Strategic Information Systems Planning in a NZ Polytechnic: A Case Study

David Skelton

Eastern Institute of Technology
Hastings, New Zealand

Dskelton@eit.ac.nz

Proceedings of the 15th Annual NACCQ, Hamilton New Zealand July, 2002 www.naccq.ac.nz

ABSTRACT

A strategic IT management case study was undertaken at EIT spanning a new management planning cycle. This case study used principles of strategic information technology manegement and the viewpoints on end-user computer (EUC).

The Eastern Institute of Technology (EIT) was chosen as an organisation under study and provides a good repreentative sample of a medium sized tertiary organisation in New Zealand. EIT has grown rapidly in recent years and is in the process of a new information systems strategic planning cycle. The aim of this study was to relate end-user computing views and goals to the development of a strategic IS plan and to find out which areas of end-user computer are most readily applied in this strategic planning. This should also address the question of whether EUC can have a greater influence on IS planning at EIT and what level exists currently.

It reports and analyses planning meetings of the information technology department and user groups and activities related to the information technology strategic planning process in the years 2001/2002. The study uses Eastern Institute of Technology corporate records, meetings minutes, interviews with managers and users, and results from staff and student surveys on information technology planning. This is a case study which examines and analyses the complex dimensions of organisational change and planning, so is rich in detail and provides a 'slice-of-life' example of a tertiary organisation grappling with the many demands of information technology and user demands. This particular paper focuses on the outcomes of key interviews and a staff survey. A larger study with full details is contained in a Masters thesis by the author as part of an MIS degree from Massey University, 2002. Flowing from the research findings, recommendations are made for professional information technology management practice and for changes in non-IT managers' involvement in the information technology planning process.

1. RESEARCH QUESTION

This study reports research about the management of information technology and the experience of computer users at the Eastern Institute of Technology (EIT). The investigation of the relationship between the desires and expectations of user groups and the influence these have on the setting of strategic information technology plans is the object of the study.

The main research question in this study was:

- What areas of strategic information systems planning could be more influenced by end-user computing concepts for a better outcome for tertiary institutes?

A new understanding of Information Technology (IT) strategy development may stem from the influence of end-user computing (EUC).

2. METHODOLOGY

An information systems study examining the strategic IT planning of an organisation, and surveying the user communitites, lends itself well to the use of the case study methodology. Case study allows a wide range of evidence and document gathering without the restrictions of, say, the survey method alone. As this study will study systems and people within their natural setting at the Eastern Institute of Technology, employing multiple methods of data collection to gather information from many internal sources, then using the case study research methodology seems the most useful. As part of this case study approach, survey instruments were used, interviews and general observation.

3. STAFF SURVEY RESULTS

An on-line survey was sent to all 260 fulltime employees at EIT asking them to respond to questions relating to their input as a user into information technology (IT) planning at EIT. 52 staff (20 percent) responded. Some reasons for the low response rate may include a lack of Internet access by administrative staff, and perhaps the fact that the survey focussed on strategic planning of IT rather than support issues.

Over 60% of respondents said they had attended a meeting with corporate services to discuss future IT planning, however only 48% had been involved with IT planning within their own departments. The survey seems to indicate that a very high percentage of EIT staff are computer skilled, with all respondents seeing themselves as either a competent PC user or with excellent skills. Over 70% believed that they had a good IT knowledge in a general sense as well. This may indicate that non-IT staff are in a better position than before to make informed comment on IT planning, as well as showing that EIT has achieved almost full diffusion of IT throughout the organisation.

All respondents agreed that IT would have a major influence on EIT's success in the future. However most respondents felt that EIT was not on track for the strategic use of IT or able to enable their department utilise IT strategically through the use of the internal Computer Services section. Over 80% believed that IT planning should not be left to the IT department but should be the responsibility of the business unit (or teaching section/faculty).

69% of respondents believed that IT management was not being represented at a high enough level. This could be interpreted in two ways: either, that the Computer Services Manager was not reporting at a high enough level (senior managers forum) or that other non-IT senior managers were not acting sufficiently as catalysts and sponsors to IT projects and initiatives.

