

Prepared for Emerging Health Policy Research Conference Program

*Need Assessment and Feasibility of Developing a
Responsive Integrated E-health System*

Prepared by

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Agenda

- The problem
- Significance
- Methodology
- Proposed reform framework
- Discussion
- Further research
- Q & A

The Problems

- *What are the unmet needs for the E-health system in Australia?*
- *How to address such diversified unmet needs through developing a politically feasible, responsive and integrated E-health System in Australia?*

E-Health: Definition

- A national approach to enable a safer, higher quality, more equitable and sustainable health system for all Australians
- Transforming the way information is used to plan, manage and deliver health services
- Facilitating electronic access, transmission and recording of health information through better use of information technology

Reference

Department of Health and Ageing (2010) e-Health: Healthcare Identifier Service, accessed 29 July, 2010, <http://www.health.gov.au/internet/main/publishing.nsf/content/pacd-ehealth-consultation>.

Also see Oh, H. , Rizo, C. , Enkin, M, Jadad, A. , and Dphil, M. (2005) What is eHealth: A Systematic Review of Published Definitions, Journal of Medical Internet Research, access 28 July, 2010, <http://www.jmir.org/2005/1/e1/>.

Whose Needs Count?

- Organisations (hospitals, nursing homes)
- Patients
- Physicians and other medical practitioners
- Case workers
- Nurses and publishers
- Policy makers
- Community

Reference

Eze, B., Kuziemy, C. , Peyton, L., Middleton, G. and Mouttham, A. (2010) Policy-based Data Integration for e-Health Monitoring Processes in a B2B Environment: Experiences from Canada, Journal of Theoretical and Applied Electronic Commerce Research, 5, 1, 56-70.

Understanding the Problem: An Institutional Economics Perspective

- Objective is to minimise the transaction costs
- Health care providers can select the governance mechanism through choosing whether “internally produce” the e-Health system or outsource it.

Reference

Williamson, O. E. (1985). The economic institutions of capitalism: firms, markets, relational contracting. New York, London, Free Press; Collier Macmillan.

Understanding the Problem: A Public Policy Perspective

- Addressing the unmet needs
- Optimising social welfare given the limited resources collected from the tax payers
- Votes considerations

Understanding the Problem: An ICT Perspective

- ICT system infrastructure, i.e. IBM e-Health and Collaboration, TIBCO
- Service-oriented integration system
- Indoor experts

Reference

IBM (2010) eHealth and Collaboration, accessed 1 August, http://www-07.ibm.com/solutions/au/healthcare/ehealth_collaboration/.

TIBCO (2010) Healthcare, accessed 1 August, <http://www.tibco.com/industries/healthcare/default.jsp>.

System Requirement

- Service-oriented
- Comprehensive collaboration and strict confidentiality
- Integration
- Compatibility with heterogeneous needs from the stakeholders

Theoretical Significance

- Using evidence-based approach in assessing the need of an e-Health system
- Applying Institutional Economics analysis on organisation design associated with the e-Health reform
- Applying supply chain approach in e-Health system

Practical Significance

- Need assessment is of great significance in policy analysis. Addressing the right needs can improve the efficiency and social equity of future E-health system.
- Given that the unmet social needs are heterogeneous and institutional context is diversified in different vocations, incorporating politically feasibility, responsiveness and integration into the E-health System can better the implementation of the new system.

Methodology

- Evidence-based enquiry and evaluation
- Strategy development based on Balanced-score cards

Evidence-based Approach

- Systematic review and Meta analysis
- Cost benefit analysis
- Impact analysis
- Experiment and quasi-experiment design
- Pilot project

Reference

Eze, B., Kuziemy, C. , Peyton, L., Middleton, G. and Mouttham, A. (2010) Policy-based Data Integration for e-Health Monitoring Processes in a B2B Environment: Experiences from Canada, Journal of Theoretical and Applied Electronic Commerce Research, 5, 1, 56-70.

Oh, H. , Rizo, C. , Enkin, M, Jadad, A. , and Dphil, M. (2005) What is eHealth: A Systematic Review of Published Definitions, Journal of Medical Internet Research, access 28 July, 2010, <http://www.jmir.org/2005/1/e1/>.

Buccoliero, L., Calciolari, S., and Marsilio, M. (2008) A mehtodological and operative framework for the evaluation of an e-health project, Int J Health Plann Mgmt, 23, 3-20.

