for developing the services were used. At this stage, the case studies used the imitation strategy by looking at similar projects to offer services that are more advanced. It was used to look at well-known projects, and to acquire additional knowledge in terms of how they designed and implemented projects and what unique services were offered. In addition, customers' experiences and feedback were considered, by which the co-design of the

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service is the output of customer ideas based on customer involvement. Accordingly, the customers guided the companies to develop their service systems. In this stage, the rational approach was used to enhance customer satisfaction. Finally, when the project was delivered, the ideas of offering services that are more advanced were introduced to companies by domestic and international professional service providers. Here, the design approach is more oriented towards service innovation, as services are the dominant element of the design outcome, and the project becomes the platform to deliver these services. Yet, these services should be designed to fit with the project's nature, and be systematically incorporated into the project's scope. The ideas behind development of these services were driven by different sources, designed based on different techniques and joined based on different integration systems.

5.3.6 The Facilities Arrangement for Offering Service

Successful service provision requires much attention to services' requirements and implications (Baines et al., 2012). Facility arrangement is one of these important decisions that support the success of a servitization strategy (Baines et al., 2009b; Baines & Lightfoot, 2011). The key consideration in servitization is to find an appropriate fit between service strategy and different organizational configuration (Gebauer et al., 2010c). This configuration should exploit product and services systems synergy (Raddats & Burton, 2011). The academic discussions in mainstream literature suggested different organizational arrangements to produce and deliver an integrated product and service system. These arrangements involved three main categories, in-house manufacturing, outsourcing, and strategic networking (Gebauer, 2008; Kowalkowski et al., 2011a; Gebauer et al., 2012a; Turunen & Neely, 2012). Still, there is no "right" design to produce the services (Kowalkowski et al., 2011b). Several external and internal factors should be taken into account when designing an efficient configuration (Baines et al., 2012). The critical points for designing an optimum organizational arrangement for service provision are sharing knowledge and information, coordinating activities and enhancing communication (Ohvanainen & Hakala, 2014). Scholars recognise the need of multidimensional configuration to support the transition from product orientation to service orientation (Dunn & Thomas, 1994; Raddats & Burton, 2011; Matthyssens & Vandenbempt, 2010; Gebauer et al., 2010c).

Parallels were noticed between the literature and the respondents' perspectives. The findings support the use of hybrid facilities designed for service provision in real estate development projects. This hybrid approach combines aspects of both internal and external arrangements. Realty firms are not able to produce internally all services required to deliver

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solution systems. The case studies used different external and internal arrangements to offer services. These arrangements maintain both operational efficiency and flexibility. The system was designed to meet service provisions requirements such as technical expertise and services characteristics such as customer participation. The findings indicated that basic services such as customer relationship management, mass customization design, consulting and advising services were offered by hiring skilled individuals based at the company's internal operations department. Other services such as financial services, individual customization design, equipment supply, and installation require people with more specific skills like designers with specialist expertise and tools. These servicers were outsourced to external providers. Where more advanced services, particularly those offered after the "project delivery" phase were provided by a full-scale separate service unit and through different strategic alliances and collaborations. These included things like property management services.

According to the case studies, this hybrid design supports and facilitates different types and levels of service to be provided. Different pricing policies are used as well. Influenced by the work of (Matthyssens & Vandenbempt, 2010; Kowalkowski et al., 2011b), the study developed a hybrid approach for organizing the services based on internal and external arrangements (Figure 4-5). This hybrid approach lines up with the incremental movement of the servitization strategy. This approach allows building firms to consider different factors. These include matching customer needs, the types of services offered, the scale and the scope of services and finally the cost of providing those services. Moreover, this hybrid approach helps building firms to develop the required competences to be able to offer different types of advanced and professional services.

5.3.7 The Price Decision of Offering Service

The pricing policy is one of the critical success factors of servitization (Newnes et al., 2014). In offering service integrated with product, the pricing strategy plays a significant role in reducing organizational risks by designing and offering viable services, and maintaining a sufficient income (Ulaga & Reinartz, 2011). Usually, different external and internal factors affect the pricing decision, where a pricing policy could be developed based on one or more of these internal or external factors (Avlonitis & Indounas, 2005). According to Indounas, (2009) a comprehensive pricing approach considering multiple internal and external factors, is more competitive. One of servitization's challenges when adding services to the product is that customers consider these services should be part of the product and are unwilling to pay for these services (Ulaga & Reinartz, 2011; Gebauer et al., 2012a). Therefore, it is vital for organizations to develop a reliable pricing policy (Artto et al., 2008). Here, the main

discussion point of a servitization pricing policy is to reach a win-win situation, where customers are willing to pay for added services and this pricing policy is able to reduce the organizational cost and risk (Ulaga & Reinartz, 2011).

The findings highlight different approaches to pricing policy used by the case studies. Combining both external and internal factors, the use of different policies were centred around two factors; the organizational arrangements for offering services and the type of service offered. The case studies produced basic service internally and offered these services free of charge. This "free of charge" policy is an important scheme for offering basic services considered as add-ons services. These services were considered as a basic part of the company's commitment and were offered to attract customers. Secondly, the case studies provided advanced services internally through separate business units or services departments based on two pricing schemes. The first was, cost plus and the second was market competitive price for advanced and sophisticated services offered via outsourcing. Other advanced services were offered based on external provider's capabilities and based on competitive market prices. The cost plus pricing scheme was used to support customer customization activities and deliver customer satisfaction. While using a market competitive pricing scheme is more logical when services are provided by third party and those services provided are more advanced and more costly. Accordingly, the study developed a decision matrix to support the pricing decision (Table 4-9).

5.3.8 Section summary

Service provision becomes a key driver of organizational competitive advantage in real estate development. Both external environmental factors and internal organizational factors were significant in shaping the design of service provision. Realty firms offer different types of services at various stages of the project life cycle to attract customers, satisfying customers and influence their purchasing decisions, where aligning services strategy with project operations is crucial., A deliberate strategic plan and systematic development are imperative to form an appropriate service strategy in building projects. The hybrid organizational arrangement and multi-dimensional pricing decisions are more appropriate when offering different types of services.

5.4 Strategy Implementation

The traditional organizational design does not fit with a strategy of service provision. The successful accomplishment of a servitization strategy depends on the organization's ability to develop an optimum structure, culture, management practice and conversion process that fits with the requirements of service provision (Martinez et al., 2010;Kindström &

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Kowalkowski 2014). Additionally, servitization strategy requires a specific set of capabilities to develop, produce, and deliver services (Hanski et al., 2012; Raddats et al., 2014; Raddats et al., 2015). This section discusses the strategic implementation process of servitization in the real estate development industry. Seven themes related to servitization strategic implementation process are presented as follow:

1. The capabilities for adopting servitization strategy
2. The organizational structure for offering services
3. The organizational culture for service provision
4. The operational process for providing services
5. The quality control system of a product-service system
6. The challenges of adopting a servitization strategy
7. Managing servitization challenge

5.4.1 The Capabilities for Adopting Servitization Strategy

Organizational internal capabilities are usually insufficient to implement a servitization strategy (Paiola et al., 2013). Organizations have to develop a new set of capabilities to ensure success of a servitization strategy (Gebauer et al., 2012a; Baines & Lightfoot, 2013b). Still, these capabilities needed to provide services are not always well understood (Neely et al., 2014). Assessing the required capabilities of offering different services directs the business decision towards the extent and type of services that can be offered effectively (Oliva & Kallenberg, 2003). Recently, Raddats et al., (2015) implied that implementing a servitization strategy consists of two processes: the organizational transformation from product orientation to service orientation and the sustainable operations of service provisions and development. These two processes require different sets of capabilities (Gebauer et al., 2012a; Baines & Lightfoot, 2013b). Developing both transformation and service operation capabilities are imperative if services are to be provided successfully (Watanabe & Shimomura, 2013). Other scholars argue that transformation capabilities are the most important when adopting a servitization strategy (Windahl et al., 2004; Brady et al., 2005b), as the incremental process of servitization facilitates the progressive development of other capabilities over time (Brady et al., 2005b). Nevertheless, other scholars argue that only entrepreneurial capability is needed to shift from a product focussed business model to a service focussed business model (Manzini & Vezzoli, 2003).

The findings indicate that organizational capabilities play a significant role in adopting a servitization strategy in the real estate development sector. The nature of the project operations process increases the importance of these capabilities, as the construction project is more complex and limited in terms of time and scope. The project's short life

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cycle hinders the gradual development of service capabilities increasing the probability of a strategic failure. In addition, the project nature of real estate development implies that when providing services a firm needs to run two key activities simultaneously in order to deliver its outcome successfully. Those are customer relations and project management. Therefore, it is vital that businesses develop capabilities supporting service provision and efficient project management.

The respondents emphasised the planning and design skills, risk and cost management skills as the most important capabilities needed to reduce the organizational expansion risk. These capabilities support the organization's long term planning in a services strategy and making meaningful decisions of services' expansion to meet the largest customer segment. In addition, the findings point to co-ordination capability as vital in a project based business to handle customer relationships and organize different activities among customers and employees, processes, functions, departments and the project site. This capability is needed to impose more control over the project process and reduce cost. Furthermore, management must be able to anticipate customer needs to facilitate the organization's activities toward sensing their requirements to standardizing the scope of services and reducing the cost of change.

Influenced by the work of (Baines & Lightfoot, 2013b) the study's findings categorized the skills requirements for offering services in building projects based on reactive and proactive capabilities (Table 4-16). Proactive capabilities need to be developed in advance, as it is necessary to the success of service provision to reduce the associated risks of following such a strategy. These capabilities are vital to identify project strengths and weaknesses, to understand customers and to outperform competitors. These capabilities reduce uncertainty and allow the project manager to adapt to unexpected events successfully and realize the opportunities from these events. The reactive capabilities are needed to cope with servitization implications related to organizational change, service operations and to respond to customer desires. These capabilities are gained incrementally and based on an organizational learning and development process.

5.4.2 The Organizational Structure for Offering Services

Servitization strategy is a plan of action aiming to transfer organizations from being product orientated to becoming service orientated (Oliva & Kallenberg, 2003). This requires restructuring of the organization toward customers and customer relationships (Gebauer & Kowalkowski, 2012). In order to support a servitization strategy, the organizational structure must be improved to fit with the provision of services and to become customer

centric (Neu & Brown, 2005). Usually, the organizational structure within a product firm is a functional structure designed around production effectiveness and efficiency. Whereas, the organizational structure for a service firm is geared to customers (Turunen & Neely, 2012). Although of the few studies that address the design of the organizational structure for combined product and services provision, debate among scholars tends toward the creation of an optimal organization structure supporting servitization strategy. Mont, (2002) modified the functional organization structure by adding specialist functions to support provision of services. Salonen, (2011) suggested that a project based structure design must be a flexible and appropriate structure to deliver customized services to a particular customer segment in particular project divisions. Built on a longitudinal quasi-experimental study, Turunen & Neely, (2012) identified the characteristics of organisational design required for adopting servitization. Their study investigated the effect of task uncertainty, task interdependence and organization size. Service provision decreases task predictability and increases task interdependence. Thus, organizations need an organic structure to meet the increase of task uncertainty and task interdependence. However, providing services increases organizational size and reduces efficiency of the control mechanisms. Therefore, organizations need a mechanistic structure to deal with the control dilemma. Their study recognised that there is no permanent organisational design. They developed a theoretical model for the necessary structural changes. In the first stage of offering services, organizations need an organic structure with a high level of flexibility to meet the exploratory nature of the new services. Next, organizations need a mechanistic structure to meet the challenge of managerial control. However, moving between two distinct structures is not an easy process as it raises organizational inconsistency and tension. They suggested a hybrid structure, which combined and balanced the elements from the organic and the mechanistic structure (Turunen & Neely, 2012).

The findings support the argument of (Turunen & Neely, 2012), where the rigid hierarchical organisational structure adversely affects the servitization strategy, and the company's need to change their structure to fit with service provision. However, in construction projects there is a significant need to balance the focus between service orientation and project operations. According to the findings, organizational structure should be flexible enough to support both customer orientation and project operations, which directs the whole organization toward customer interactions, and increases coordination and functions' collaborations. The findings suggest a hybrid organizational structure is needed to manage project and service provision effectively. This hybrid structure is ideal, by which operational processes are well organized based on the robust hierarchical controls of a mechanistic structure, yet at the same time, management has the flexibility of an organic structure to

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respond to the close customer relationships, high customer interaction and high customer involvement. This requires more flexibility of fast decision-making and problem solving approach. Consequently, the characteristics of this type of organization structure should have the features of an organic structure with a flat design and more decentralized decision-making. This organic flat structure evolves with the organization's movement from standardized products to customized ones. This movement requires fewer management tiers and more employee empowerment. In addition, this requires multiple dimensions of a control system with narrower spans of control. This narrow control system was attributed to the importance of performance assessment based on service provision and customer contact, as the organization needs to monitor this performance within several areas based on multiple criteria. Still, project constraints, project ambiguity and high task interdependence require more mechanistic structures and robust hierarchical controls. The study identified the main characteristics of the recommended structure. This organization structure has to balance the focus between innovation and productivity and enable independence between service provision and project management. It has to facilitate an effective integration system that is needed to change the business direction to become a solution provider and it needs to facilitate communication and coordination between different departments to support successful services provision and efficient project management.