A 'white paper' initiation IT planning document put out by the Corporate Services Manager and Computer Services Manager in mid-year 2001 had not been seen by 30% although it had been widely circulated throughout EIT. 56% of staff respondents had viewed this pre-planning document. The remainder were not sure. Although most users were IT literate and recognised the importance of IT, they believed they were having only a small influence on IT planning.

This response indicating that users feel they have only a low real influence should concern management at EIT, as it may indicate that even although staff have been consulted through the series of meetings, they still do not believe this will have a major influence on the ultimate IT plans. This warning is referred to by Moran (1998) where users have given up listening or tuning in to the 'official' corporate IT plans, they are too busy planning their own vision and plans for IT.

A mixed response was given as to who should set the long range IT plans at EIT. 46% thought that the CEO should set the long range IT plans, 58% thought that the computer manager should set them, 46% believed other senior managers should have primary responsibility, while 58% believed that faculties or sections should be the ones setting long-range IT plans and strategy. Respondents were able to choose more than one planning person/group.

Staff users at EIT indicate they desire strong IT leadership at the highest levels, but also wish to have wide user involvement. There may be an underlying tension between these two expectations because as Bjerknes and Bratteteig (1995) point out, the modern knowledge worker today has a low tolerance for

strongly authoritarian IT departments making all decisions regarding computing.

Despite the evolution of computer user communities and knowledge, this staff survey indicates that the computer manager is still where the biggest group of user goes when they need advice. Karat (1998) in his 'Bill of Rights' for users, supports the users' right to communicate with the IT manager or technology provider and receive a thoughtful and helpful response when raising concerns.

When asked what strategic IT goals their department is working on, the most common goal was to get up and running with an online web delivery mechanism called Blackboard. This integrated learning environment is installed and running but each department is charged with putting educational content in this platform.

Some critical comments on the overall picture of IT planning and end-user computing came through when respondents were asked to write their insights. Some users felt there was a lack of planning for IT from top management, while others were obviously frustrated by the general lack of positive IT support for their own initiatives and current systems.

Hussain and Hussain (1997) discuss how users seek release from the strict control of the centralised computer department, whose existence has often resulted in many delays for systems. In western democracies, modern workers have a low tolerance for strongly authoritarian IT departments and will simply remove support for the official IT systems and begin to seek their own systems (Bjerknes and Bratteteig, 1995).

There was a general feeling that an Internet based delivery platform would be important in the future, but also a questioning of the level of finance directed into physical resources (new buildings etc) coupled with a lack of serious funding for the 'invisibles' such as IT systems. There may be a conflict here between 'old-world' bricks and mortar mentality amongst the senior management at EIT and the 'new world' virtual systems such as E-Commerce and E-Learning projects. A new building may gain a 3 or 4 million dollar support but an equally strategic resource such as Blackboard may gain less than $100,000.

4. INTERVIEWS

As part of the case study research, interviews were undertaken separately with each the CEO, the Corporate Services Manager and the Computer Manager at EIT.

5. CEO INTERVIEW

The CEO of EIT, Bruce Martin was aware of the user group meetings with the Corporate and Computer Managers. He was supportive of this liaison and believed these meetings to be essential for a shared vision for future IT planning. When asked for his view on whether end-user computing should have more sway at EIT, Martin was cautious on this concept, as he tends to favour a centralised controlled approach. He explains that a more centralised approach to functional areas allows some economies of scale and avoids wasteful use of resources. When Bruce Martin started at EIT in1991, EIT was very de-centralised in many aspects. He has brought in a more centralised model of management.

The CEO plays two roles in his influence; one as providing the top oversight over IT and EIT governance, and two as a senior level user exerting influence as a senior management user. The CEO has opportunity to have input as a managerial user through the senior managers forum, a meeting of all senior managers at EIT that meets regularly.

6. CORPORATE SERVICES MANAGER INTERVIEW

The Corporate Services Manager, Kerry Marshall, has traditionally been the architect behind most business led IT initiatives at EIT. Marshall found the Section / Information Technology consultation meetings that were part of the IT strategic planning process at EIT in 2001 very useful. As the Corporate Services Manager, he did not believe that the consultation process really slowed down the IT planning process because user involvement and ownership is critical to EIT's success. He believes that it is important for overall control of IT by a central manager or department, but that hopefully more control and responsibility can be devolved to the user groups. One of the management tools that Marshall

uses as part of his oversight of IT is environmental scanning, but generally executes conventional conservative management, attempting to balance the many needs at EIT. The recent appointment of a new Computer Services Manager may signal commitment to a more strategically aware IT management approach.

