ICT Strategy and Implementation: Change Management Issues – A Case Study of a Public Utility Company in Malaysia

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ABSTRACT

A case study was done on a public utility company in Malaysia and this paper discussed the change management issues faced by this company, on ways the issues were tackled and what the company can do to improve its change management initiatives. In order to understand how the change management initiatives were being done in the company, key people in the company were interviewed, information audit was conducted and observation was made. From the research, it was found that there were a number of problem with dissemination of information and behavioural issues. This may hinder the growth of the company and might affect its productivity.

Keywords

Change management, public utility company

1.0   INTRODUCTION

This paper will concentrate on change management issues, elements of change management and also suggestions on what need to be done in order to manage the change.   Although changes include system architecture, functionalities, and development, this paper will only look into changes in term of software testing and user acceptance.

A case study was conducted on a public utility company in Malaysia in order to help the company to set its direction on ICT strategy and implementation. The study also included the case company's issues with change management when it introduced new systems to the users. This paper discussed the current change management practice, issues with the current practice and also gave recommendation on how to overcome those issues.

1.1 Change management: Definition

Change management is a systematic approach to dealing with change, both from the perspective of an organisation and on the individual level (Whatis.com,

2007). Change management has three (3) different aspects: adapting to change, controlling change, and effecting change. For an organisation, change management means defining and implementing procedures and/or technologies to deal with changes in the business environment and to gain profit from changing opportunities (Whatis.com , 2007).

Change in an organisation is very important in order to ensure the organisation is moving in with the current technologies and trends. It is also to ensure the organisation is moving towards its vision and mission.

2.0   RESEARCH   BACKGROUND   AND   METHODOLOGY

The study was conducted within a period of seven (7) months, starting from August 2006 until March 2007. The study discussed the external and internal factors that affect the company. The external factors were key emerging trends associated with the utility business, emerging trends in the ICT industries, and information law and regulations. The internal factors were the company's long and short term goals, current information resources, current change management practice, information flow, business processes, architecture, framework, and system families of the company.

The study adopts a mainly qualitative method and data were collected using three (3) approaches. Firstly it involved information gathering from respondents through interviews, which provide the main input to this study (in-depth interviews). Secondly, data were also collected through documentation analysis (written documents). Finally, data gathering through observations method was also used to gain further insights into the operation of the company (direct observation).

In order to develop the ICT framework, several issues were looked into, which includes, ICT related risks, change management, key challenges, critical success factors and key performance indicator.

3.0 PUBLIC UTILITY CASE STUDY: CURREN CHANGE MANAGEMENT INITIATIVES

When implementing any new systems or applications, the case company has taken a few initiatives in order to get buy-in from users. This includes distributing brochures or flyers, conducting road shows and kick-off sessions, advertising online, organising competitions, getting feedback and training the users.

Currently the company adopt a four-phase activity for its change management initiatives when introducing new systems and applications as shown in Figure 1.
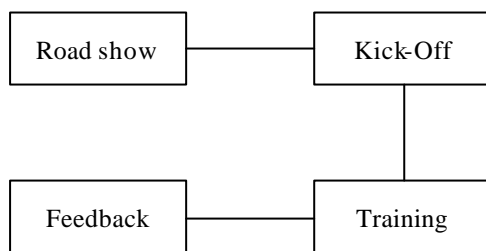
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┌───────────┐        ┌───────────┐
│ Road show │────────│  Kick-Off │
└───────────┘        └───────────┘
                           │
┌───────────┐        ┌───────────┐
│  Feedback │────────│  Training │
└───────────┘        └───────────┘
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Figure 1: The flow of initiatives taken by the utility company in promoting new systems/applications

3.1 Activity 1 – Road Show

Road show is an initiative where a team will visit departments, units and state offices in the company to promote any new system development. During these road shows, the case company's ICT Department/Function demonstrated the new systems, explained the functionalities of the systems and organised question and answer sessions. End users' stations and departments were called to be involved in these initiatives.

3.2 Activity 2 – Execute kick-off Session

The road shows were then followed by kick-off sessions, which are awareness programs. Here key people were gathered to present the detail of the new system. In the utility company, kick-off sessions were conducted for all Heads of Department (HOD). Introduction and explanation on the new systems were provided to the HODs. The HODs were later expected to conduct their own departmental briefing and awareness programs on the new systems.