Fingberg, J., Hansen, M., Krasemann, H., Iacono, L., Probst, T., Wright, J. (2006) Integrating Data Custodians in eHealth Grids - A Digest of Security and Privacy Aspects, In: Christian Hochberger, and Rüdiger Liskowsky (Eds.), Informatik - Informatik für Menschen, Lecture Notes in Informatics (LNI) vol. P-93, pp. 695-701.

Strategic Design: A balanced Scorecard Approach

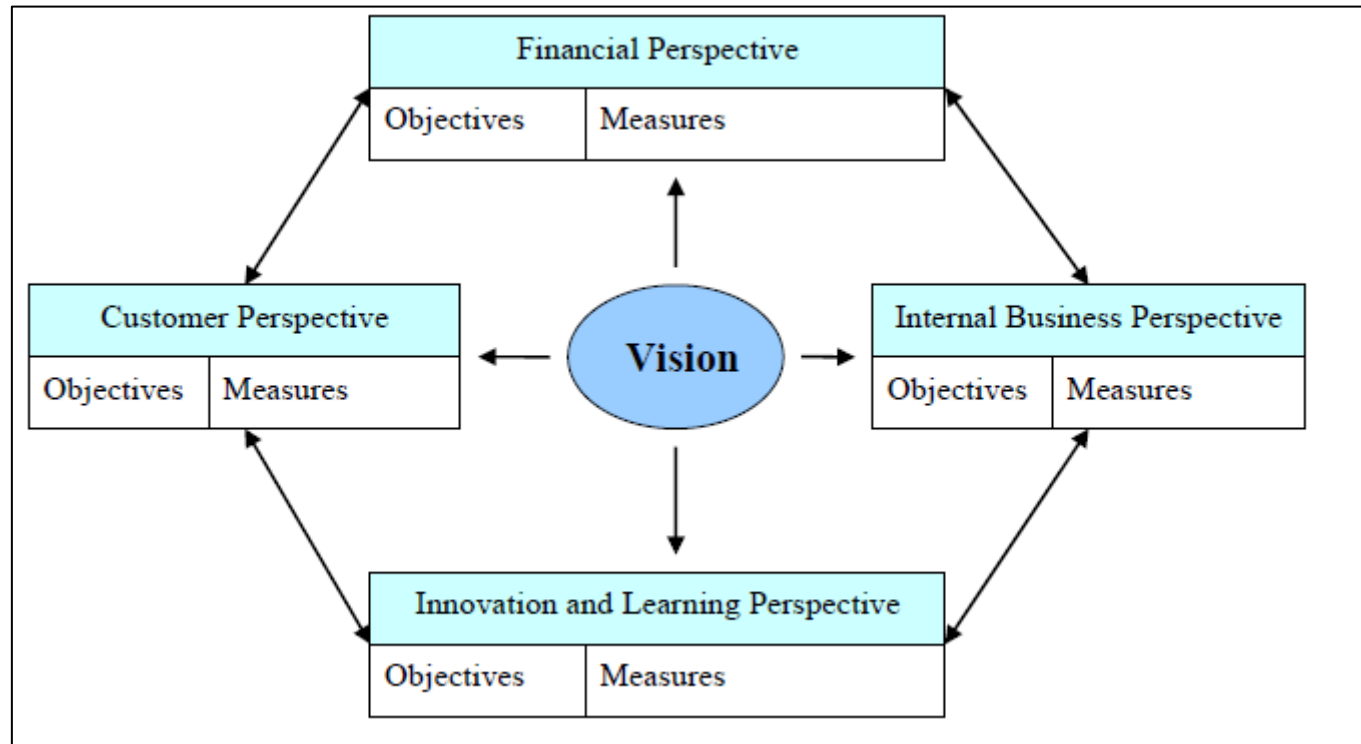


Figure 1 Original Balanced Scorecard Model (Kaplan and Norton 1992, 1996)

Reference

Kaplan, R. & Norton, D. (1993). Putting the balanced scorecard to work. In *Harvard Business Review: On Measuring Corporate Performance*. Boston, MA: Harvard Business School Press, pp. 147-181.

Kaplan, R. & Norton, D. (1996). Using the balanced scorecard as a strategic management system. In *Harvard Business Review: On Measuring Corporate Performance*. Boston, MA: Harvard Business School Press, pp. 183-211.