5.4.3 The Organizational Culture for Service Provision

Organizational culture is a significant component of a servitization strategy (Dubruc et al., 2014). It is a determining factor forming organizational change (Brax, 2005). The product-oriented culture is centred on productivity and efficiency (Kinnunen & Turunen, 2012). A service-oriented culture emphasises on developing long-term customer relationships by developing integrated activities and flexible procedures that support customers (Nuutinen & Lappalainen, 2012). The characteristics of service reshape organizational culture (Webster & White, 2010). Although researchers agreed on the positive roles of service orientation culture on the success of servitization strategy, these roles are not without debate. Service orientation and product orientation are two distinct types of organizational cultures and both of them have an influence on organizational performance (Kinnunen & Turunen, 2012). Product orientation creates competitive advantage by focusing on productivity, performance and quality (Visnjic & Looy, 2013a). A service-orientated culture creates competitive advantage and leads to better customer satisfaction by stimulating and developing organizations' innovation capabilities (Baines et al., 2009a). However, the requirements of services such as flexibility and heterogeneity contradict the traditional characteristics of

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product operation processes such as standardization, productivity and effectiveness (Mathieu, 2001b).

Scholars argue that to implement a servitization strategy successfully a dominant service orientation and customer centric approach should be developed (Brax, 2005; Nuutinen & Lappalainen, 2012). This dominant orientation facilitates customer understanding which is imperative for servitization success (Ohvanainen & Hakala, 2014). However, other scholars argue that although a customer centric approach and service orientation need support from the whole organization, organizations do not need to change completely toward services focused practices. Adopting servitization based on a separate services business is more appropriate (Kinnunen & Turunen, 2012). This separate service unit will decrease the clash between product and service cultures (Gebauer et al., 2007; Gebauer et al., 2010b).

The findings confirmed that adopting servitization strategy in real estate development businesses requires a new organizational culture that fits with service provision. The services culture coupled with focused customer orientation are vital components for a better performance. The real estate development firms needs to relinquish the focus on cost reduction and focus more in customers. Yet, the findings indicated that the relationship between customer orientation and project management is indispensible, as customers will not accept low quality and high cost products. Project orientation is also vital to develop and build a superior product and to deliver a profitable project by focusing on operational effectiveness, time, and quality. The study found that more balance is required between a service culture and project management culture. The service orientation directs the project and the project's development to customers' needs and requirements. The study found that it is more relevant to take advantage of both a customer-centric and efficient management of project operations. The findings suggested that companies have to balance the service orientation culture that encompasses the values of process innovation, customer importance, problem solving and flexibility, with the project operations management that involves project productivity and efficiency, and is based on time, cost and quality factors. Businesses should combine services and product into one operational process. Adopting a servitization strategy requires support from the whole organization. Still, project orientation is also important logic. Thus, it is significantly important to align the core business interests with customer satisfaction in project-based organizations.

5.4.4 The Operational Process for Providing Services

This aspect is involved with the process design used in the operation system, which is expected to deliver efficient and effective product and services systems (Smith et al.,

2014). Thus, it is imperative to consider the similarities and differences between products and services when designing an operational system (Voss & Hsuan, 2009). A product operation process is orientated toward standardization and automation to achieve standard quality, enhance production efficiency and reduce production costs and errors (Slack et al., 2013). The service operation system produces intangible and perishable outputs. It deals with a higher level of customer contact where production and consumption processes occur simultaneously (Krajewski et al., 2013). The servitization strategy shifts the process's focus from cost, time, and quality, to system accessibility, dependability, performance and functionality (Lightfoot et al., 2011). This shift from a standardized operation process to a customized operation process is the main challenge when offering services (Smith et al., 2014). A service created for each customer is unique, divergent and requires a flexible flow (Brown et al., 2013). Moreover, customers are more likely to engage with the process, which requires more customer contact points (Slack et al., 2013). Debate among scholars emerged from the dominant factor of operational process design. For instance, Ohvanainen & Hakala, (2014) argue that the success of servitization depends on understanding customers, as customers are the main criteria in the design of an effective operation process. Quinn et al., (2013) argued that the major successes of business come from services integrated into the product. This means that the operational process should be designed around the service element. Collier & Meyer, (1998), argue that the operational process should be designed around the characteristics of the dominant element of the system whether it is the product or the services. Smith et al., (2014) linked the operations process design to the value transition from offering products to offering system solutions. However, Baines et al., (2009c) argue that the output of a product-service system is the combined value of tangible assets and intangible services.

According to the findings of this study, service provision in real estate development projects requires a modification of the operation process, which could lead to an operational clash. Customers' presence and variability appear to disrupt the core process of project operations, which increases project cost and reduces the products attention to detail. The findings support the argument that focusing on the value of the product and the services system is more efficient for delivering superior customer value where, both service provision and project operations should be considered for designing an effective and successful operational process of providing project -service systems. The findings show that real estate organizations need to develop an operational process that combines both product and service characteristics. Both tangible and intangible features must be considered. Measurements such as product quality, conformance and product specification criteria are essential to control project time, scope, cost, enhance resource utilization and minimise

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waste. Still, customer relationship management is vital to enhance customer satisfaction and ensure best performance delivery.

The case studies used a combination of operational practices that support service provision and project operations management. The service operational process has a high customer involvement with customized tasks. The service process is labour intensive and requires a high level of interpersonal skills. The presence of customers also requires attention to workforce appearance and facility design. On the other hand, project operations management deals with large scale and complex output of daily tasks, and this requires a high level of control over the project's tasks. The findings suggest a balanced design between product and services operational process systems. The case study companies restricted customer contact points to a specific department, and worked to reduce the system's variability by balancing standardization and customization of product components. The proposed operating system enjoys both standardization and flexibility. The study suggested different features of project and services operation systems. According to these features, the system should be flexible, rational and orientated to customers. From this, real estate organizations should be able to understand their customers' expectations and strive to exceed these expectations through effective project operations.

This study developed a framework to respond quickly to wide variations and dynamic customers' needs in the building sector. An approach of implementing mass customization was compiled to enable various combinations. These were based on modular designs where the final service could be assembled efficiently from a set of standardized modules in response to customer needs. This modularization of offered services yields many advantages. It will increase system functionality, promote reliability and flexibility, and improve efficiency.

5.4.5 The Quality Control System of a Product-Service System

Although the importance of offering services has been extensively discussed in literature, curiously, there is still a lack of attention to the dimensions of quality control systems of services integrated to products in the servitization context (Mert et al., 2014). Quality management is compulsory and the quality aspect is even more important in service operations (Brown et al., 2013). The service quality system is vital to address several gaps between customer expectations and services performance. This could lead to customer dissatisfaction (Parasuraman et al., 1988). The quality dimensions used to assess products are different from the quality dimensions used to assess services (Baines et al., 2009b). The "product quality assessment" system usually uses dimensions such as the expected

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performance, product durability, reliability, conformance, serviceability, aesthetics, and perceived quality (Garvin, 1987). These dimensions focus on efficient production operations processes by producing standard products with a low level of defective units and an efficient utilization of resources (Baines et al., 2009b). The quality of service is measured based on service reliability, tangibility, assurance, responsiveness, and empathy (Parasuraman et al., 1988). The service quality control system is more subjective and tends to be based on performance evaluation. This control system focuses on customers and customers' satisfaction (Baines et al., 2009b). Servitization integrates both product and service into a system. This means that there is an added challenge to develop an adequate product and service control system (Meier et al., 2013; Mert et al., 2014).

In the context of real estate development, the study designates the importance of developing a quality control system for offering services integrated to the project. The findings show the need to develop a quality control system that combines both product and service characteristics; where both the tangible and intangible features have to be considered. Measurements such as product quality conformance and product specification criteria are essential to control project time, scope and cost; enhance resource utilization; and minimise waste. Still, customer relationship management is vital to enhance customer satisfaction and ensure best performance delivery. According to the findings, servitization quality is described using three interrelated aspects; the product, the service and the system. Those aspects represent the required quality to satisfy customers' needs and to meet their expectations. The first quality aspect is related to the product, which mainly concerns the product design, engineering and operations process. It is also concerned with the levels of compliance with pre-determined specifications and standards. These standards and specifications should lead to high product quality. The second aspect is related to service quality, which mainly concerns managing customer relationships, understanding customers' needs, meeting customers' expectations and improving customer experience. The third aspect related to the integration system, it is mainly concerned improving the synergy between product and services and adding more value to customers. The system considers the features of both product and service and the inter-dependent relationship between them. This system should improve the performance of both product and service.

The study suggested different features of project and services quality control systems (Table 4-26). According to these features, the quality control system should be flexible, rational and orientated toward customers. From this, realty projects should be able to understand their customers' expectations and strive to exceed these expectations through effective project management.

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5.4.6 The Challenges of Adopting a Servitization Strategy

The adoption of a servitization strategy imposes different difficulties (Javan & Touri, 2012). Baines et al., (2009a) summarized these difficulties and put them into three main categories. These categories are the service strategy; the design of the service; and organizational changes. These challenges mainly emerge from the integration between two divergent processes, the product operations process and the service operations process (Gebauer et al., 2004). Scholars consider that changing organizational culture from a product-orientation to a customer-orientated culture is the main challenge when implementing a servitization strategy (Neely et al., 2011a; Ohvanainen & Hakala, 2014). The challenge of designing an effective service system emerges from the nature of services (Biege et al., 2012), the insufficient experience of developing an effective product service system (Ohvanainen & Hakala, 2014) and the difficulty of understanding the extent to which the service strategy will mature (Baines et al., 2010). Finally, the organizational strategic challenge emerges from the multi-dimensional approach of a servitization strategy (Oliva & Kallenberg, 2003), and the different requirements of each dimension (Martinez et al., 2010).

The study affirmed that the adoption of a servitization strategy in building projects is challenging, and imposes its own strategic barriers. The findings highlighted different challenges that occurred when offering services (Table 4-15). Unlike servitization literature, the study found that managing the service provision is the main challenge of servitization in real estate development projects. Real estate development firms have to run two key activities simultaneously to deliver a successful outcome. Those are customer relations and project management. Projects have a relatively short pre-determined life span with a specified scope of work, clear objectives and specific starting and ending points. Adding the service element into a project will fundamentally change aspects of the project such as the delivery time, the project cost, and quality. This contradicts the project objectives and the long standing practices of project management. Therefore, offering services requires more managerial attention and a more effective management system. Real estate development firms have to ensure the right balance between product and services management. They have to plan and design the optimum level of services provision that create more value for customers, reduce divergence of the operational process, meet the variety of customer needs and reduce organizational risk. In addition, the impact of services on the operations process and the lack of coordination among employees, activities, functions, departments and project site can create problems. The findings point to the need to manage service provision effectively. This is justified by the divergent nature of project operations, which

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are designed to achieve specific objectives based on high task interdependence, with high uncertainty and a limited work scope. On the other hand, the nature of service makes it hard to be definitive and to standardize, which increases project uncertainty and broadens the project scope. Therefore, managing service provision in construction projects is more challenging.

The findings also showed that customer presence is another significant challenge when offering services in building projects. Customer presence requires an effective service management that is flexible and responsive to customer needs, places more controls over project cost, has more collaboration activities, more capabilities and a different operational process. This customer presence brings new challenges and requires different organizational capabilities and competencies. Therefore, managing close customer relationships with high customer involvement is one of the main challenges of servitization. Furthermore, the findings indicate that the project cost presents another challenge when offering services. This can be justified by the cost of changes, as the project is moving forward. The cost of change becomes high and significantly affects the product's final price. This challenge is linked to competitors' activities in terms of competitors' product quality or product cost, which generates another challenge for offering services in realty projects.

5.4.7 Managing Servitization Challenge

A servitization reforms an organization around a deep understanding of customers, which requires significant changes of organizational practices and attitudes toward the service elements as these become the main source of competitive advantage (Nuutinen & Lappalainen, 2012). A service-oriented organization requires developing the integration of strategic choice, organizational arrangement and the activities associated with service provision into an efficient, homogeneous, and harmonious system (Bowen et al., 1991). This change has to occur across the organization such as in management practices, innovation practices and customer relations (Martinez et al., 2010). Typically, organizations will encounter challenges inherent in their traditional business model, operations process, structure and culture (Kinnunen & Turunen, 2012; Nuutinen & Lappalainen, 2012). Debates among scholars are around the extent of change and the nature of the change process.

Kinnunen & Turunen, (2012) argue that the incremental approach using an evolutionary change process facilies a smoother transformation from product orientation to service orientation by emphasising the importance of service elements as the main sources of competitive advantage. In contrast, Brax, (2005) and Nuutinen & Lappalainen, (2012) criticised the incremental approach. They suggested the revolutionary change as the most

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appropriate model to mitigate the risks of organizational change and to succeed in adopting a servitization strategy by reinforcing the importance of service elements and applying a comprehensive, fundamental and fast change of organizational culture and structure that traditionally evolved to support product orientation. Kowalkowski et al., (2012) suggested an agile incremental approach, where the change took place by systematic and logical increments, with an emphasis on flexibility and responsiveness. Dubruc et al., (2014) argue that in order to reduce operational problems and organizational transformation issues, when developing a customer-orientated organization requiring a long time period; the change process should start at corporate level and smoothly diffuse into other organizational levels. This should be done by a continuous learning process.

