University of Huddersfield Repository

Haq, K. A., Ward, Rupert and Wilkinson, Julie

Preliminary frameworks and models for telework maturity within organisations

Original Citation

Haq, K. A., Ward, Rupert and Wilkinson, Julie (2012) Preliminary frameworks and models for telework maturity within organisations. In: Proceedings of The Queen's Diamond Jubilee Computing and Engineering Annual Researchers' Conference 2012: CEARC'12. University of Huddersfield, Huddersfield, p. 147. ISBN 978-1-86218-106-9

This version is available at https://eprints.hud.ac.uk/id/eprint/13483/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

http://eprints.hud.ac.uk/

Subject: Telework maturity within organisations.

Research: Teleworking: a feasible, productive and complementary solution in the competitive market? An exploratory study within local councils of the impact of teleworking in terms of maturity to the translation, transition and transformation of working practices.

Team: Khawaja Al-Musavar-Ul Haq (khawaja.haq@hud.ac.uk)
Supervisors: Dr. Rupert Ward and Ms. Julie Wilkinson
Pedagogical Research Group, Computing and Engineering

University of Huddersfield

Stage 1

Qualitative frame

Telework is a binary model of non-ICT work. Telework is a three-part framework: i) work that is, process, product and/or output of a digital form; ii) created out of digital environments of space, place and time; iii) with resources that is, paper, writing, audio and video applications of a digital form. Telework thus, is a transformative work practice and one that is, to a level of significance, equal to, an enhancement of, or an improvement to, the pre-transformative state of that work. Telework would be alternative and/or complementary to job function(s). Examples of process and output transformations include: writing to typing, paper reports to digital documents, filing cabinets to databases and human interaction within the physical framework to online interactions within digital frameworks such as emails, forums, bulletin boards, VoIP (Voice over Internet Protocol) and streaming video. Compared to non-ICT related work forms, telework as per technological infrastructure is unique in terms of three concurrent, aspects: i) the capability to work at relatively higher standards of continuity that is, at any time as per asynchronous communication, to connect, operate and interact with others, ii) the capability to work at any place most notably, at a distance from the designated or traditional, office place and space, and iii) at a minimum, akin to, or consistent with organisational standards of non-ICT process, product and/or output.

Impact measurements

Stage 2

Metrics and KPIs within qualitative frame

Qualitative units of telework as per above represent identifiable units of working practice with an organisation such that we have parameters within which to target our investigation. Councils would be representative of potential case studies for research, owing in large part to, metrics and KPIs that are established within this sector as per government protocol. Metrics and KPIs would provide a measure of output and thus feed our research in terms of the impact of telework for an organisation. We would further posit data in a meaningful form in terms of themes and taxonomies.

Stage 3

Language application

Telework maturity

Whilst teleworking is not a new concept or reality (World at Work, 2009. Cited In: Sener and Bhat, 2009, p.1) over many years it has not delivered widely in terms of modernisation of the workplace (Pyöriä, 2011, p.386). Exponential growth of technology in terms of adoption rates and advancement has each contributed to and cemented the infrastructure layer (*see* figure 2) of the transformation process). Today, the infrastructure layer has materialised to the extent that it would now present a sustainable platform for teleworking to exist in terms of longevity. As the size of each macro level layer correlates to time, subsequent layers would be formed in decreasing time scales. To avoid being left behind, the focus for teleworking now switches to strategic and human resource capabilities within the organisation to adopt and implement teleworking sooner rather than later, in order to maintain position and continuity ahead. Early positioning may also be a potential source for competitive advantage. We do understand that in any type of change we may also be met with resistance or restraining forces to change. There can be a number of restraining forces that decelerate rates of growth. At a macro level, organisations may seek a level of governance in terms of employment contracts and agreements to establish telework as an official working practice. Governance (*see* Gruber, 2010) would form two functions: firstly, a protection mechanism that is, to make official, the teleworking infrastructure that is available to, and operating to the benefit of the organisation. Secondly, to promote and create an environment that is hospitable to telework that is, an alignment to a community of teleworking practice, namely, layer 3. Thus, governance would be a driving force of change. The transformer model would be a key tool for an assessment of the maturity of an organisation to telework in terms of viability and feasibility.