An Small Business Solution: Phoenix System

Supply chain management theories and practices can be applied to the e-Health system.

Dr. Wei Dai's Phoenix System is can provide optimal solution for supply chain management.

Phoenix is collaborating with GS1, IBM and TIBCO on developing the integrated service-based system.

Reference

Phoenix System (2010) Introduction to the PHOENIX research program, accessed on 2 July 2010,
<http://www.staff.vu.edu.au/phoenix/phoenix/abt.htm>.

Proposed Reform Framework

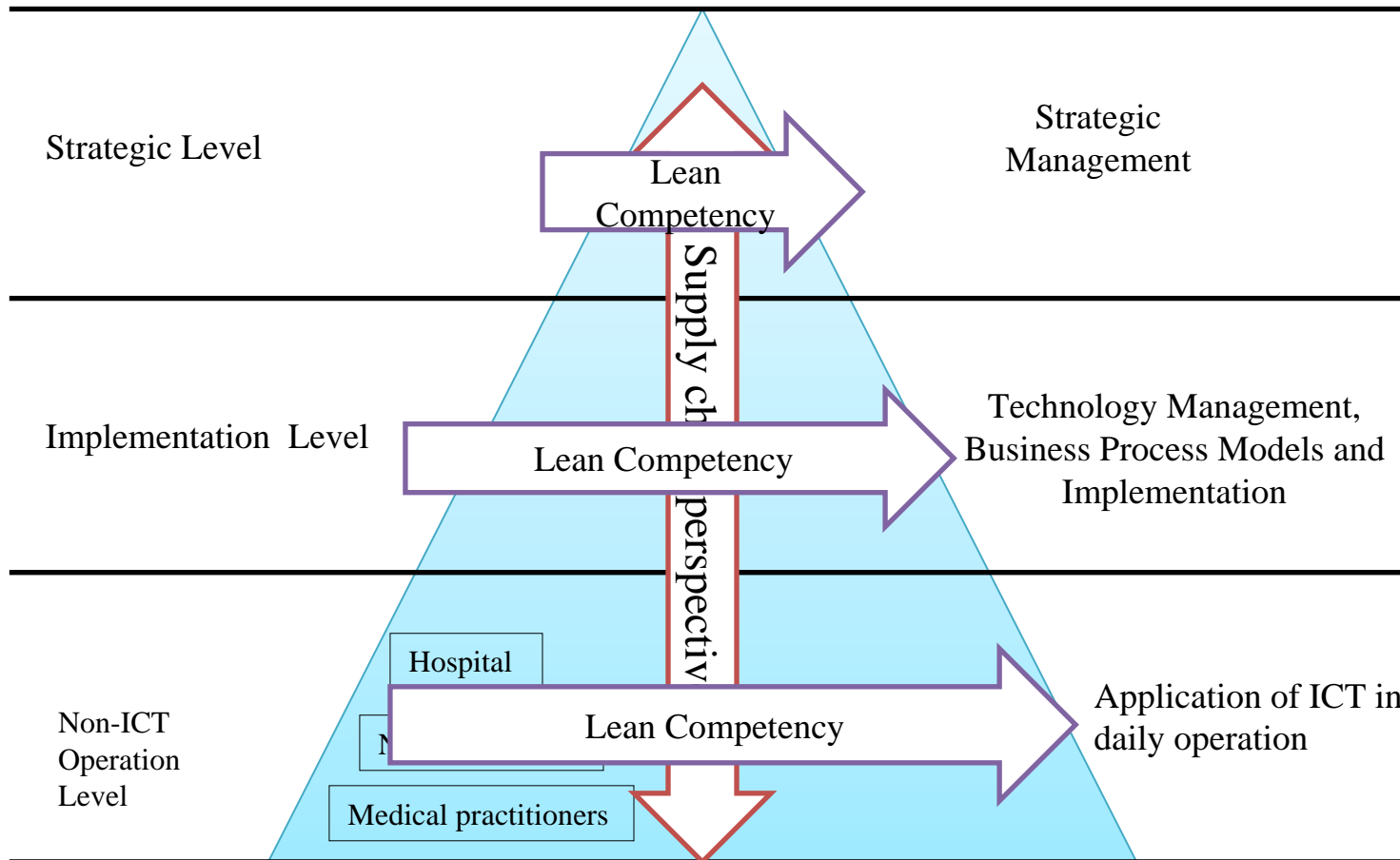


Figure 2 A Proposed Strategic e-Health Reform Framework

Discussion (Cont'd): Vertical Integration

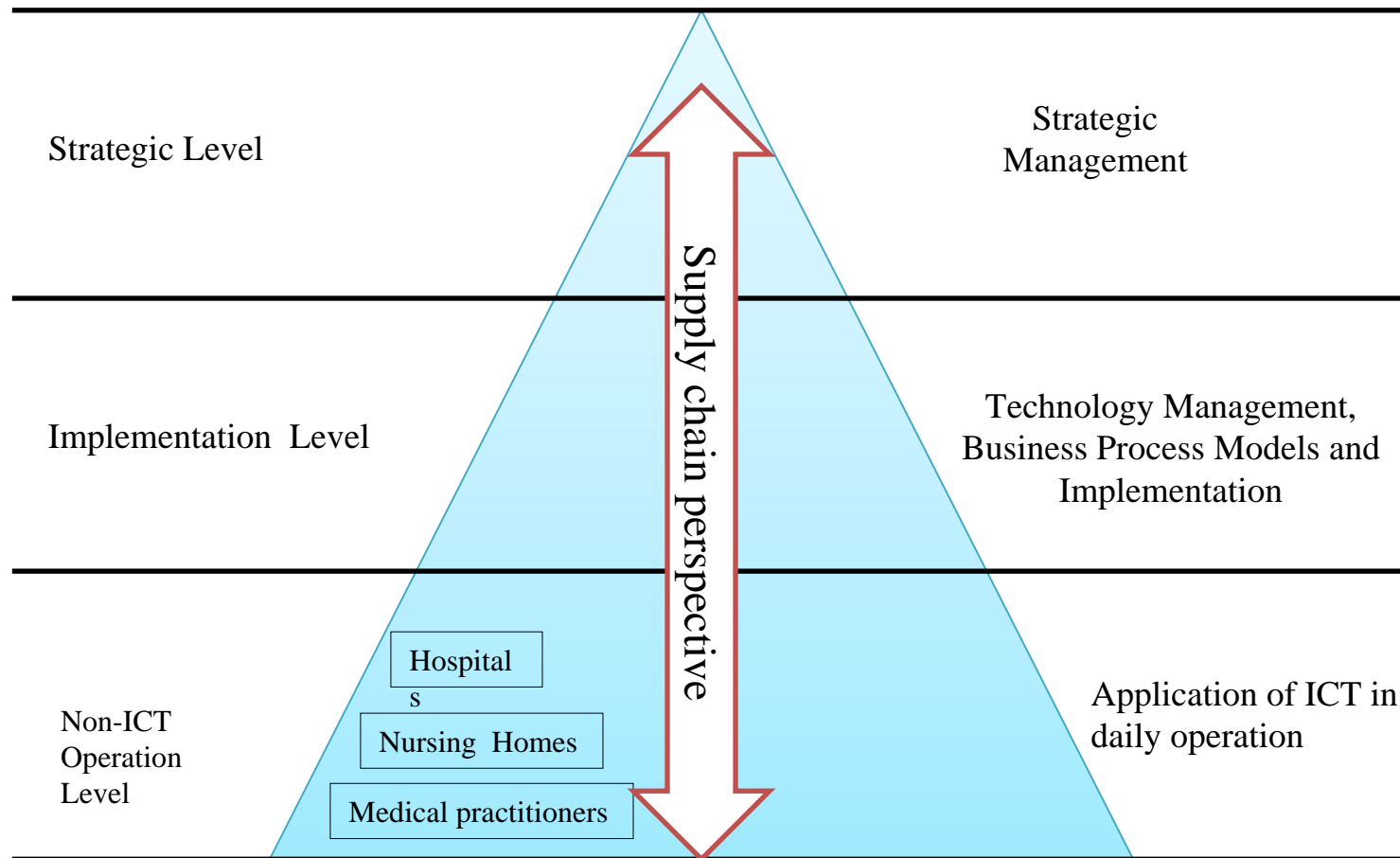


Figure 3 A Proposed e-Health Reform Framework: Vertical Integration

Reference

Kannan, V. And Tan, K. (2010) Supply chain integration: cluster analysis of the impact of span of integration, Supply Chain Management: An International Journal,15, 3, 207-215.