The study indicates the importance of services orientation and customer-centric approaches in real estate development projects. Providing service becomes an important competitiveness factor. Still, the project management tool is also important to achieve the objectives of the business effectively. The project nature of real estate development businesses implies that when offering service a firm needs to run two key activities simultaneously to deliver its outcome successfully. Those are customer relations and project management. According to the case studies, enforcing service culture and customer orientation disrupts project operations management. Usually, the development of a service-focused and customer-centric culture requires nurture and continuous efforts but without a need to radically change the whole organization. Therefore, the deliberate strategic plan of servitization will solve most servitization difficulties. The ability to maintain both the project and service orientation values, rather than substituting one for the other is an appropriate technique to deliver successful outcomes and mitigate the resistance to change. The balance of service orientation and project operations management in terms of organization culture, structure and operation process is needed to support both services and project operations. Generally, the project has specific goals and objectives to be completed at a specific time, cost, and scope. The project is not only under pressure from dynamic customer needs to deliver more customer value but it is also under economic pressure to deliver the project within the designated time and cost. Furthermore, the full scale of service units in realty projects applies after project delivery. Accordingly, the findings suggest that an incremental development process based on apparent change is more convenient for developing an organizational structure, culture and operation process bounded around both service and project operations. The slower change adds new values without adverse effect on those already embedded values and balances the service provision and project operations. The study suggested different procedures to balance the

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organizational focus between service orientation and project operations management in the real estate development industry (Table 4-25).

According to respondents, one of the most influential points is the strategic management planning that involves project design, execution, direction and transformation by considering service elements from the beginning. The project plan has to identify the project mission, scope, values and market segment. It has to set smart goals and objectives, ensure the best utilization of organizational resources and ensure the best means to attract customers, address customers' needs and meet customer satisfaction from service provision. Real estate development firms have to develop a strong culture orientated toward the importance of customers and consider the services provided to satisfy customers as being at the core of the system's outcome. They also have to emphasize the effective project management tools, as vital tools for the project's success and the success of service provision strategy. They must also consider the project as the primary means to meet the requirements of a customer focussed business. In addition, using advance technology such as customer relationship management will help to manage customer relations. Likewise, a variety of computer-based programmes are available in project management that can help companies to plan, collaborate, control and manage project cost to drive a project forward. The result of using these procedures is an organizational culture that matches the recommended organization structure and operational process.

5.4.8 Section summary

The previous section discusses the process of putting a servitization strategy into action and meeting the implementation requirements of offering services in the real estate development organizations. The development of a service-focused business requires several changes, adjustments and modifications in organizational design. The nature of the project stands in contrast to the implementation of servitization. Real estate organizations have to ensure the right management balance between product and services in terms of organizational structure, culture, processes, capabilities and developing a quality control system that is able to improve customer satisfaction by considering the features of both product and service. It becomes necessary to manage the process of service provision and to anticipate accompanying risks based on careful planning and designing. In the next section, the strategic evaluation system of servitization is discussed.

5.5 Strategy Evaluation

The decision to offer services is complex, and associated with a high degree of uncertainty (Biege et al., 2012; Benedettini et al., 2015a). Generally, previous studies specify different results regarding the impact of varying approaches of servitization (Benedettini et al., 2015a). According to Min et al., (2015) with the controversial results of servitization in the literature, there is a crucial need to measure the outcome of a servitization strategy. This section discusses the evaluation process of servitization strategy in the real estate development industry. Four themes related to servitization strategic evaluation process are presented as follow:

1. The outcome of servitization strategy
2. Services paradox
3. The cost drivers of Servitization
4. Servitization critical success factor

5.5.1 The Outcome of Servitization Strategy

Earlier literature recognized several outcomes expected from offering services integrated to products (Baines et al., 2009a). Mathieu, (2001a) classified these benefits into three broad categories. These are financial benefits, strategic benefits and marketing benefits. Recently, Lay, (2014) added innovation benefits to the list. Regardless of the expected benefits and higher revenues from service provision as the share of service sales reached more than 30% of total sales (Fang et al., 2008). Still, the process of servitization is challenging (Neely et al., 2011a; Ryals & Rackham, 2012). Recent studies indicate that providing services could lead to a performance decline (Benedettini et al., 2015a), where offering services in some cases could decrease profitability (Visnjic & Looy, 2013a). In some cases, organizations took a step back from offering services instead of progressing forward to offer more services (Matthyssens & Vandenbemept, 2010). The question is how the organization performance based on service provision can be measured (Ryals & Rackham, 2012).

Unlike the literature, the respondents emphasised that the outcome of servitization strategy in real estate projects does not come from the sale of services, but rather comes from the ability of services to promote and sell the project. The study found that the service roles in providing more customer values are ever more important in the real estate development industry. According to the respondents, services become a part of the project. These services made a difference and created new competitive advantage. Still, the strategy worked differently based on the type of project, the type of offered services, and the targeted market segment. At the outset, it is paramount to mention that the vast majority of respondents consider a servitization strategy to be beneficial. Although, a small

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proportion of them argued that offering services increases complexity and weakened the organization's performance. Nevertheless, offering services is considered an essential element of the project marketing success. This necessity of providing services comes from the characteristics of services.

The study concludes that there are three connected outcomes of servitization in realty projects. Services were offered to attract customers, satisfy customers and increase customer confidence. The case studies describe how the basic services have potential to attract customers through their focus on adding more value for customers and to support the customer's processes. Here, the services offered includes a project's 3D model, 3D virtual tour animation, mass customization, electronic selling point, aesthetic aspects of design, and maintenance. Those basic services attract more customers by creating additional value. It enhances market qualifier characteristics but has limited impact on market winning characteristics. This level of service provision should be supported by offering more advance services such as a consulting & advisory service, financial service, customized design, equipment supplying, installation & supervision, insurance coverage, Co-development & Co-design services, mock-up models and home furnishing. These advance services are more distinctive, where customer is participating in value creation. It provides customers with more flexibility. Offering these services is more likely to satisfy customers. These advance services form the basis of order winning characteristics. Nevertheless, the output of a real estate project is long-life building units, where the purchasing decision requires heavy investment from customers, requiring a long-term commitment and relationship between customer and supplier. Realty firms have to deal with this long-lasting project outcome by offering sustainable services. These include site management, facilities Management, sustainable living, recreational services, technological service, property management services, and business support services. These services are offered to gain customers confidence and to influence their purchasing decision. These services work as a facilitator to winning the purchasing contract and forming the order winning characteristics. Additionally, these services extend the business life cycle of the project by providing after project delivery services. Selling these different categories of long-life services becomes the main element of the business model and the main source of organizational revenue.

5.5.2 Services Paradox

Servitization is considered as an opportunity to gain more sustainable competitive advantage (Nenonen et al., 2014), but it also introduces new risks (Li et al., 2015). The Service paradox is the hidden challenge of the servitization strategy. The outcome of providing services could contradict the anticipated results (Neely et al., 2011a). Several service paradoxes were identified such as the cost-profit paradox (Gebauer et al., 2005)

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sales growth paradox (Visnjic & Looy, 2013a) and organizational branding paradox (Nenonen et al., 2014). Recently, Li et al., (2015) investigated the service paradox, based on secondary data collected from annual reports. Their study indicates that in the short term, servitization did not deliver the expected performance. However, the positive effect of servitization is clearer once the organization developed the required resources to support the servitization strategy.

Interestingly, the findings revealed a new service paradox in the real estate development industry, namely the competitive advantage paradox. Offering services temporarily reduces the project's competitive advantage. Although it is a short-term paradox, it is nonetheless a significant one in project-based businesses. It was noticed during data analysis that the respondents emphasised competitors' actions as one of the main servitization challenges and a vital factor that needed to be considered when designing effective service provisions. In addition, competitor orientation was mentioned as a required capability when offering services. This short-term paradox could be justified by the challenging characteristics of services. Project-based firms are motivated to offer services integrated to their project that add more customer value; still, offering services randomly, disrupted the project's daily task. It increases the project cost and complicates the project tasks. The findings indicate that the case studies suffered in the earlier stages of providing a service and the implementation difficulties reduced overall performance in the short term. According to the respondents, the deliberate strategic plan of servitization will solve most servitization difficulties.

5.5.3 The Cost Drivers of Servitization

The increasing interest in product and services system as a key contributor to organizational competitive advantage and product marketability has stimulated organizations concerns for the economic effects of servitization strategy (Min et al., 2015). As opposed to the expected economic advantages of implementing a servitization strategy, service provision may lead to higher revenue but lower profits and even losses (Gebauer et al., 2005; Neely, 2008). The cost of service provision is ambiguous and indirectly identifiable (Lerch, 2014). This could lead to a lower price or an over pricing of the product and services system, both of which weaken the organization's competitive advantage (Lerch & Gotsch, 2014b). One of the main challenges of offering services is to control the associated costs and deliver the value required by customers (Datta & Roy, 2010; Newnes et al., 2014). In general, little attention has been paid to investigating the cost of a service provision strategy (Datta & Roy, 2010). There are no detailed studies addressing the cost associated with planning and implementing a servitization strategy, or tracing the cost sources and identifying the cost

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pools. In fact, it is difficult to collect data related to the cost of service provision, as organizations do not report the cost of services clearly in financial reports (Gebauer et al., 2012b). This could be attributed to several reasons such as the various levels and approaches of servitization strategies, the variability of service cost, the atypical nature of the service process, and the uncertainty of demand. Furthermore, organizations often jointly develop a product and service system and the cost of service is incorporated into the product price (Lerch & Gotsch, 2014b).

The study identified only general cost categories related to offering services in building projects. These categories were changed based on the incremental process of servitization from offering basic services to advanced ones. In addition, the variable nature of service costs plays a significant role in the appearance and disappearance of different cost pools. The findings argue that offering standard and basic services are inexpensive and require little initial investment. The case studies did not report the cost of offering these basic services separately in their financial reports, which implies the relatively small cost of services at that level. However, the cost of offering services becomes noticeable when offering a variety of customised and personalised services. This could be justified by the cost of changes in the project execution phase. Here, the case studies classed this cost as an expenditure, which included both the cost of carrying out the project and the cost of added services. Finally, when offering advanced services using a separate service business unit, the cost of service becomes the main cost driver. This variation in the cost of service provision is justified by different activities of the service, where different levels of these activities deliver different levels of value to the customer and require a different level of cost.

5.5.4 Servitization Critical Success Factors

In an ambiguous and dynamic business environment, the service element is becoming a significantly important component (Macdonald et al., 2011). However, servitization strategies have not been adopted widely (Baines et al., 2007). Among 10,028 organizations In 25 different European countries, only 29.52% firms were found to provide different types of services (Neely, 2008). After three years, the percentage increased by only half percent. The later percentage was still only 30.10% of organizations within the same study sample (Neely et al., 2011a). Although servitization is expected to mitigate dynamic business environment risks, it also raises new risks (Li et al., 2015). The adoption of a servitization strategy requires great efforts and numerous considerations (Sawhney et al., 2003). Actually, not all businesses reach their expected goals from offering services (Benedettini & Neely, 2010). Some organizations have had to reduce or stop providing services to avoid

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failure (Matthyssens & Vandenbemept, 2010). Therefore, identifying the critical success factors is imperative to guarantee the future success of a servitization strategy (Benedettini et al., 2015a).

The literature on servitization provides a long list of different critical success factors (Neely et al., 2011b). Often, these factors were developed as either very general factors or very specific factors (Ulaga & Reinartz, 2011; Benedettini et al., 2015a). For instance, researchers have investigated servitization success as an interaction between system integration and organizational change, where the development of a customer-centric organization is the critical factor for providing services successfully (Heikkilä & Brax, 2010). Other scholars considered customer involvement and value creation to be the critical success factor (Macdonald et al., 2011). Vasantha et al., (2012) viewed designing a service to fit customer needs and addressing organizational external and internal factors are significant for servitization success. Datta & Roy, (2011) argued that service and product required different operating systems and that developing a sustainable operations process is the most critical success factor. Gebauer et al., (2006) listed a set of critical success factors of servitization; yet, these factors are limited to the services element. Ulaga & Reinartz, (2011) considered the development of organizational capabilities for both product and services based on hybrid provision to be the key success factor. Nevertheless, Neely et al., (2011b) argue that organizations need to consider several factors to ensure the success in a service provision strategy.

The study provides a specific view into the critical factors that should be focused upon when managing servitization strategy in real estate development projects (Table 4-38). According to the findings, those initiatives that will successfully support servitization are a combination of factors related to service orientation and project operations management. These mixed factors contribute correspondingly to the success of providing services in real estate development projects. According to the findings, both project and service are inter-dependent. Neither service nor project could be disregarded without affecting one other. Servitization strategy needs to be synchronized into project operations to ensure the success of the project. As a result, servitization strategy needs to be developed based on sustainable cooperation between project operations and service provision. Therefore, the most appropriate critical success factors are those supporting the synergy between service orientation and project operations management. However, this should be done without losing concentration on customer, as the expected outcome of servitization is the main concern of these factors.

