The Impact of Effective IT Systems Management on End-User Productivity: An End-User Perspective

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ABSTRACT:

This paper compares two IT service delivery contracts - the Service Level Agreement (SLA) and the Technology Partnership Agreement (TPA) and discusses issues of accountability and compensation. The relative benefits of using a Cost Centre model and a Profit Centre model for IT service departments in organisations are also evaluated, as is how these models can exist alongside TPAs and SLAs.

The SLA is being promoted as best practice for IT support providers' dealings with their customers. Such SLA's should include the services to be offered to an IT department's customers, performance, tracking and reporting, problem management, and fees for service, along with details of the customer's duties and responsibilities. It is important to note that SLA's are evolving to include compensation, or the cost of not providing the service.

In contrast, the conventional Technology Partnership Agreement (TPA) is formed for a fixed duration, involving defined areas of collaboration, initiated by mutual agreement and negotiated with the intent of exchanging value of mutual benefit.

IT service delivery has serious impact upon the quality of teaching delivery and the quality of graduates from NACCQ member institutions. Which of the methods discussed in this paper provide the best support for providers of ICT qualifications?

KEYWORDS

Information Technology Systems Management, Service Level Agreement, Technology Partnership Agreement, Cost Centre, Profit Centre, Out-sourcing

1. INTRODUCTION

Within IT Systems Management, two IT service delivery contracts - the Service Level Agreement (SLA) and the Technology Partnership Agreement (TPA) are used. This paper examines these and discusses issues of accountability and compensation. The relative benefits of using a Cost Centre model and a Profit Centre model for IT service departments in organisations are also evaluated, as is how these models can exist alongside TPAs and SLAs.

The IT service delivery aspect of IT Systems Management can have serious impact upon end-user productivity – in the case of NACCQ affiliated institutions the quality of teaching delivery. This paper begins to explore which methods could provide the best support for over-all end-user productivity, and in particular providers of ICT qualifications.

2. METHODOLOGY

Literature relating to both the Service Level Agreement – Technology Partnership Agreement issue and the Cost Centre – Profit Centre issue was reviewed, analysed and summarised. From this, a list of eleven statements was created that reflected aspects of both issues.

Approaches were made to individuals who are in information technology management roles in major public sector organisations who agreed to participate in the study. They completed a trial questionnaire in which they were asked to indicate their level of agreement with the statements from "strongly agree" through to "strongly disagree".

The responses were analysed to determine if there was a pattern in the responses that might indicate agreement amongst the respondents about either issue under review.

With only a small number completing the trial questionnaire it was not possible to make generalisations about the perceptions of all people who are involved in IT management roles in public sector organisations. It is however possible to identify some trends that will provide the basis for further research.

3. LITERATURE REVIEW

3.1 Technology Partnership Agreements and Service Level Agreements

Computer users are losing almost half their productive time due to frustrating computer experiences, according to Professor Ben Shneiderman, of the University of Maryland (Shneiderman, 2002). Those surveyed by Shneiderman were mainly students who were used to computers and yet nearly half their time was wasted. Hardware crashes and slow connections were amongst the problems most frequently cited.

Shneiderman believes the IT service sector needs to dramatically raise its expectations to do better. He also claims that there should be more pressure on IT educators to train users more effectively so that their (the users') expectations are raised as well – the expectation to receive better service.

IT service delivery has serious impact upon the quality of teaching delivery as just one example of end-user productivity. Students, our customers, would certainly appear to fare no better than Shneiderman's sample and all academic institutions will have some system in place to attempt to ensure quality delivery from their IT service providers. Increasingly IT service provision and IT end user receipt is governed by a contractual agreement that defines the level of service.

One such contractual agreement, the Service Level Agreement (SLA) is being promoted as a best practice for IT support providers' dealings with their customers – in this case computing staff and students of NACCQ programmes. SLA's include the services to be offered to an IT department's customers, performance, tracking and reporting, problem management, and fees for service, along with details of the customer's duties and responsibilities. It is important to note that SLA's are evolving to include compensation for non-compliance, or the cost of not providing the service (The SLA Toolkit, 2003).

In contrast, the other and more conventional contractual agreement, the Technology Partnership Agreement (TPA) is formed for a fixed duration, involving defined areas of collaboration, initiated by mutual agreement and negotiated with the intent of exchanging value of mutual benefit. (Fowler & Levine, 1993). Compensation for non-compliance is not an issue covered by a TPA.

Typical compensation issues covered by the SLA are professional fees, reimbursable expenses, terms of payment, and interest on late payment.

Concepts that emerge from this discussion include:

That IT service delivery can have a serious impact upon the quality of end-user productivity

♦ Organisations should consider having formal contract that covers issues relating to the provision of IT services by an internal IT department

♦ Whether such a contract should set out specific measurable objectives for service delivery and deal with issues of non-compliance and reimbursable expenses that may arise as a result.

3.2 Cost Centres and Profit Centres

Gray *et al.*(1994) hypothesise that if an organisations information system (or information technology) is to achieve a strategic end, it must be managed as a productive part of the organisation. They go on to describe the cost centre approach where information technology departments have fixed budgets and are not expected to generate revenues. As a consequence of this approach the financial performance of the information technology departments are measured on the basis of complying with a fixed cost budget, and the costs incurred are charged to different parts of the organisation on an overhead basis.

"The analysis of a cost centre may lead to the assumption that 'the best cost centre is the one that spends the least'" (DeCoster *et al.* 1988). This quote suggests that an internal service delivery department that operates as a cost centre may end up focussing on cost minimisation as opposed to increasing the quality of service delivery.