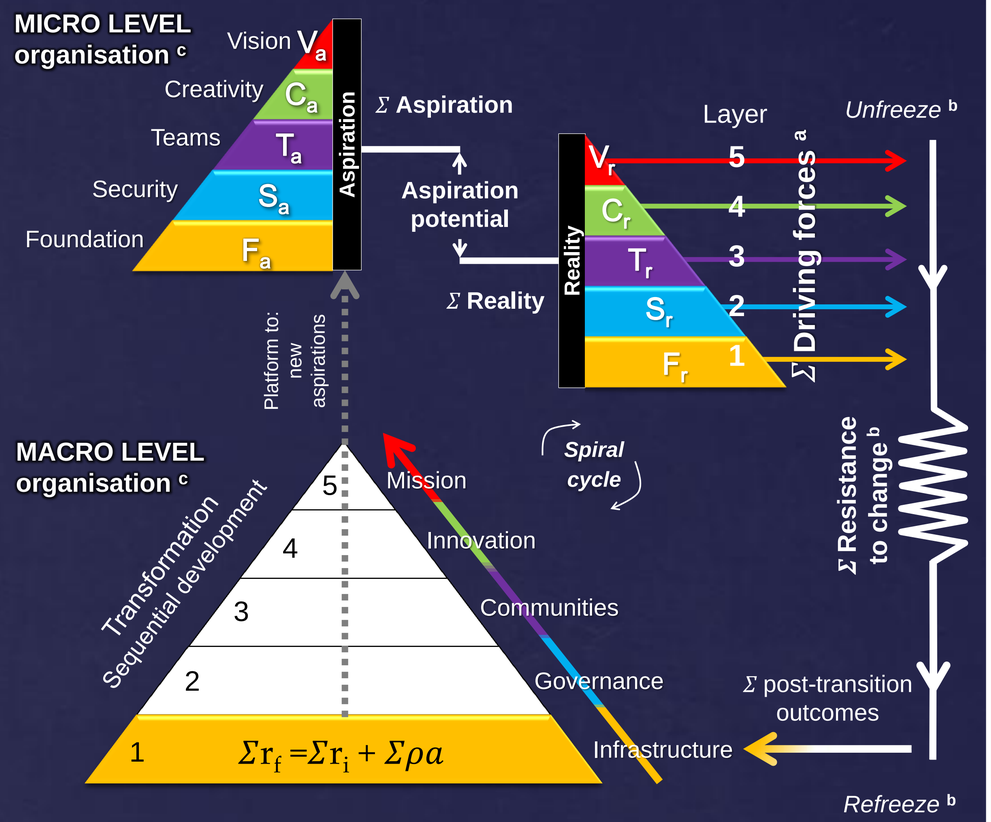

Figure 2: Transformer model
Source: adapted from [a] Lewin (1951a); [b] Lewin (1951b) and [c] Maslow (1943)

Stage 4

Capability assessment

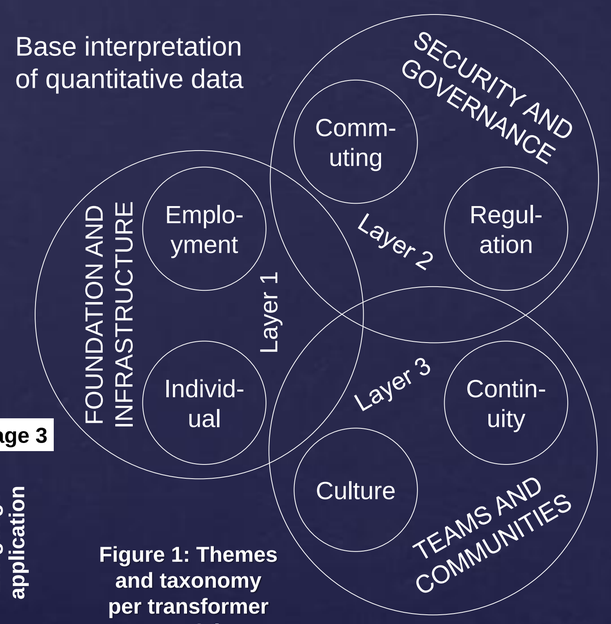

Figure 1: Themes and taxonomy per transformer model

Themes and taxonomy

Taxonomy of telework would add to existing literature as there is no common framework of terms other than three broad categories namely, individual (human resource), organisation and environment (*see* Daniels et al., 2001). Taxonomies (figure 1) are derived from a review of literature and reflect the existing state of telework. Taxonomies would provide a standardised and applicable framework in terms of language for interpretation of research conducted at any given organisation. We find impacts of telework (as reported), to be consistent with the three themes or categories aforementioned. However, we draw an alignment of these themes to the meta-model (figure 2 above) and substitute each of the three themes with the first three micro and macro level layers (figure 1 opposite) namely: 1) foundation and infrastructure; 2) security and governance; and 3) teams and communities, respectively. Within each of these themes exist taxonomies at high and low levels. There are six high level taxonomies (figure 1) namely: individual, employment, culture, continuity, commuting and regulation. For each of these taxonomies there are, at least six low level forms. In this poster, we posit one low level example for each high level respectively in terms of telework benefits: i) work-life balance (Shamir and Salomon, 1985. Cited In: Bailey and Kurland, 2002, pp.383-384), ii) recruitment potential (Baruch, 2003. Cited In: Baard and Thomas, 2010, p.2), iii) teamwork (Pérez et al, 2005, p.98), iv) efficiency (Hill et al, 2003. Cited In: Robèrt and Börjesson, 2006, p.522), v) time and expense (Di Martino and Wirth,1990. Cited In: Greenhill and Wilson, 2006, p.382) and vi) favourable outcomes with regard to the budget deficit (Kbest, 2010). To note, each of the low level taxonomies further divides into sub categories. We find taxonomies to be a comprehensive language form; to utilise with regard to case analysis and findings. Furthermore, we utilise a transformer model (figure 2 above) to assess data and feedback to stakeholders of an organisation.