Influenced by the work of (Belassi & Tukel, 1996), the study grouped the critical success factors of adopting servitization based on real estate development projects into three main groups. These are the customer, the service and the project. The first category includes the critical success factors that support a customer-centric approach in building projects. The second category involves factors that support the activities of service provision. Finally, the third category includes the critical success factors related to effective project execution. Accordingly, the study was able to extract several important success factors related to service provision activities in building projects. The findings argue that in real estate development projects, it is not only service that is complex and diverse, but also, customer preferences are complex and diverse. Both of them complicate the project's operating system and increase its complexities and uncertainties. Therefore, offering services requires a strategic configuration mechanism, deliberate planning, advanced risk assessment, and more coordination schemes. Still, customers significantly influence the success of servitization. Organizations have to ensure that the expansion in services is in line with customer preferences. Customer involvement and value co-creation is vital to identify customer needs and how customers recognize and perceive the added- value, which requires a flexible operational system. In order to satisfy customers, it is essential to provide advanced and complex service systems based on systematic expansion methods and pre-defined objectives.

5.5.5 Section summary

The outcome of servitization strategy in real estate projects does not come from the sale of services, but rather comes from the ability of services to promote and sell the project. Still, measuring the effectiveness of servitization is significantly important. Although of several expected advantages of servitization, offering services may reduce organizational performance. It is imperative for building projects to design services based on customer needs and the project's nature and developing a systematic cost system able to allocate effectively the ambiguous cost of providing services. Servitization strategy needs to be synchronized into project operations to ensure the success of the project. Finally, it becomes necessary for building firms to consider several key factors related to the project, the services, and customers to ensure the success of the project and services systems prior to implementation.

5.6 Servitization Roadmap

Competing strategically by offering services integrated to the product is becoming a distinctive feature of creating competitive advantage (Baines et al., 2009a). The transition from offering product to offering both products and services is modelled differently (Fischer et al., 2012). Commonly, organizations are moving towards servitization incrementally based on an incremental approach (Oliva & Kallenberg, 2003). Other scholars like Brax, (2005) and Chase, (2010) linked the incremental approach of servitization to different factors. However, others argue that the servitization process is bound by different strategic alignments i.e. (Mathieu, 2001a; Gebauer, 2008 and Helander & Moller, 2008). They argue that service provision is managed strategically and not sequentially (Kindström & Kowalkowski, 2009).

The main discussion point is that servitization is a monumental decision. This study argued that in real estate development the servitization strategy emphasizes customer needs and expectations, while project management focuses on effective project delivery within the allocated time, cost, and quality constraints. Offering services can be costly, time consuming, exhausting and can disrupt the project team's focus away from day-to-day project management activities. The study's findings indicate that in order to mitigate this tension between servitization and managing a project effectively, real estate development organizations need to plan carefully to offer services and balance the symbiotic relationships of using two different business logics i.e. service-oriented and project-oriented. The study developed a strategic road map to support the systematic adoption of servitization (Figure 4-20). This roadmap explains how organizations achieve their desired objective of servitization by simultaneously balancing orientation toward customers and project management.

The framework focuses on the different stages of the project life cycle and it is vital at these stages for offering different types of services to extend the project life cycle and become a solution provider. The framework emphasises offering different types of services at different time of project life cycle covering the whole project life cycle. These different services yield different outcome. Offering basic service attracts customers and improves order qualifiers criteria. Offering advance service satisfy customers and forms the basis of order winning criteria and offering system solutions makes customers more confident and shapes the order winning criteria. Consequently, the roadmap is presented along two axes. The horizontal axis represents three stages of the project life cycle. The vertical axis consists of several strategic aspects that need consideration within each stage. Accordingly, the servitization process is concerned with deciding the nature, domain, and scope of

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servitization activities. The process is developed using several strategies of servitization, which require a series of steps that build upon one another, and be performed to reach the strategic alignment. These steps include selecting an appropriate level of servitization strategy and selecting the suitable strategic level. They also include, choosing alternative entry modes, selecting the range and the extent of service provision; identifying the strategic factors to consider for service provision; choosing the optimal design approach; setting the price; and arranging the location of the process. Then, the implementation process acts as a route map where the selected design is translated into action.

The strategic fit is the main theme of the process, where the organization aligns its resources, capabilities, organizational culture, structure, operational process and quality system. Finally, the strategic evaluation process is an attempt to look into the health of the formulation and implementation processes and appraise the strategic outcomes. It is also an attempt to look for developments and improvements that govern the success of the servitization strategy.

5.7 Conclusion of discussion chapter

The study focused on the servitization strategy that real estate development projects could implement to develop a competitive advantage. In the literature, a debate remains around the best methods for adopting a servitization strategy successfully. Scholars argued that the successful adoption of servitization required a holistic approach with full transformation and fundamental shift from product-orientation to services-orientation. Organizations need to change their business model, strategies, structure, culture, operations and capabilities to support services delivery and become a customer-centric organization (Neu & Brown, 2005; Fang et al., 2008; Baines et al., 2009a, Kowalkowski, 2011 Nuutinen & Lappalainen, 2012 and Visnjic & Looy, 2013c). Commentators argued that the complete separation of the product and service business is preferred to reduce the clash between product and services and to maintain constant innovation of both (Oliva & Kallenberg, 2003; Gebauer et al., 2006; Brown et al., 2009; Nordin & Kowalkowski, 2010; Gebauer et al., 2010b; Kinnunen & Turunen, 2012). This study concludes that a balance between service orientation and project orientation is preferred in real estate development projects to reduce ambiguity and increase collaboration and coordination. Figure (5-1) presented these different models for adopting servitization.

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Figure 5-1: Implementation models of servitization strategy
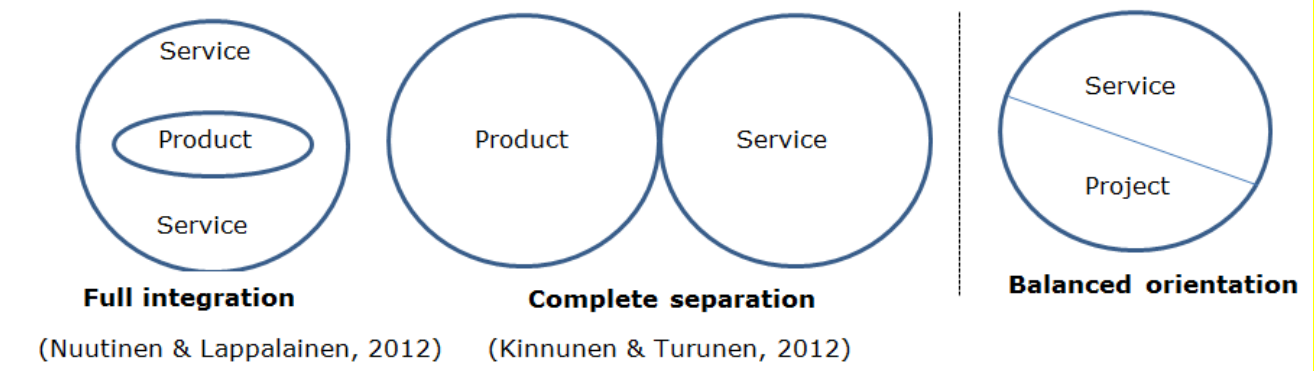
5.7.1 Servitization and Project Competitive Advantage

The study demonstrated that Service provision becomes an essential element of successful real estate projects. Adopting the servitization strategy improves the competitive advantage of real estate development organizations. The sources of this competitive advantage are described below.

5.7.1.1 Servitization and Project Life Cycle

The servitization is an incremental process and developed based on several approaches of service provision. The study found that in order to fulfil a servitization strategy in real estate development, businesses have to offer different types of service at different stages of the product life cycle as shown in figure (5-2).

Figure 5-2: The relationship between project life cycle and servitization strategy to develop competitive advantage.
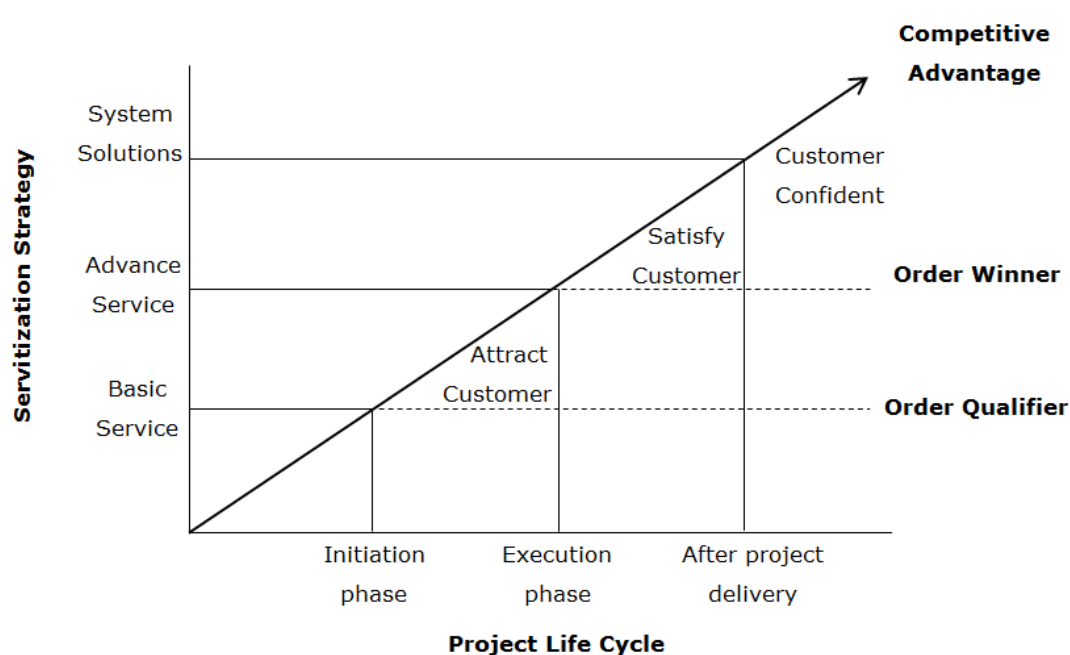
The findings argue that the value chain of a real estate development project is now described as systems of both the project component and services. These systems are capable to add more value for customers. By which, a building project becomes a process that includes stages before and after the project execution and delivery. Accordingly, offering services should be continuously enhanced with more advanced ones to cope with customer needs. Services should be added to each stage of project development. This means that building firms have to provide different types of service that cover the whole project's life cycle. This requires a series of steps that build upon one another, and be performed in order to develop incrementally a competitive advantage,

Offering basis services creates an attractive entry point for customers. These services add more value for customers and make the project more valuable. These values lay on providing services that link the customer's needs to the project's outputs. These basic services are considered an important aspect of order-qualifier criteria. More advance services such as customer-oriented services need to be offered to enhance project competitive advantage through customer involvement and co-creation. Offering these customized services based on value co-creation, tailors the project toward customers' needs, enhances customer satisfaction and increases customer commitment. These services are not easy to imitate or exceed by competitors, so that they retain a differentiation edge. It is considered as the base of order-winner criteria and as a facilitator to winning the purchasing contract. Still, the outcomes of a real estate project are long-lasting buildings, where the purchasing decision requires heavy investment from customers. Consequently, it is imperative for customers to feel a high level of comfort with their decision, which requires a long-term commitment and relationship between customer and providers. Organizations have to deal with this long-lasting project outcome by offering sustainable services using a service-oriented approach. Here, organizational learning and networking are fundamental aspects to offer these kinds of sophisticated services. These services make customers more confident with their purchasing decision, develop unique competencies and shape the order-winning criteria.

5.7.1.2 Servitization and Project Operations Management

The study shows that in real estate development, the competitive advantage is obtained by linking servitization strategy to project operations management as shown in figure (5-3) below.

Figure 5-3: Aligning servitization strategy with project operations management
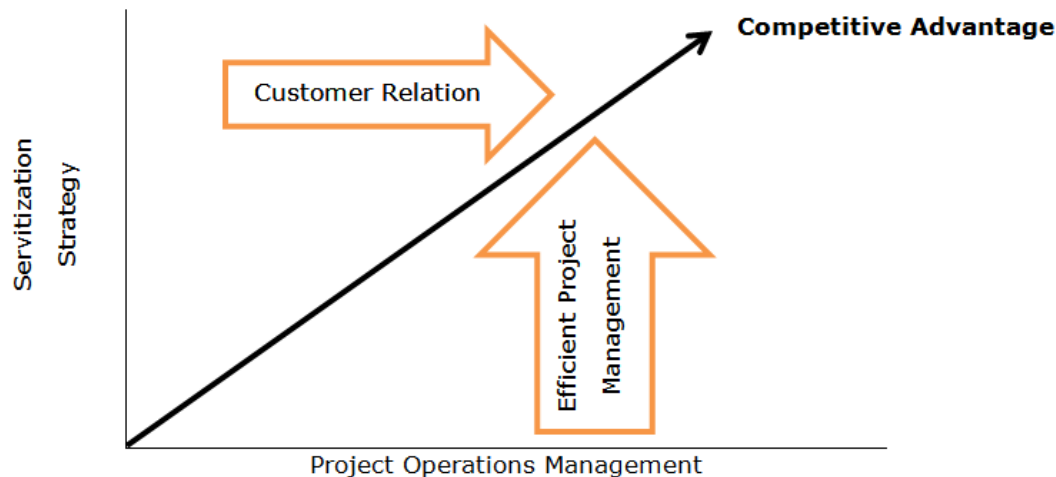
Servitization is one of the strategic decisions building firms could consider for long-term competitive advantage. It is a beneficial strategy but with high risks of failure. Usually, real estate projects involve many uncertainties, and offering services increases project uncertainty. The project nature of real estate development businesses implies that when offering service a firm needs to run two key activities simultaneously to deliver its outcome successfully. Those are customer relations and project management. Therefore, it is vital that businesses develop capabilities supporting service provision and efficient project management, where more strategic alignment between servitization decisions and operations management is required to create a competitive advantage.