7. COMPUTER MANAGER INTERVIEW

The Computer Manager at EIT in 2001, Halasz, is of the belief that users and user groups may have too much power at EIT and this can cause problems of high cost and complexity. When users are able to secure delivery decisions beyond the resources or control of the IT department then the computer services section becomes more an operations department than a business partner. One group that computer services has worked with quite successfully seems to be the disability awareness section with the advent of wireless networking provision for notebooks of disabled students and other innovations.

The Computer Manager reinforced a view from other users and results from the survey that IT is not represented directly at a senior-enough level. Halasz uses a service level agreement as a specific benchmark for his computer section with a prioritised set of responses for various problems.

8. RECOMMENDATIONS TO MANAGEMENT

From the literature surveyed, the experiences of this case and the survey results it is clear that some of the difficulty in setting strategy for an IT department lies in the positioning of the section itself. The leader of IT should report directly to the CEO, and participate in senior managerial planning sessions. Foster and Hollowell (1999) confirm the need for the IT leadership to be represented at the highest level in an organisation.

Non-IT senior management can no longer leave all IT strategy and political support to the IT department but must actively lead the selling process throughout the organisation.

For example, a CEO-led IT strategy such as Blackboard at EIT has far more chance of success than a Computer Manager-led network infrastructure change because of the greater influence exerted. Pressure from the user community then is not solely directed at the IT section but is persuaded by other functional areas.

Whether or not end-user computing (EUC) gains more influence at EIT, clarity needs to increase over the demarcation in support issues, planning input, and alignment of educational goals and IT strategy. In some instances, educational goals are being raised and set by reports stemming from Corporate Services and the Computer Services sections. The question here is; should a non-educational management team set educational strategic goals?

Day and Shoemaker (2000) also list “maintaining organisational separation” as main criteria for deploying emerging technologies for successful strategic use by organisations. This not only applies to EUC and IT management but also to allow the separation from the stifling risk-avoidance that sets in to any internal bureaucracy to resist change and development.

9. RECOMMENDATIONS TO IT MANAGEMENT

From this it is recommended that IT managers, especially tertiary IT leaders, view IT strategic planning as a dynamic and engaging process covering several dimensions. In this context strategic planning is used to define a future desired state as well as to increase responsiveness and satisfy the growing and complex demands and needs of end-user computing groups represented throughout the organisation. This approach takes IT staff focus away from the technical aspects of the process and helps focus energy on creating the future desired state and helps to develop enthusiasm and to embrace change positively.

This approach offers the potential to bring a new vitality and purpose to IT strategic planning within IT departments, helping to bring computer sections in closer partnership with faculties and staff departments in Polytechnics and Universities. The dual mode IT strategic planning - EUC model recognises that strategic planning is a process through which it is possible to develop a shared vision for the future of professional practice in IT planning and support, and further that the process can be used to bring about real cultural change within IT departments and within organisations.

REFERENCES

Bjerknes, G. and Bratteteig T. (1995). User Participation and Democracy. A discussion of Scandinavian Research on System Development. Scandinavian Journal of Information Systems, vol 7, no. 1, April 1995, pp. 73-98

Available: http://www.ifi.uio.no/~tone/Publications/bjerkandbratt-sjis-i95.html Accessed Feb 2001

Day, G. and Schoemaker, P. (2000). Avoiding the Pitfalls of Emerging Technologies. California Management Review Vol. 42 No. 2 Winter 2000.

Foster, S.J. and Hollowell, D.E. (1999). Integrating Information Technology Planning and Funding at the Institutional Level. New Directions for Institutional Research, No. 102, Summer 1999. Jossey-Bass Publishers.

Hussain, K. and Hussain D. (1997). Information Technology Management. Butterworth Heinemann 1997.

Karat, C. (1998). Guaranteeing Rights for the User. Association for Computing Machinery. Communications of the ACM; New York; Dec 1998; vol 41, no. 12

Moran, C. (1998). Chapter 3: Strategic Information Technology Planning in Higher Education: A New Roadmap to the 21st Century Academy. The Future Compatible Campus. Editors: Oblinger and Rush. Anker Publishing Company, Inc.