Discussion: Horizontal Integration

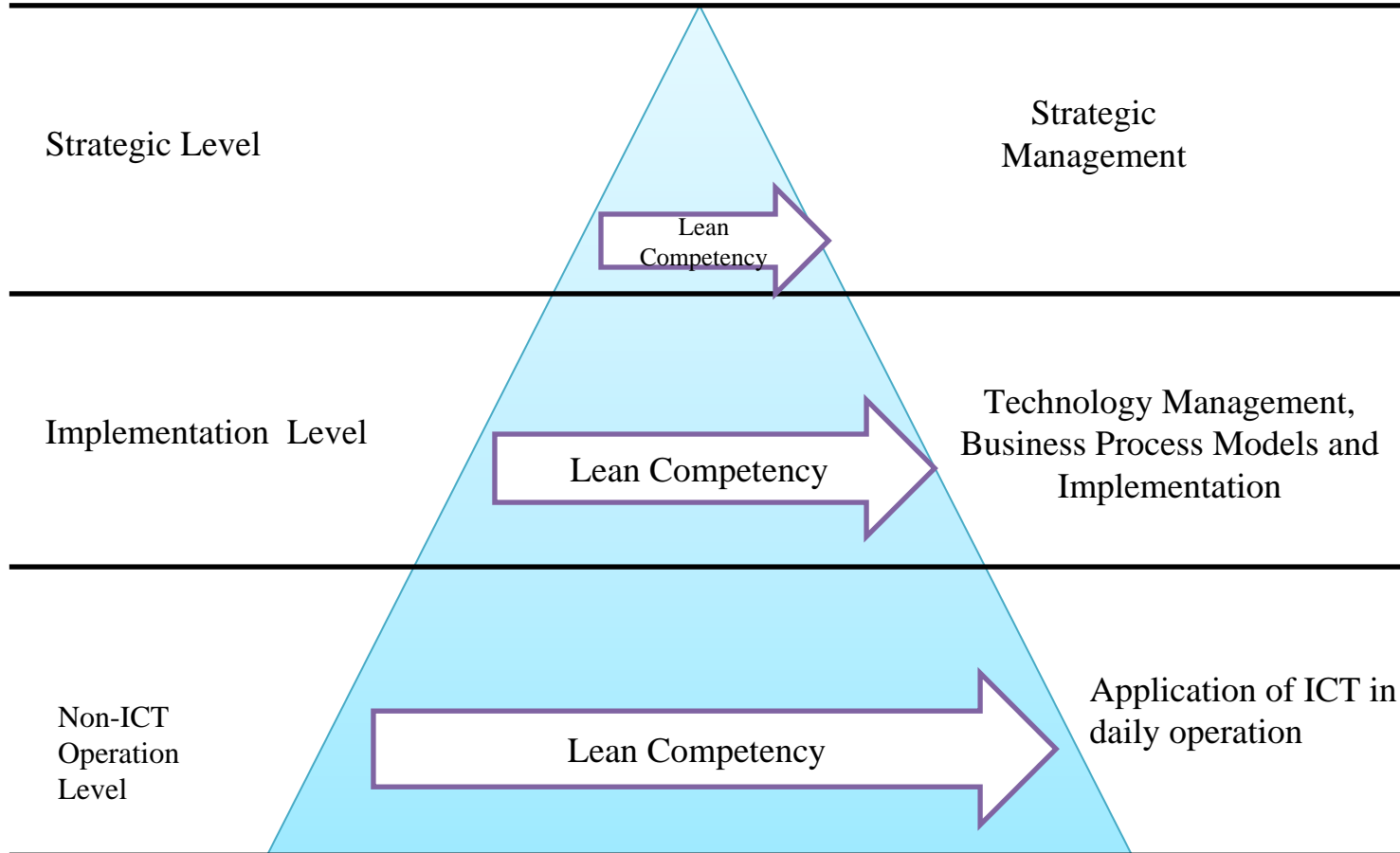


Figure 4 A Proposed e-Health Reform Framework: Horizontal Integration

Reference

Parry, G., Mills, J. and Turner, G. (2010) Lean competence: integration of theories in operations management practice, *An International Journal*, 15,3, 216-226.

Further Research

- Application of the reform framework in the existing healthcare system
- New policy problems raised in the implementation process, i.e. Cost, facilities and human capital

Q & A

Thanks very much for listening.

Your feedback values a lot to us.