In fact, offering service adds more value to the customer, but this value is linked to the project's outcome, where both service and project efficiency significantly influences customer satisfaction. The study shows that service orientation has a strong correlation with project operations. The real estate projects have to place a high value on both the servitization strategy to achieve long-term results and project management to deliver short-term results. Therefore, organizations need to balance the strategic focus between service orientation and project operations management to find the appropriate synergy and overcome the coordination and communication problems, reduce uncertainty, better utilize resources and deliver a successful project. This significantly contributes to competitive advantage. Hence, service orientation and project operations direct the project activities to achieve organizational strategic goals. Both lead to higher levels of organizational performance and create sustainable competitive advantage.

5.7.1.3 Servitization and Organizational knowledge

The study perceives a mutual relationship between servitization and organizational knowledge. Offering different types of services influences the type of knowledge that organizations gain by having a closer customer relationship. In turn, enhanced organizational knowledge influences the strategic choice of offering more tailored services and so on. Organizations develop sustainable competitive advantage as the expected outcome of servitization as illustrated in figure (5-4) below.

Figure 5-4 : The relationship between different level of servitization, organizational knowledge, and competitive advantage.
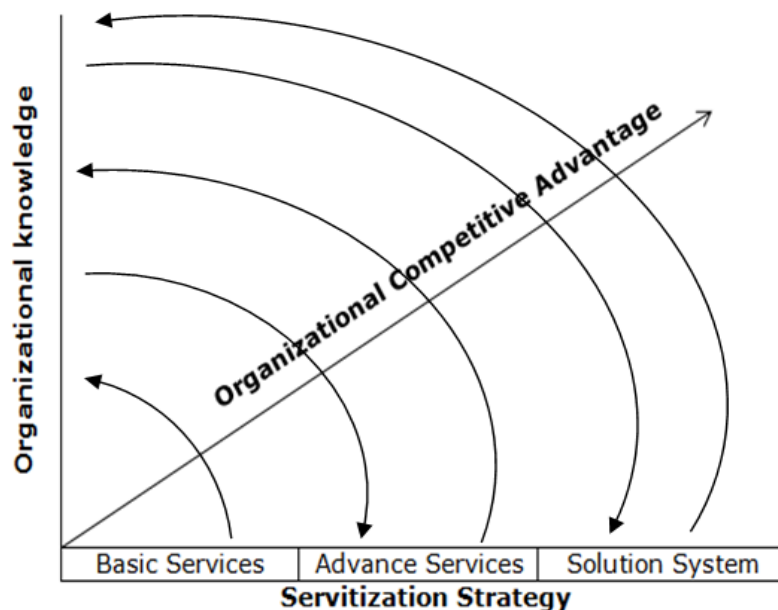
Market knowledge becomes a key competitive advantage (Bamford et al., 2015). The study found different positive connections between organizational knowledge and adoption of servitization strategy. The incremental movement of servitization improves the organization's learning curve, as at each stage, organizations become more knowledgeable about their customer needs.

At the first stage, real estate development firms that provide services tend to attract more customers. The high level of customer contact from offering these services builds a productive customer relationship. Servitization enables customer understanding and gaining customer knowledge through customer involvement and personal contact. This relationship directs organizations' service provision to customers' needs. Organizations become more knowledgeable about their customer needs and start offering more tailored and advanced services. Here, customer involvement and value co-creation development are vital for identifying these customer needs and how customers recognize and perceive the added

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value. In fact, being customer-centric helps organizations to sense, realize, recognize, and deal with specific customer needs. Finally, organizations become solutions providers based on offering a superior solution through extensive knowledge of sophisticated and hidden needs of their customers. This comes from a proactive response rather than reactive response and thus the process of developing new services is enhanced. Moreover, providing services requires firms to establish more networking systems and develop more sophisticate capabilities, which improves organizational innovation ability.

5.7.2 Conceptual Framework Reconfiguration

The study revealed that the provision of services has become a mandatory market requirement in the real estate development industry. However, it is not adequate to only produce and sell services for a servitization strategy to succeed. The development of services should be based on systematic planning decisions and incremental small-step development, rather than a sudden product and service packaging decision. Reality firms have to plan carefully a service provision strategy based on what they are going to do, what is to be expected and what changes need to take place. The study considers an overview of key steps in the servitization process, addressing several strategic factors to help make an informed decision. Reviewing servitization literature leads to the development of a conceptual model that captures the process of adopting a servitization strategy. Empirically, the study identified different aspects that should be considered when adopting a servitization strategy. Thus, the conceptual framework presented in the literature review chapter (Figure 2-6) is redeveloped based on these aspects (see figure 5-5).

Figure 5-5: Servitization Strategic Process Conceptual Framework
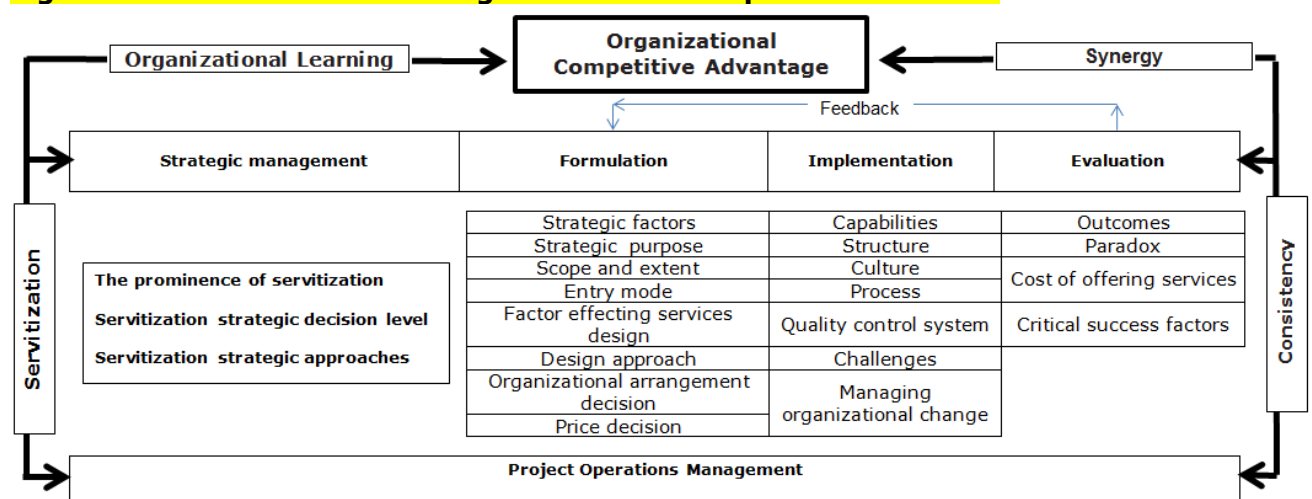
The underlying theme of this conceptual framework has been developed to facilitate the organizational decision to provide services. The framework is developed based on the
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traditional model of the strategic management process, which consists of strategic formulation, implementation, and evaluation (David, 2013). In addition, this framework was developed in alignment with the incremental notion of servitization and different strategic levels and approaches of offering services (Oliva & Kallenberg, 2003 and Tukker, 2004). This conceptual framework is developed based on a circular process, to be more in line with the incremental process of servitization strategy and the three phases of the project life cycle. Strategic fit and alignment are the main themes of a servitization process in realty projects. The study proposes that organizations need to understand the notion behind the servitization concept and develop the service provision strategy systematically. Servitization strategy must be consistent and tied to project operations management based on full alignment and a robust link. Thus, both servitization and strategic consistency contribute to creating a sustainable competitive advantage as shown in figure (5-5) above.

Servitization contains several strategies, as there are different levels and types of services that could be offered for different strategic purposes. Each level requires different arrangements and delivers different outcomes. The process consists of a series of steps that build upon one another, where the output of one-step becomes the input of the next. This circularity implies that companies must go through the stages continuously and reflect upon the previous stage to learn how to improve the process.

A deliberate strategic planning and systematic development process are imperative to form an appropriate service strategy in real estate projects. The service provision process starts with understanding the importance of the services element and the notion behind the servitization strategy, which is imperative to deliver the strategy successfully. In addition, a strategic change process, and how this change might be managed is vital for real estate development organizations. It is necessary to identify the synergy between servitization strategy and project operations management based on robust strategic alignment. The organizations new strategic priorities emphasise both service provision and project operations management to create more customer value. Finally, the strategic evaluation system is a critical tool to improve servitization decision making. The system is concerned with two key issues, the strategic consistency and the outcome of the servitization strategy. As an integral part, deploying servitization processes are evaluated against several key success factors. As a distinct part, real estate organizations reflect on the outcome of the previous stages of servitization to the effect it has on the next stage, by looking at the facts regarding the health of formulation and implementation processes.

According to Forrester, (2015) operations management becomes a vital strategic function in business today, where linking corporate and marketing strategies to operations management becomes a critical success factor. Neglecting this significant strategic role of operations management impedes the organisations marketing success, even when the corporate strategy is well designed and formulated (Bamford & Forrester, 2010). According to Hayes et al., (2005) operations management is a key determinant of organizational ability to achieve long-term success or even survival. Effective operations activities need to be consistent with long-term strategic intentions, to contribute to organizational competitive advantage. This is where organizations match resources, capabilities, organizational culture, structure, operational process, and quality systems with the selected strategic approach of servitization.

5.8 Chapter summary

The above chapter discussed the research results from the case studies. The chapter was organized around the conceptual model developed at the end of chapter (2), which has been reconfigured according to the empirical findings to fit with the real estate development industry. This study focused on service provision in the real estate development industry from a project management perspective. The differences between project-based businesses and manufacturing businesses were used as a discussion base. Also, the work of researchers who addressed servitization in a project-based business such as (Artto, et al., 2008, Kujala, et al., 2010, 2011 & 2013; Weeks, & du Plessis, 2011 and Galera-Zarco, et al., 2014) were used to support the study's arguments. As well as, the several approaches of service provision based on an incremental movement process of these approaches based on the work of (Oliva & Kallenberg, 2003) were used to develop the discussion chapter. In general, four main themes were used to discuss the study's results.

- The nature of a servitization strategy
- The differences between product and services
- The differences between manufacturing and project-based businesses
- The differences between developed countries and developing countries in terms of service provision

In the context of real estate development projects, the study argued that organizations have to ensure the right balance between operations management and servitization. Therefore, it becomes necessary to link servitization strategic decisions to project operations management using the systematic planning approach. In addition, the study argued that there is a mutual relationship between servitization strategy and organizational

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knowledge. Both strategic alignment and servitization strategy contribute to the development of sustainable competitive advantage. The next chapter is the conclusion chapter, where previous chapters are summarized, the research questions are answered, and a conclusion of the study's outcome is provided. The study's implications, research limitations and recommendations for further research are also presented.

Chapter 6: Conclusion

6.1 Introduction

The uniqueness of this research is that it proposes to investigate the servitization strategy in the real estate development industry and its implications for improving the organizational performance and developing a competitive advantage. Servitization strategy has been recognized as a suitable context for developing competitive advantages. This study was driven by the limited amount of literature on servitization strategy in real estate development, as well as the limited evidence obtained from developing countries. Set against this context, this study attempts to capture the application of aspects of servitization in the real estate development industry. Moreover, this research has also studied the servitization strategy practices in the context of developing countries.

In the previous chapter, the study's results were discussed in relation to the servitization literature. This chapter aims to draw together the several preceding chapters by showing how each chapter contributes to this study. Whereby, the study statement is reaffirmed. This chapter answers the research questions and provides a conclusion of the study's outcome and related implications from both theoretical and practical perspectives. The chapter also addresses the research limitations and recommendations for further research. It begins with brief recap of the research aims and objectives.

6.2 Research Aims and Objectives Revisited

The role of services in sustaining organizational competitive advantage is much discussed from a broad range of academic perspectives (Baines et al., 2009a; Gebauer et al., 2012b; Neely et al., 2014). Throughout different industrial sectors, the activities of service provision integrated to a product are increasing (Lay, 2014). Providing services secures long-term business prosperity and sustains competitive advantage (Neely et al., 2014). However, few researchers have studied servitization strategy within the context of the real estate development industry. Likewise, few researchers have investigated the servitization strategy in developing countries.

This research filled these gaps by investigating the aspects of servitization strategy in the real estate development sector based on collecting empirical evidence from Jordan. The purpose of this research is to develop tools and methods to help real estate development firms to engage effectively with servitization. The study is looking to support the successful adoption of a servitization strategy in the real estate development sector by identifying the drivers motivating servitization in real estate development industry, exploring the range and

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extent of servitization in real estate projects and examining the role of services in developing a competitive advantage and developing the strategic formulation, implementation and evaluation processes that make up a successful servitization strategy. The study is also developed to examine the challenges of servitization in real estate development, and develop an understanding of how these challenges could be managed, while determining the critical success factors for adopting servitization strategy in the Jordanian real estate development organizations. Accordingly, this research sought to answer several questions:

1.   What are the motivations for the Jordanian real estate development sector when considering servitization strategy?

2.   To what extent are real estate development firms servitizing, and how viable is the servitization in influencing Jordanian real estate development organizational competitiveness?