The Profit Centre approach is described much more favourably by Gray et al (1994), in which the information technology department is treated as a business within a business, with its services being priced on a systematic basis to the rest of the organisation. The implication of this is that the financial performance of an information technology department is measured on the basis of the profit that it makes. As Gray goes on to explain this means that departments within the organisation have the choice of what information technology they use, and they are only charged for what they use.

There is some indication from writers including Gray *et al.* (1994) that the use of a profit centre of an internal service delivery department can result in the pricing being inflated to ensure that a profit is made. However, DeCoster *et al.* (1988) explain that implicit to the cost centre concept is the assumption that an increase in the profit of a profit centre must correspond to an increase in the profit of the organisation. This appears inconsistent with the concept of raising prices just to increase the profit of the profit centre, as this would have no affect on the overall profit of the organisation. To ensure that this issue does not arise, one possibility can be for parts of the organisation to outsource some of the IT services that are required, as this can serve to have both economic and service quality benefits, which are two of the benefits of outsourcing IT functions as outlined by Gray *et al.* (1994).

A number of concepts emerge from the work of Gray *et al.* (1994) and DeCoster et al (1988) including:

♦ That the financial performance of an internal IT department should be measured

♦ That the cost centre approach may result in a focus on costs instead of a focus on service quality

♦ That the profit centre approach can provide a balance of cost effectiveness and service quality

♦ The parts of an organisation having the option to outsource some of the IT function can result in a better value for money service being provided.

4. RESULTS

The statements that were drawn from the literature review are shown in Table 1, along with the responses from each of the three respondents.

5. ANALYSIS

Of the eleven statements, there were three were at least two of the respondents strongly agreed:

♦ IT service delivery has serious impact upon the quality of end-user productivity

♦ The financial performance of an internal IT department should be measured

♦ If parts of the organisation had the option of purchasing their IT services from an external source, this would encourage the internal IT department to provide a better value for money service

There was one statement where two respondents indicated a level of disagreement with the third respondent having a neutral view:

♦ A good way to measure the financial performance of an IT department is to measure actual costs incurred against expected costs (Approach A).

There were three statements where at least one respondent indicated some level of disagreement, with at least one respondent indicating some level of agreement

♦ An IT Services Contract should provide for reimbursable expenses resulting from non-compliance

♦ Adopting Approach A could result in an IT department focusing on reducing cost as opposed to increasing quality

♦ Adopting Approach B could see IT departments increasing the rate at which they charge their services to the rest of the organisation.

6. CONCLUSIONS

While it is not possible to make generalisations about the perceptions of the entire population of those in IT management roles in the public sector due to this being an exploratory study, some trends appear to be emerging:

♦ IT service delivery can impact on end-user productivity.

♦ The financial accountability of internal IT departments appears to be an important factor.

♦ Being able to outsource for some parts of the IT function may be a way of encouraging value for money service by an internal IT department.

♦ Adopting a cost-centre approach to measuring the financial performance of an internal IT department may not be best practice.

Directions where this research could be taken in the future include surveying the following groups and examining their responses to the same statements:

Table 1 – Statements Respondents Were Asked To Rate And Their Ratings
1="Strongly Agree", 2="Agree", 3 ="Neutral", 4="Disagree", 5= "Strongly Disagree"

	Statement	A	B	C
1	IT service delivery has serious impact upon the quality of end-user productivity	1	2	1
2	Organisations should have a formal contract (IT Services Contract) that covers issues relating to the provision of IT services by an internal IT department	3	2	2
3	An IT Services Contract should set out specific measurable objectives for service delivery	2	2	2
4	An IT Services Contract should deal with issues of non-compliance	2	1	2
5	An IT Services Contract should provide for reimbursable expenses resulting from non-compliance	2	4	2
6	The financial performance of an internal IT department should be measured	1	2	1
7	A good way to measure the financial performance of an IT department is to measure actual costs incurred against expected costs (Approach A).	3	4	4
8	A good way to measure the financial performance of an IT department is to charge its services to the rest of the organisation, and compare the income received with the cost of providing the service (Approach B).	3	2	2
9	Adopting Approach A could result in an IT department focusing on reducing cost as opposed to increasing quality	2	2	4
10	Adopting Approach B could see IT departments increasing the rate at which they charge their services to the rest of the organisation.	2	4	4
11	If parts of the organisation had the option of purchasing their IT services from an external source, this would encourage the internal IT department to provide a better value for money service	1	1	3

♦ A much larger group of those in IT management roles in the public sector

♦ A group of people in IT management roles in the tertiary education sector

♦ End users of the IT function in the tertiary education sector – for example those in a teaching role, with the possibility of separating into those teaching IT related subjects, and those teaching non-IT related subjects

♦ A cross-section of practitioners in the IT Industry.

REFERENCES

Shneiderman, B (2002) *Leonardo's Laptop: Human Needs and the New Computing Technologies* MIT Press

Service Level Agreement and SLA Guide (2003) retrieved March 13, 2003 from http://www.service-level-agreement.net/index.htm

Fowler, P & Levine, L (1993) *A Conceptual Framework for Software Technology Transition* retrieved March 13, 2003 from http://www.sei.cmu.edu/pub/documents/ 93.reports/pdf/tr31.93.pdf

Gray, P., King, W.R., McLean, E.R. and Watson, H.J. (1994) *Management of Information Systems* (Second edition) Fort Worth: The Dryden Press

DeCoster, D.T., Schafer, E.L. and Ziebell, M.T.. (1988) *Management Accounting: A Decision Emphasis* (Fourth edition) New York: John Wiley and Sons