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Urban and architectural strategies for the new green towns

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Fig. 1 Aero-picture of Shanghai and its islands (top left).  
Fig. 2 Master plan of Chenjia Town (top right).  
Fig. 3-4 Photos of Chong Ming island.



## Abstract

Obiettivo del workshop internazionale ospitato dalla Tongji University di Shanghai è stato la progettazione di una città ecologica di nuova fondazione per 40 mila abitanti sull'isola di Chongming, collegata recentemente alla terraferma con nuove infrastrutture viarie e ferroviarie. Il tema è stato approfondito tenendo in considerazione le esigenze già espresse in termini di politiche insediative, sociali e urbanistiche e finalizzate in un masterplan che i partecipanti hanno però liberamente modificato, elaborando cinque diversi modelli urbani.

本文介绍了帕维亚大学在本次由高级学术学会与同济大学联合举办的国际建筑设计研讨会“城市文化与景观更新”中所作的学术研究与教学训练的部分成果。文章并非仅仅对方案进行简单的罗列描述，而是详细阐述了各学生小组在城市最佳实践区项目中所取得的设计研究性成果。这些成果不仅有助于发现当今上海城市发展产生的问题，而且为新的建筑研究方向奠定了基础。

The International Design Seminar (IDS) “Urban Culture and Landscape Renewal” was hosted, for the second time since 2005, in CAUP – College of Architecture and urban Planning of Tongji University in Shanghai. The IDS was back in Shanghai after 5 years, expanding interest and project topics’: while in 2005 the participants designed the masterplan of the Expo 2010, in 2010 the topics concerned the renewal of the area of the Expo but also the design of a new “green town” (XV edition). The format of the International Design Seminar is thought, thanks to the two co-directors Prof. Angelo Bugatti and Prof. Zheng Shiling, to maximise the cultural exchange of participants and to share the design activities: that is why of some choices as to draw by hand and produce at the end a set of tables in a predetermined format as if it is a design contest. In particular the workshop activities, which were attended by 40 students from five different Universities divided into six international groups, was aimed at urban and architectural planning of a new city for about 40.000 inhabitants on Chongming Island. The theme is of fundamental importance for the development of the urban region which includes Shanghai and has been debated in many venues since the end of 90s: the idea of designing some small town functionally independent from the “great” Shanghai is part of possibility of finding alternatives to the satellites town for 1 million inhabitants.

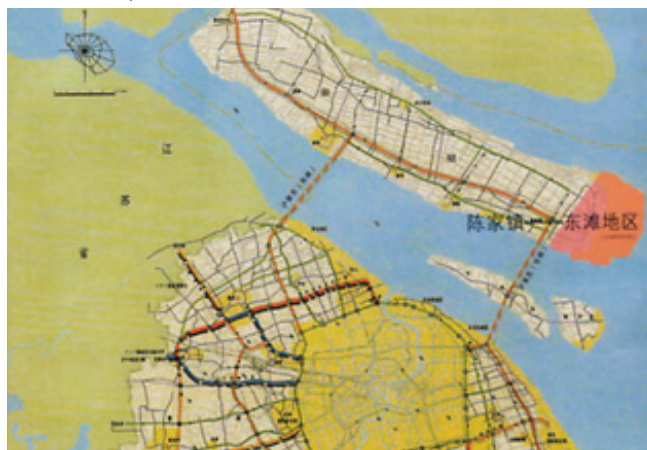
Designing a new city imposes some preliminary choices, also concerning transportation and urban design, that derived to existing studies or infrastructural projects already approved and sometimes already under construction. Some students also approached the urban part of project theme in Urban Design Course of Italian Chinese Curriculum of Master Degree





Fig. 5 Masterplan of full Shanghai territory (top).

Fig. 6 Location of Chenjia Town together with Dong-Tan Area (East End of island).



Course in Building Engineering and Architecture of University of Pavia which was held by Professor Sha Yongjie from Tongji University of Shanghai.

This preliminary work was essential to situate and calibrate the needs of customers (government and municipality), to understand the need in terms of functional system, to realize the expectations of inhabitants and of a territory that have a lot of social and economic differences from other realities and in particular from the western ones.