3.   What are the challenges that the Jordanian real estate development firms have to overcome to become servitized organizations?

4.   How can the servitization strategy be designed, implemented and evaluated to enhance organizational competitiveness within the context of real estate development industry?

5.   What are the critical success factors required for ensuring the success of a servitization strategy in real estate development organizations?

6.4 Answering Research Questions

RQ1. What are the motivations for the Jordanian real estate development sector when considering servitization strategy?

An examination of several findings indicates that providing services becomes an essential element of a successful real estate project and a necessary organizational marketing proposition to offer more customer value. This necessity of service provision is twofold: on the one hand, service becomes an indispensable customer requirement. On the other hand, providing services brings several benefits in terms of organizational competitive advantage, marketing position, innovative thinking and financial returns (figure 6-1 below).

Figure 6-1 Drivers Motivate the Adoption of Servitization Strategy in the Real Estate Development.

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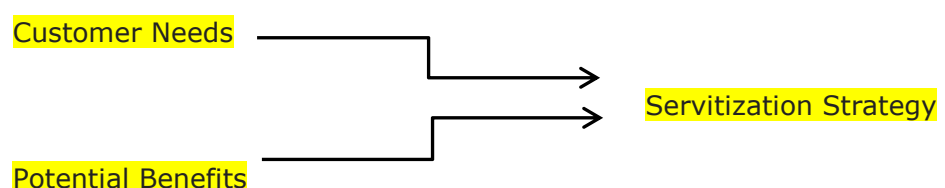
Both customers and real estate developers are driving the service provision. Customers' needs are dramatically changing, they have become more conscious, exacting and more ambulant. Service provision becomes part of real estate developers' responsibilities to deal with the long-time horizon of the outcome of building projects. Moreover, the outcomes of a real estate project are long-lasting buildings, where the purchasing decision requires heavy investment from customers. Offering sustainable service builds customer trust, inspires customer confidence and assures customers of reliable long-term support. In addition, service offers more value to the customer. Offering services is imperative to meet customer needs. Servitization provides customers with more flexibility to make changes during a projects' execution phase. This flexibility improves customer satisfaction.

On the other hand, providing services brings several benefits in terms of organizational competitive advantage, marketing position, innovative thinking and financial returns. The strategic benefit of servitization is justified by the characteristics of service, which differentiate projects and create more maintainable competitive advantage due to the difficulty in imitating services. Also, service has the ability to develop organizational knowledge capability through closer customer interaction. The marketing benefit is justified by the ability of services to promote projects in the marketplace and enhance the customer perception of these projects. In addition, offering services enables firms to increase their market credibility and gain more customer confidence. The financial benefit of servitization is justified by the ability of a servitization strategy to increase demand for the project and attract customers which enables the selling of more units. Finally, in terms of real estate projects, service innovation is more flexible, requiring less sophisticated technology, less research and development activities, less complex actions and low capital investment.

RQ2. To what extent are real estate development firms servitizing, and how viable is the servitization in influencing Jordanian real estate development organizational competitiveness?

The study highlights the growth of the service element in the real estate development industry. There are different forms of service that real estate development firms could offer. The study mapped those forms into four main categories. Table (6-1) below shows this categorisation framework.

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Table 6-1: The Four Options for Servitization in the Real Estate Development Industry

Project-Orientated Service	The project-orientated service is a form of providing basic services. It involves conceptualizing the project around service provision designed and combined so that they are jointly capable of fulfilling general customer needs. This can include, for example gated suburb, private resort, integrated commercial complex and integrated industrial city.
Product-Orientated Service	The product-orientated service involves offering basic services to support product sales. These extra services help the customer to realize the application of the project. This can include, for example project's brochure, project's 3D model and building's 3D virtual tour.
Customer-Orientated Service	The customer-orientated service involves providing advance services to support customer activities and the design is highly customized. These services are outsourced to a third party. This can include, for example consulting and advising services, financial services , customized design and mock-up models
Service-Orientated	The product-orientated involve providing after sales services to support product functionality and support the customer to optimise the application of the project. These services are provided by outsourcing, networking and partnership. This can include, for example site management, facilities management , sustainable living and property management

The output of the real estate development industry becomes a system of both the project component and added services. These service systems are the result of a servitization strategy in the real estate development industry that shifts the industry focus from designing and selling only the physical output of the project to delivering systems of services integrated into the project that together are capable of adding more customer value. These services are offered to set a new value model for customers and raise the criteria of selecting a market offering. The project-orientated service is a basic service. It could be seen as a general market position of the project as the service places the project in a particular perceptual position within the mind of the customers. The product-orientated service is also a type of basic service. It can be seen as "product plus services", as services are offered to support product selling. Customer-orientated service is an advanced type of service and can be seen as customer plus services. These services support customer activities to create more customized products. Finally, the service-orientated approach is about offering more advance services and can be described as service plus project. These services are offered to support the product functionality throughout its life cycle. The real estate development projects could offer different forms of these services within different stages of the project lifecycle. Each dimension has its own outcome and impact on organizational performance (See figure 6-2 below).

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Figure 6-2: The Value Chain of Servtization Strategy

Basic service	Advance services	System Solution
Adds Value	Support Customer Activities	Support Project Functionality
Attracts Customers	Satisfies Customers	Assures Customers
Support Product Selling	Support Customer Purcshasing Decsion	Stimulates Customer Purchasing Decision
Improves Order-Qualifies Criteria	Set the base of Order-Winning Criteria	Shape the Order-Winning Criteria

Traditionally, the minimum level required from a real estate development firm to do business in the market is delivering the project on time, at the agreed cost and quality specifications. Offering basic services such as project-orientated service and product-orientated service adds more value for customers and makes the project more valuable. Providing basic services becomes one of the project performance dimensions to fulfil the market order qualifier criteria. However, offering basic services will not ensure competitive success. More advanced services such as customer-orientated-services need to be provided to enhance the project competitive advantage. Offering advance services tailors the project toward customer needs, distinguishes the project from others and enhances customer satisfaction. These advanced services are considered the base of order-winner criteria that facilitate winning the contract. Still, real estate development projects need to deal with the long-time horizon of the project outcome. This long-term nature of the industry outcome requires service provision that supports long-term product functionality and to assure product stability. Offering system solutions builds customer trust, inspires customer confidence and assures customers of reliable long-term support, all of which motivates customer purchasing decisions and influences customer confidence when buying a costly and long-term asset. These system solutions shape the order-winning criteria. Thus, in real estate projects, servitization is an inter-dependant and interconnected process covering the whole project life cycle. Providing life-cycle services is critical to gaining full customer satisfaction and developing a competitive advantage.

RQ3. What are the challenges that the Jordanian real estate development firms have to overcome to become servitized organizations?

Managing the service provision is the main challenge of servitization in real estate projects. This challenge associated with the process of operating a servitization strategy emerges mainly from the combination of two divergent processes, namely, the project operational process and the service operational process. The nature of a real estate development project is designed to achieve specific objectives based on high task interdependence, with high uncertainty and a limited work scope. On the other hand, the nature of service provision makes it hard to be definitive and standardized. This in turn increases the project uncertainty and broadens the project scope. Adding services requires new arrangements throughout the organization, and different forms of services require different arrangements. Organizations have to develop new and alternative organizational capabilities, principles, structures and design. Still, there is a significant need to balance the focus between project operations and service orientation. Project operations are vital to develop and build a superior product and to deliver a profitable project by focusing on operational effectiveness, time and quality. The service orientation is also important. It directs the project and the project's development towards customer needs and requirements. Therefore, it is more relevant for the industry to take advantage of both a service orientation and efficient management of a project's operations. Real estate development organizations have to balance the service orientation culture that encompasses the values of process innovation, customer importance, problem solving and flexibility with the project operations management that involves project productivity and efficiency based on time, cost and quality factors. Therefore, a strategic change process and how this change might be managed are vital in building companies.

An incremental development process based on apparent change is more convenient for developing an organizational structure, culture, and the operations process bounded around both service and project operations. The slower change added new values to the organization but did not change the deeply embedded ones. Accordingly, a real estate development firm could develop a strong culture orientated toward the importance of customers and consider services provided to satisfied customers as an important part of the project's outcome. Also, it has to emphasize the effective project management tools, as vital tools for the project's success and service provision strategy. The company must also consider the project as the primary means to meet the requirements of a customer focussed business.

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Finally, one of the most influential points is the strategic management planning that involves project design, execution, direction and transformation by considering service elements from the beginning. The project plan has to identify the project mission, scope, values and market segment. It has to set smart goals and objectives, ensure the best utilization of organizational resources and ensure the best ways to attract customers address their needs and meet customer satisfaction from service provision.

RQ4. How can the servitization strategy be designed, implemented and evaluated to enhance organizational competitiveness within the context of real estate development industry?

The fundamental logic of servitization is that customers should be at the starting point of project development. Therefore, servitization is taken as a process where a real estate development business develops it capabilities to meet customer needs. Accordingly, in real estate development, the servitization strategic decision is considered a directional strategy that shifts the overall orientation towards customers and markets to determine business practices.

A real estate development firm could offer different levels and types of services for different strategic purposes. Each level requires different arrangements and delivers different outcomes. However, in order to capture the value of servitization, the extent of services should be extended to the overall project life cycle. Accordingly, the movement of servitization is an incremental process based on circular, iterative and on-going processes. This implies that organizations need to go through these stages continuously to move forward by offering more services. Businesses need to reflect upon the previous level and review the outcome of the process to learn how to improve their service provision strategy

The findings tackled important questions of how to deploy successfully servitization in real estate projects to create competitive advantage and describe the practices that contribute to the success of the project-service system, as shown in Figure (6-3) below.

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Figure 6-3: Servitization Deployment Process in Real Estate Development
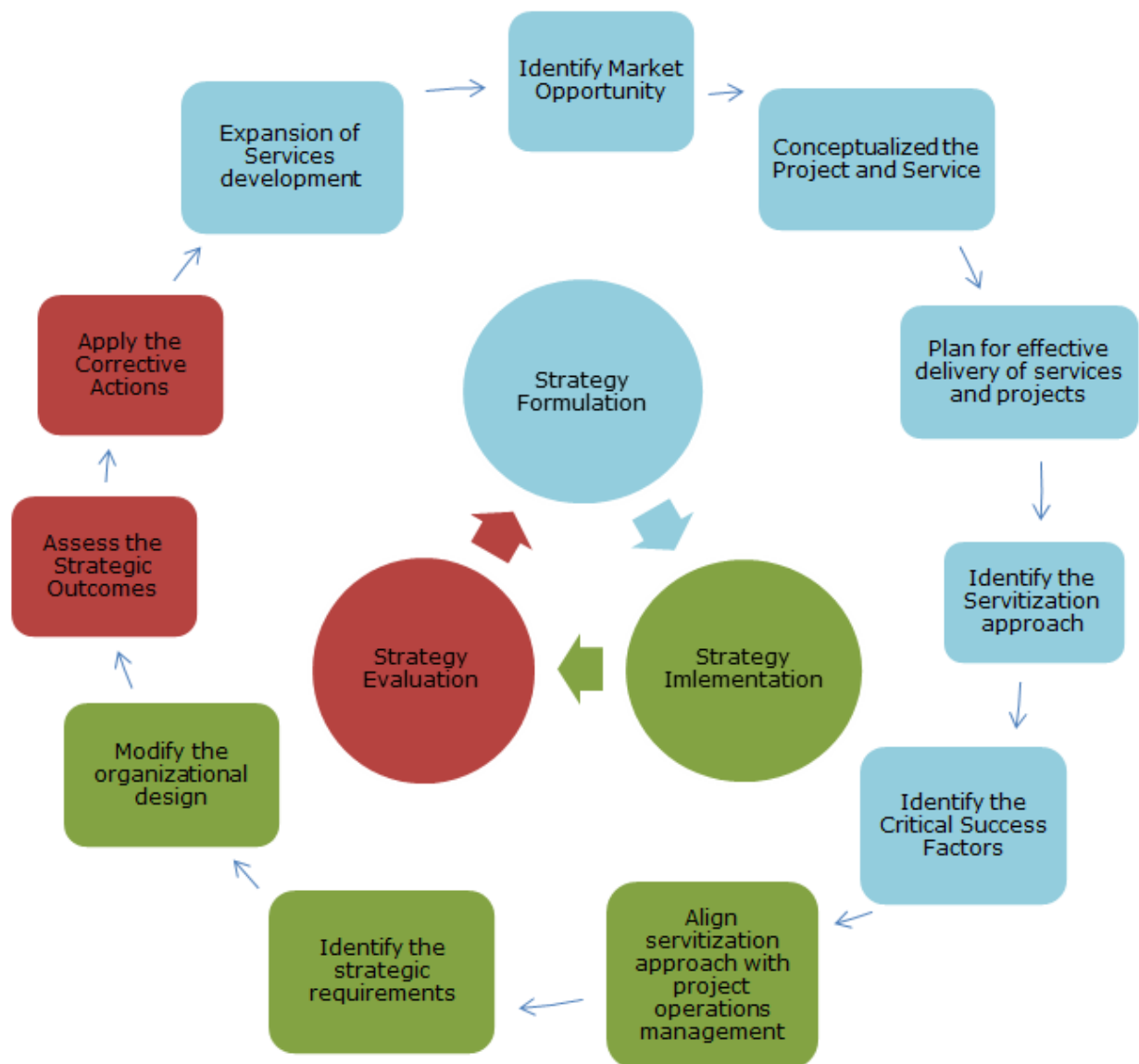
The service provision process starts with understanding the importance of the services element and notion behind the servitization strategy, which is imperative to deliver the strategy successfully. The next step is identifying a growth opportunity magnifying the synergy between a building project and services to develop a competitive advantage. The development of this competitive advantage requires a strong link between servitization strategy and project operations management to balance the focus between service orientation and project operations management. This requires a deliberate strategic plan and a systematic development process to form an appropriate service strategy. The strategic plan of a servitization strategy should identify the form, extent and objectives of service provision and it should be done within a specific period. Finally, the critical success factors must be identified.