References

BAARD, N. AND THOMAS, A. (2010) 'Teleworking in South Africa: Employee benefits and challenges', *SA Journal of Human Resource Management*, Volume 8, Number 1, pp.1-10 [Online] Available at: http://sajhrm.co.za/index.php/sajhrm/article/download/298/242 [Accessed: 18 December 2010]

BAILEY, D. E. AND KURLAND, N. B. (2002) 'A review of telework research: findings, new directions, and lessons for the study of modern work', *Journal of Organizational Behavior*, Volume 23, Issue 4, pp.383–400 [Online] Available at: http://onlinelibrary.wiley.com/doi/10.1002/job.144/abstract [Accessed: 26 December 2010]

DANIELS, K., LAMOND, D., AND STANDEN, P. (2001) 'Teleworking: Frameworks for Organisational Research', *Journal of Management Studies*, Volume 38, Issue 8, pp.1151-1185 [Online] Available at: http://dx.doi.org/10.1111/1467-6486.00276 [Accessed: 30 December 2011]

GREENHILL, A. G. AND WILSON, M. (2006) 'Haven or hell? Telework, flexibility and family in the e-society: a Marxist analysis.', *European Journal of Information Systems*, Volume 15, Number 4, pp.379-388 [Online] Available at: http://search.proquest.com/docview/218766018?accountid=11526 [Accessed 06 November 2011]

GRUBER, A. (2010) 'House sends telework bill to Obama', *GovernmentExecutive.com*, 18 November [Online] Available at: http://www.govexec.com/story_page.cfm?articleid=46551&dcn=todaysnews [Accessed: 21 July 2011]

KBEST (2010) 'Telework bill just a signature away', 2nd December 2010, Blog, *Federal* [Online] Available at: http://blog.tandberg.com/publicsector/index.php/tag/2010-telework-enhancement-act/ [Accessed 22 July 2011]

LEWIN, K. (1951a) *Force field analysis*. *In:* 12MANAGE (2009) *Force Field Analysis* (Lewin) [Online] Available at: http://www.12manage.com/methods_lewin_force_field_analysis.html [Accessed 04 April 2009]

LEWIN, K. (1951b) *Unfreeze – Change – Refreeze*. In: WILKINSON, J. AND WARD, R. (2009) 'Unfreeze-Transition-Refreeze', Change and Project Management CMI 3417, *University of Huddersfield*, 24th March 2009

MASLOW, A. (1943) 'A Theory of Human Motivation', *Psychological Review*, 50, pp.370-396. *In*: GREEN, C. H. (2000) *Classics in the History of Psychology* [Online] Available at: http://psychclassics.yorku.ca/Maslow/motivation.htm [Accessed 23 April 2009]

PÉREZ, M. P., SÁNCHEZ, A. M., CARNICER, P. D. AND JIMÉNEZ, M. J. V. (2005) 'The synergism of teleworking and information and communication technologies', *Journal of Enterprise Information Managemen*t, Volume 18, Issue 1, pp.95–112 [Online] Available at: http://dx.doi.org.librouter.hud.ac.uk/10.1108/17410390510571510 [Accessed: 30 December 2010]

PYÖRIÄ, P. (2011) 'Managing telework: risks, fears and rules', *Management Research Review*, Volume 34, Issue 4, pp.386-399 [Online] Available at http://dx.doi.org.librouter.hud.ac.uk/10.1108/01409171111117843 [Accessed 17 July 2011]

ROBÈRT, M. AND BÖRJESSON, M. (2006) 'Company Incentives and Tools for Promoting Telecommuting', *Environment and Behavior*, Volume 38, Issue 4, pp.521-549 [Online] Available at: http://www.swetswise.com.librouter.hud.ac.uk/eAccess/viewFulltext.do?articleID=27111858 [Accessed: 28 December 2010]

SENER, I. N. AND BHAT, C. R. (2009) 'A Copula-Based Sample Selection Model of Telecommuting Choice and Frequency', forthcoming, *Environment and Planning A* [Online] Available at: http://www.ce.utexas.edu/prof/bhat/ABSTRACTS/telecommuting_29July09_unabridged.pdf [Accessed: 28 December 2010]