What are the social needs which the urban planning must correspond to?

What is the existing territory's future development (also a social terms) partly inhabited by poor people?

What are the expectations of future citizens of the "new towns"? What are the working and social-economic outlooks? These questions represent a matter hardly resumable in synthetic terms, and which only a few expert and operators can give an adequate response: but it is clear how they are a set of essential issues influencing also the architectural "matter". Architecture should pretend to be an experience at service of society's needs: the separation among a range of needs and social issues can just put it out of real life, made also of aspirations, needs and hopes. "Better city, better life" that is motto of Expo 2010 which all participants visited, resume part of these objectives and in fact could also be the motto of the International Design Seminar.

I am strongly convinced that the work done during the workshop within Tongji University campus can contribute very much to deepen these issues. The project developed by groups of international students, of course, do not take into consideration many topic like the relationship with the developer and the economic issues. So they do not represent a realistic project in the sense that it should be feasible for the market. But these attempts show a different way of representing urban possibilities to attend the needs of people.

Considered these necessary conditions is useful to return an overall picture of the projects developed during the workshop: six different strategies that define several urban models which

can be a reference or a start point for further processing.

Design strategy 1: The underground "ideal City".

This project deals with an innovative concept of new town as "foundation" act, proposing to build a settlement largely underground at least for the collective functions, while housing is located on the artificial reliefs which reclaim soil digging. A particular distribution structure allows to imagine a perimeter road network, also underground, while the urban functions are distributed around patios that take air and light from above. The ground is thus preserved and recovered for agricultural use, while the urban sustainability is guaranteed by use of geothermal energy, biomasses, recovery of rainwater and lower energy impact of underground buildings.

Design strategy 2: An urban settlement in harmony with nature.

This project deals with the trial of relationship between nature and town. On the contrary of what usually and historically have been done, by defining a sharp boundary to the urban settlements, the project deals with the existing pattern of agricultural fields and the relationship between housing and agricultural activity. The understanding of this relationship let the designers imagine a new kind of settlement, into which nature and urban features are linked together. It is the trial for a new idea of human settlement that organizes itself accordingly to landscape dimension and to nature rhythm and shapes.

Design strategy 3: the Town along the infrastructural axe.

The project deals with a very clear spatial organization, that is both referred to the site and to the general masterplan on the Chongming island. In fact the new development of the territory includes an infrastructural axe with highway and fast railway system. The masterplan organizes the town along this linear axe with large urban spaces faced by the main collective function, and also the main square of the settlement. This project represents a model of linear city, as it could be extended even far from the site perimeter. Starting from clear references in the western architectural debate (EUR masterplan in Rome, 1942,

or even La Defense in Paris) this project develops a urban idea that is as much clear as it is present in history of towns.

Design strategy 4: a water canals Town.

Starting from the context that is agricultural and with many canals, this project develop the idea of an urban settlement that is set along some canals that are both landscape elements but belongs also to the infrastructural net. The ecological feature of this town is strictly linked to the water treatment, through innovative hypothesis in terms of cooling and microclimate benefits. History of town and architecture shows, both in western and eastern cultures, different techniques for building along the water (Venice, Amsterdam, Copenhagen but also Zhou Jia Jiao or Suzhou).

Design strategy 5: the Linear City as mega-structure.

This project deals with the hypothesis of working with big shapes, and particularly with the idea of collecting all of the functions inside just one building. This urban idea has some strong references both in super structures or mega structures developed in the Sixties, and in OMA/Koolhaas Bigness. Some recent realizations as for example Steven Holl's Vanke Center in Shenzhen also evoke the horizontal development of these complex kind of buildings. The urban strategy stresses the existence of a dense built portion of the site, that let the most of the surface to be used for ecological uses as agriculture and green areas.

Design strategy 6: reinterpreting the traditional Chinese Town.

This project works very strongly with traditional dwellings typology, the courtyard house, to develop an urban idea that is close to historical Chinese towns like for example Suzhou. Starting from a basic grid of urban settlement the masterplan deals with housing neighborhoods, green areas and landscape elements like water canals, public and collective functions or spaces. The result looks original and contemporary, even if the strong reference to the history makes it perfectly comprehensible.