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The implementation process translates the selected design of the servitization into action. Offering service integrated with the project involves organizational changes that emerge from combining two divergent processes, i.e., project operations and services operations. While providing services is becoming an imperative element of real estate projects, effective project operations management is also a key success factor to deliver the project on time, at the correct cost and with the necessary quality standards. Therefore, the organization needs to align its resources, capabilities, organizational culture, structure, the operational process and the quality system between a service provision strategy and project operations management. The required change should be based on hard alignment of servitization and project, whereby the organization's new strategic priorities are emphasising both service provision and operations management to generate more customer value.

Finally, evaluating a service provision outcome is a critical tool to improve the servitization decision-making process. The real estate development firms need to determine the effectiveness of a given approach to servitization, and whether offering services has succeeded. If not, they have to take corrective action wherever required. The servitization strategic evaluation process is concerned with two key issues, the strategic consistency and the outcome of the servitization strategy. Firstly, the evaluation process is concerned more with the consistency of offering a service strategy and project operations management to ensure neither disrupt the creation of customer value. Accordingly, deploying servitization processes are evaluated against several key success factors. Additionally, the real estate organization reflects on the outcome of the previous stages of servitization to the next one by looking at facts regarding the health of formulation and implementation processes; looking for more development; and improvements that govern the success of a servitization strategy and project delivery. The second key issue is measuring the effectiveness of servitization strategy. Organizations appraise the strategic outcome of servitization against several keys such as competitive advantage, customer attraction, sales growth and customer satisfaction.

Thereafter, the project-services system is a repeatable process based on an incremental approach of continuous improvement and on-going learning process. The process of offering service enhances organizational knowledge. This includes close customer relationships, which in turn facilitates the continuously improvement of superior project-service systems. The cycle continues by identifying the optimal service approach to implement the next level of the project-service system.

The real estate development industry offers services to develop a competitive advantage by offering different type of services throughout different stages of the project life cycle. These service systems should improve the synergy between product and services and add more customer value. Therefore, the success of servitization in real estate development is described by three interrelated aspects (Figure 6-4). These relate to managing customers, service provision and project management. Several initiatives related to these three aspects contribute correspondingly to the success of offering services in real estate development projects.

Figure 6-4: Factors Affecting Servitization Success into Realty Projects
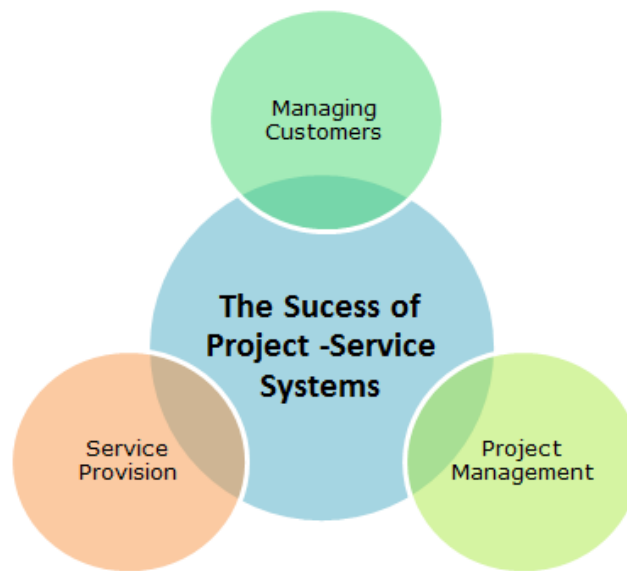
Customers are the most important component of a combined project and service provision strategy. Fulfilling their needs is considered the key success factor, and customer satisfaction is the main criteria used to evaluate the success of the service provision strategy. Real estate firms need to manage customer expectation, customer long-term relationship and custom interaction.

In addition, both project and service are inter-dependent. Neither service nor project could be disregarded without one affecting the other. As a result, servitization strategy needs developing based on sustainable cooperation between project operations and service provision. Therefore, the most appropriate critical success factors are those supporting the

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synergy between service orientation and project operations management. The project-service systems should be developed by systematically balancing product innovation and service innovation and benchmarking best practices. Offering services should be linked to organizational capabilities and arranging for developing the additional capabilities needed for service provision. Offering services requires commitment from executive management and communicating to other organizational members, the importance of meeting customer satisfaction by providing services. The organization needs to develop effective communication and coordination. Also, it needs to minimize task variation and scope change through an effective change control process

6.5 Synthesising Key Findings and Study Conclusion

Traditionally, the real estate development industry focused their efforts on project delivery and cost reduction. The findings of this research indicate that service provision becomes a responsibility of real estate developers. Offering Service has become an essential element of the real estate development project. This necessity of servitization in the real estate development industry is pushed by customers' needs and pulled by the strategic, marketing, financial and innovation advantages available from service provision (as explained in figure 6-1 above). This study found that servitization offers a new way to compete. It improves industry operational practices, sets a new value model for customers and raises the criteria of selecting a market offering. Once services are provided, real estate development firms relinquish the idea that the value of a real estate development project is only centred on delivering the project. The deliverables of a project become an integrated process of offering basic services, advanced services and system solutions. These are offered before sales, during the execution and after project sales. The study has identified the impact of these services approaches (See Figure 6-2 Above). Each approach has its own outcome and impact on a project's performance. The real estate development needed to offer services that cover the whole project life cycle ensuring that customers perceive more value with each phase of the project life cycle.

However, this is not without challenges. The nature of real estate development projects is designed to achieve specific objectives based on high task interdependence, with high uncertainty and a limited work scope. Offering services integrated into the project increases uncertainty and broadens the project scope. Adding services requires changes throughout the organization. The real estate development organizations need to balance the service orientation with project operations management. The success of servitization in real estate development is described by three interrelated aspects related to managing customers, service provision and project management. Therefore, a real estate development firm needs

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to strategize ahead and plan carefully for offering services integrated to the project. The study suggests that the conceptual phase of the project design is the best time to design the different approaches of servitization that will be offered during different stages of the project. Consequently, this study constructs a comprehensive and reliable guide to put servitization strategy into action (see figure 6-3 above). Strategic alignment based on deliberate strategic planning is the main theme of the servitization process in real estate projects, where the adoption of servitization requires a robust balance between service orientation and project operations management. Therefore, the success of servitization in real estate development is described by three interrelated aspects. Those aspects are managing customer relationship, managing service provision and managing project operations (see figure 6-4). From this study, it can be observed that the servitization process is affected by the nature of the industry.

6.6 Research Contribution

The literature on servitization has focused primarily on the manufacturing sector. However, differences exist between manufacturing firms and project based firms such as real estate development. Each project is unique, with specific objectives, a definite scope and limited resources. Each project consists of temporary activities that require high coordination. These activities have programmed start and end times.

A gap exists in the literature on servitization in the real estate development industry, and this research attempts to contribute to the knowledge of this area. This research filled these gaps by investigating the aspects of servitization strategy in the real estate development sector based on collecting empirical evidence from Jordan. Accordingly, this research has several important implications. The study contributes to the body of knowledge. These are academic literature; theory; research methodology; and finally an improvement in managerial practices.

6.6.1 Reflection on the Literature

There are knowledge shortfalls in designing and managing servitization strategies (Neely et al., 2014). "More research is needed to study service strategies in an even wider range of industries … only limited knowledge is available about the phenomenon in developing countries" (Gebauer et al., 2012b, p123). It is compelling to investigate whether servitization could be seen as a suitable strategy for organizations throughout developed (post-industrial) economies. Also, it would be interesting to see how the differences in operational environment between countries and industries influence the possibilities to

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servitize (Turunen & Finne, 2014, p. 605). Accordingly, the study contributes to the existing literature in terms of the following aspects:

- To our current knowledge, this is the first attempt to apply the servitization concept within the real estate development industry in Jordan. The study extends the concept of servitization to the real estate development industry, highlighting the difference between product manufacturing and project operations. The study findings present how the focus in a real estate development business is changing from the execution and delivery of building projects, to deliver systems of services integrated into the project that together are capable of adding more value for customers.

- Existing literature identified two main approaches for adopting servitization. Those approaches are the full integration approach (Nuutinen & Lappalainen, 2012) and complete separation approach (Kinnunen & Turunen, 2012). This study has developed a new approach to the adoption of a servitization strategy, which is the balanced orientation approach (Figure 5-1) Chapter 5. Accordingly, this study developed the servitization deployment model in real estate development integrating the service provision strategy with project operations management (Figure 6-3 above).

- This study developed four categories of servitization in real estate development and identified the value chain of servitization strategy based on these categories (Table 6-1) and figure (6-2). This model replaces the traditional value chain of real estate development projects.

- The existing literature of servitization suggested two main methods to meet the challenge of servitization and facilitate organizational change. Those are evolutionary change (Kinnunen & Turunen, 2012) and revolutionary change (Brax, 2005 and Nuutinen & Lappalainen, 2012) (Section 5.4.7 in the discussion chapter). This study suggests the apparent change is a more suitable change method to meet organizational change. The study also developed a model that guides this kind of change methodology in the real estate development industry (see table 4-25 chapter 4)

- The existing literature of servitization has identified three types of service paradox and those are cost-profit paradox (Gebauer et al., 2005), sales growth paradox (Visnjic & Looy, 2013c) and branding paradox (Nenonen et al., 2014). This study has identified a new service paradox namely the competitive advantage paradox. This

study suggested that careful planning of servitization strategy to mitigate the risk of the competitive advantage paradox (Section 5.5.2 in the discussion chapter).

- Although, the importance of offering service has been extensively discussed in operation management literature, curiously, there is still a lack of attention to the dimensions of quality control system of service integrated to product within the servitization context (Mert, et al. 2014). This study has identified the characteristics of servitization quality control system (Section 5.4.5 in the discussion chapter). This study argues that organizations need to develop a quality control system that combines both product and service characteristics; where both the tangible and intangible features have to be considered. Measurements such as product quality conformance and product specification criteria are essential to control project time, scope and cost; enhance resource utilization; and minimise waste. Still, customer relationship management is vital to enhance customer satisfaction and ensure best performance delivery. Therefore, a servitization quality is described using three interrelated aspects; the product, the service and the system. Those aspects represent the required quality to satisfy customers' needs and to meet their expectations.

6.6.2 Reflection on Theory

The existing literature of servitization referred to different management theories to explain the sources of servitization competitive advantage such as Market-Based Theory, Dynamic capabilities Theory, Service-Dominant Logic and Value co-creation approach, Organizational Learning Theory, Network-Based View, Knowledge-Based View and Resource-Based View Theory (Eloranta & Turunen, 2015)

This study adopted the Resource-based View Theory as a theoretical lens to develop insights into how offering service develops a competitive advantage in real estate development. This study found that offering services reconfigures the resource of the real estate development firms to offer more value for customers. Offering services develops distinct capabilities required to achieve competitive advantage. The study identified three main sources of this competitive advantage (section 5.7.1 Chapter 5).

- Based on servitization, the value chain of a real estate development project becomes as the organizational activities of offering services systems that integrate both the project component and services. These systems capable of adding more value for customers and developing a competitive advantage by converting the industry

competences and develop strategic capabilities to meet the necessary requirements in the industry and compete in a given market (Figure 5-2).

- The study shows the competitive advantage is obtained by linking servitization strategy to project operations management. This means that offering services must be consistent and tied to project operations management based on full alignment and a robust link. This link is vital to convert operational capabilities to criteria that will develop a competitive advantage and lead to market success (Figure 5-3).

- The study also shows that organisational knowledge and the on-going learning process is a base for competitive advantage. Offering different types of services influences the type of knowledge that organizations gain by having a closer customer relationship. This knowledge converts the organization capabilities and improves organisational effectiveness in managing the other resources to quickly response to customers' needs and proactively deal with customers' future requirements (Figure 5-4).

In additional, from the perspective of the Resource-based View Theory, this study affirms that organizations are different, and different organizations require different operational processes. The study illustrates that the servitization process is different in real estate development and reflects the nature of the industry.

6.6.3 Reflection on Research Methodology

Servitization is not any easy strategy to be examined (Baines, 2013). It is a multifaceted and complex phenomenon that is unclearly defined and combines several perceptions (Lay, 2014). The traditional study approaches are not satisfactory to gain an in-depth understanding of service provision practices, nor are they satisfactory to capture robust evidence and mutual agreement (Baines & Shi, 2015). Therefore, this study was carried out based inductive reasoning approach and an incremental iterative design. This design included the thoughts of the Delphi technique. The selected reasoning approach was used to identify the categories of servitization strategy in a comprehensive way, while the iterative design and the concept of the Delphi study were used to reach categories saturation, and develop mutual agreement. In addition, several articles addressed the state-of-the-art of servitization via a systematic literature review. However, a traditional systematic literature review of servitization is a complex and difficult process (Hou & Neely, 2013). The study used a partial systematic literature and network analysis by following the works of three research groups using citation and co-citation matrix. By this means, the main research keywords and servitization categories were identified. Then, the study let the central categories emerge from the academic literature. This research design was found to be very

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useful to address the complexity of a servitization strategy. The study recommends similar research data collection and analysis design that allows for an effective exporting and a deeper understanding of servitization as a research topic.

6.6.4 Managerial Implications

This research promotes the servitization strategy to real estate policy makers. The study provides real estate developers with guidelines for adopting servitization successfully and building a competitive advantage in real estate sector based on offering services. The study provides an insight into the factors that drive success when adopting servitization in real estate projects. It indicates that both strategic consistency and deliberate strategic planning are the core of successful service provision. The study identified the strategic opportunities, drivers, barriers and the critical success factors when offering services. Several frameworks were developed to support the practitioners' activities to develop a successful service offering strategy including a framework to guide the change process to support the balance between service orientation and project operations, as well a road map for deploying a service provision strategy.

6.7 Research Limitations & Recommendations for Future Research

Despite the robust research design, this study has some research methodological limitations. One of the main limitations is that it is an exploratory study investigating servitization strategy in the real estate development sector, which was conducted to build evidence, based on a qualitative case study strategy. This is not generalizable in the traditional sense, and needs to be tested using a larger sample to ensure that the results could be generalized.

Also, the bulk of the data were collected in Jordan, highlighting important factors that influence the servitization of real estate development. Although many of the study results are case specific, still, these results could be used as a model for studying the real estate development industry in a similar content and could be extended to other countries. In addition, it could be helpful for underpinning study of other project-based industries. Further research is required to confirm the research findings through a quantitative study and more in-depth research focused sectors needs to be carried out which focuses on other sectors.

Finally, the holistic research design made it difficult to explore the aspects of servitization strategy in more depth. These aspects need to be tested with more focus. Still, the study

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provided a comprehensive review and a platform base on which more in-depth research into other focused topics of servitization n could be carried out later. Also, the single case study design does not show the differences between the various real estate development companies for which a comparative case study research is required. In addition, it should be admitted that no individual research could claim to encompass all aspects of such a complex topic without further exploratory research.

6.8 Learning Experience

Conducting research is challenging and exciting at the same time. During the past three critical years, several lessons have been learnt, particularly, the importance of developing an overall picture by taking a step back and looking at the picture as whole. Furthermore, the importance of having an informed external eye to give a different perspective is a great way to move forward. Planning and making an informed decision is an important lesson that has been learnt. It is important when selecting a choice from different possible alternatives to thoroughly investigate and evaluate them before making any commitment to a particular approach, method or technique. Another great lesson is finding out that everything has its pros and cons. There is often no best solution. Both advantages and disadvantages should be considered and evaluated to mitigate risk. Finally, although PhD research requires a great deal of focus and commitment as well as hard work and dedication, it is also a highly rewarding and fulfilling experience.

6.9 Chapter summary

This chapter described the overall study project, and outlined the previous chapters. The chief aim of this chapter was to answer the research questions, provide a conclusion to the research project, outline the research contributions, address the research limitations, and suggest recommendations for further research.

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Appendices

Appendix 1: The Delphi Round One's Interview Questions

1. What are the important features and characteristics of offering services bundled to the products rather than pure product?
2. What are the reasons behind adopting the offering service strategy? i.e. the motivation for offering service.
3. How was the offering service strategy designed? i.e. the factors that influence the type of service to be offered.
4. What are the main challenges/risks of offering service that the company faced?
5. How did the company overcome those challenges?
6. As you know, service and manufacturing are different processes. What are the required changes in terms of organizational capabilities, organizational structure, organizational culture and operational process based on different levels of service types?
7. How are these changes and requirements being managed?
8. What do you think is the optimal level and extent that the organization should be offering service for? i.e. offering service related to the products only or service related to customers actions and should these service be based on standard service or advanced service or even more advanced service to be a service provider.
9. What benefits have been achieved from offering services?
10. How does offering services impact the organizational performance?
11. How did offering service influence the organization's relationship with their customers?
12. How did this new relationship re-influence the organization activities and strategic decision making?
13. What does the organization think about the customers' implications of receiving different level of services offering?
14. How did the marketing orientation through offering service bundled to the product impact on the organizational learning curve, the organizational innovation capability and the organization future strategic decisions?
15. What do you think that could be done better in the decisions of offering service and the operationalization processes? And how is that?
16. Based on your opinion, what other aspects related to the service offering could be mentioned or have positive affect?
17. What advice can you give the organization to manage their market position more effectively in the future?

Appendix 2 : The Delphi Round Two's Interview Questions

1. Overall, could you perceive offering service integrated to product as a viable business option? i.e. do you think offering service strategy is an appropriate strategy for the real estate development sector in Jordan ? Why?

2. Do you think that offering service strategy will be more effective when service factors become the core element of the production process, or when service is viewed as the supporting element of organizational activities? i.e. What is the appropriate strategic level for offering integrated services in the real estate development sector?

3. What do you think is the proper stepwise process of servitization? i.e how the project based business companies in Jordan should start with offering services and where to end.

4. In offering service strategy the organization has to change from focusing on project time, cost and quality to focus more in customers' needs and satisfactions, and handling the high customer involvement process? So, should the real estate development organization focus their orientations toward customers or toward project management? And why? · How the organization could reach that level of change?

5. In offering service integrated to the product the strategy works differently based on the type of services and the market segment. What do you think are the critical success factors for offering service in real estate development sector in Jordan?

6. What do you think are the characteristics of an effective control system based on offering service?

Appendix 3 : A sample of research participants' characteristics

Job Title	Qualifications	Profile
CFO, Chief Financial Officer	Bachelor of Accounting (1990). CFM, CMA and CAP certificates.	An executive manager with more than 30 years of experience, responsible for financial control and planning of the HC₂, and its projects. An expert in areas of business improvement and development and long term strategic planning
Deputy CEO for Industrial Investment	Degrees in Engineering (BSC). Construction and Production Management (MSC), Finance (MBA) and other from The George Washington University (1977 - 1983).	More than 30 years of experience, of which were as a General Manager/CEO level at different Investments companies, Industrial entities and logistics companies as well as Real Estate Development companies.
Deputy CEO for Marketing and Sales Affairs	B.Eng. in Electronic Engineering form King's College, University of London, a M.Sc. in Communications Systems from University of Wales at Swansea, and an MBA from Concordia University of Montreal.	An executive and business leader with over 20 years of work experience across the Middle East, Canada, and the USA. His experience spans areas including information technology, marketing, and project management serving public and e-Government, healthcare, and e-health sectors.
Chairman Office Manager	Banking and Financial Sciences	An executive assistant organising all of the administrative activities that facilitate the smooth running of the chairman office. Provides executive assistant to the Chairman and CEO in an effective and efficient manner. Coordinating meeting operations and procedures in order to ensure organizational effectiveness and efficiency.
Projects Executive Director	Bachelor of Civil Engineering, (1981)	An executive director with over than 30 years of working experiences in realty projects.
IT Director	Master Degree Computer Information System Project. Bachelor of Science Computer Science Management. Certified Project Management Professional (PMP). Enterprise Resource Planning (ERP). Certified in Managing Microsoft Dynamics	An executive director responsible for systematic planning and monitoring of organizational information technology. Demand for quality and efficiency; Calculated risk taking. Managed successful ERP implementation projects. Streamlined operational procedures and production processes, improving efficiency and minimizing costs. Analysed, designed and re-engineered business processes covering

Projects (Sure Step). Business analysis and process re-engineering.		several operational and functional areas (Accounting, HRM, AP, AR, FA, Budgeting, CRM & Constructions operations.
Bachelor's Degree in Economics & Finance science.	Marketing Director	An executive director who used to supervise all the required and a comprehensive marketing plan in order to successfully complete the establishment. Supervise the Setup of five years strategic plan on corporate level, functions, and organization levels using balance score card methodology. Supervise setting new organization structure conforms to strategic plan objectives. Supervise the capacity building of depts. Manpower and sections.
MSc. (Hon), Marketing, Huddersfield University, UK, (2003). BSc. Applied Math, San Francisco State University, USA, (1986) Project Management Certification (CPM), IAAPPM, USA, (2007)	Sales Director	Highly qualified and well-rounded professional with over 30 years of international exposure in sales, marketing, and service management in industries like real estate development, auto , education, management consulting, learning & development. Performance focused with effective and proven ability to turnaround troubled sales, marketing, and service operations, proactively identify and resolve problems, reverse trends, maximize productivity, and deliver multi-million dollar revenue increase. Strong knowledge and understanding of the target markets and products bringing added value and resources to the sales process resulting in market share gains.
BA. Business Administration, 1992	Purchasing and Logistic Director	An executive director who used to handle all purchasing activities of a group of companies. Establishing and Managing warehouses and the delivery processes leading to optimum space utilization and smooth operations. Establishing and maintain a modern and efficient procurement and inventory system. Build a strong relationship with the main suppliers of building and various materials in the local and international market.
BA, Accounting CPA CMA	Projects' KPIs manager	Extensively experienced and goal-oriented Finance professional with over than 16 years experiences providing leadership and coordination of company financial planning, analysis of financial reports , budget management functions and ensure company accounting procedures

		conform to IFRS with reputed organization.
Bachelor's degree, Business Management Certificate, Evidence Based Performance Measures (EBPMs)	Senior Strategic Planner	A professional in the field of Organizational Development. Applying knowledge and competencies to improve and enhance organizations' bottom line. Specialties: Strategic Planning, Business Planning, Business Development and Change Management.
B.Sc. Computer Science (1997) PMP, Project Management Professional (2013)	Senior Strategic Planner	Over 15 years of background experiences of Project management & IT Service Management ; Certified as Project Management Professional, PMP; Vendors Management ; Negotiations and influence ; Solutions evaluation; Planning and Budgeting ;Team Building and Working in Virtual team . His education and experiences have afforded him key skills in requirements analysis, budget control, team building and management, project planning, customer relationship management and implementing IT solutions to improve business efficiency, with a proven excellence in service management consistent with ITIL standards.
Bachelor's Degree	Senior Marketing consultant	An executive who use to plan and implement and evaluate the companies' marketing campaign in related to the market conditions, competitors and customers
Master, In Business Administration . BA, Computer Science.	Quality Manager	A department manager with 15 years of experience in various supply chain management sectors, leading change in work place and influencing many through training & field coaching. He used to evaluate input and output quality though monitoring the performance of the entire supply chain
Bachelor's degree, Hotel management, (1997)	Logistic & Admin. Manager	A department manager who manages all administrative tasks to run the required operations. Supervising smooth operations in all means of transportation. Ensuring quality and safety in the workplace affecting the health and safety of employees and visitors. Ensuring all customs procedures are followed. Managing all aspects of the warehouse and team Organizing Providing adequate customs information for each project. Liaising with subsidiaries for any logistics arrangements & requirements.
Bachelor's degree BSC, Civil Engineering	Project manager	A project manager who is responsible to ensure the project is completed on time and within budget, that the project's objectives are

(1981)		met. Preparing the site and liaising with other construction professionals such as architects, engineers, buyers, estimators and surveyors before construction work starts. He has more than 30 years experiences on construction Management; Project Management; Consultancy; Structural Design; Project Planning; Procurement; Projects Director; Claims' Expert.
Bachelor's Degree, Mechanical Engineering , (2000) Member of Project Management Institute (2011)	Subsidiary Manager	An executive manager who used to run one of subsidiaries , his responsibility include Business Plan, and annual operations plan; clarifying potential business opportunities and anticipated P&L. Organization Structure, Budgeting, Vendors evaluation. Selection of management automation systems (Software), process mapping. Setting KPIs. Designing marketing campaigns, tools, and sales strategies. Directing the business. Established and directed Commercial, Planning, Projects Management and Engineering, Production, Installation, maintenance and QA/QC departments for all business units. Reported long-term strategies to the BOD: five year plan.
Corporate and Financial Law, University of Derby, UK, (2015). Awarded the License in Practicing Law, (1999). LLB in Law, University of Cadi Ayyad, Marrakech, Morocco (1995).	Head of Legal Department	A head of department that used to provide legal advice management on all legal, regulatory and corporate governance issues. Legal planning and regulations, including reviewing mergers and acquisitions. Negotiating and advising on commercial and residential property transactions, infrastructure agreements with regulatory authorities, land acquisition and project disposals, project structuring, development and funding, including joint ventures. Identifying and advising management on legal risks, working with management on developing new strategies for project development, leasehold strategies and providing in-house training on changes in laws and effects on the business. Drafting precedent contracts for plot and unit sales, retail and commercial leasing, retail strategies, agency, marketing and brokerage agreements, retail and mall management agreements, outsourcing arrangements, events management and sponsorship arrangements. Corporate Compliance for Subsidiary as per the requirements of Securities and Exchange Commission. Liaising with external Council regarding Corporate Compliance related matters.