3.3 Activity 3 – Conduct Training

Next, a series of training sessions were conducted for the target users in order to assist the users in understanding and using the systems. This includes going to state offices and carry out training during the first phase of introducing the system to users.

3.4 Activity 4 – Obtain Feedback

Obtaining users feedback is the last change management initiative adopted by the case company. In order to get feedback from the users, the company's ICT Department/Function utilised online systems, such as through the systems' websites, emails and ICT helpdesk. The ICT Department/Function also formed a team that went to state offices and departments to explain the updated system functionality and how to use it effectively. At the same time, the team also provided hands-on help to users at their workplace when requested and resolved issues such as the use of certain functions in the system to ease their work.

4.0 ISSUES FACED WITH CURRENT APPROACH: RESEARCH FINDINGS

This study highlighted that there were insufficient change management initiatives. Some systems were developed in an almost 'secretive' manner which left users to speculate as how the system will affect them and their work. Sometimes, the users first encounters with new systems occurred very close to the implementation date and the company could not provide ample time for users to explore and familiarise themselves with the system. The complaint of users (internal and external) are usually focused around the lack of participation, the fact that systems are difficult to understand and poorly documented. Referring to Table 1, there are some comments regarding their understanding when using system developed by the ICT Department/Function.

Table 1: Several Departments' Perception of IT/ICT and/or ICT Division's Role.

Department	Perception
Department 1	Not clear with the function of ICT Division.
Department 2	ICT systems developed to serve division (company) better but not necessary serve the customers better
Department 3	Almost all of our operations are system based. As such ICT is a major player. ICT should ensure that all of the applications should be more 'user friendly'. There should also be no requirement for individual stand alone systems.
Department 4	Engineering understanding is still lacking in ICT.
Department 5	IT makes work more complicated. ICT Helpdesk is still weak in product knowledge and not fast enough to take action.
Department 6	ICT division is very important. The ERP system is good but there is a lot more functions that the system provides but people don't know of.

The users' requirements for the new systems were not obtained from the actual people who would be using the systems or were not fully captured resulting in systems that did not fully support users' job functions. The new systems were not evaluated by the users' requirements thus user acceptance tests were not able to validate users' requirements.

4.1   Road show

According to the empirical data, it shows that most of the users were not aware of the road shows conducted by the company's ICT Department/Function. Maybe this is due to lack of rigorous publicity activities on the event and the new systems.

4.2   Kick-off session

Most of the information did not fully reach the target users. The study shows that many HODs were unable to attend the awareness program due to a number of reasons, which include attending to their operational duties. Hence, some of the information did not reach the intended users. It can also be observed that full buy-in from the HODs could not be obtainedt, since not all HODs were going to use the system, The study also found that HODs were occupied with their operational duties which most of the time do not relate with the new systems. As a result, full cooperation on distributing the information regarding new systems was not obtained.

4.3   Training

From the study, there were several dissatisfactions with regards to the Enterprise Resource Planning (ERP) systems. One of the issues was that not all users could attend the training sessions, and this could be because the users were occupied with other tasks. The other issue was that the trainings conducted were not sufficient. Users needed more training to be able to use the system fully. Although the ICT Department/Function was capable to conduct training if there was a request from the other departments, the users (from the other departments) were not aware of the service.

User training commenced even before the systems were completed and the system had changed significantly by implementation stage. Training participants were not correctly identified due to last minute instruction to send users for training; therefore users do not have the motivation to learn to use the new system because they could not appreciate how the particular system had any relevance to them.

4.4   Feedback

A team of staff was formed to help the users with the new systems. However, not all users were aware of the team's existence, its objectives, roles and members of the team. Therefore users were not clear whether there exist a proper channel or personnel that they can talk to, in order to express their feelings and feedbacks regarding the system. Eventually, most of the dissatisfaction regarding the systems end at the users' departments and did not reach the case company's ICT Department/Function.

5.0   RESEARCH IMPLICATION: CHANGE MANAGEMENT ISSUES THAT THE COMPANY NEED TO BE AWARE OF

The study on the utility company shows that there are three (3) elements that the management needs to be aware of as in the case of change management shown in Figure 2.
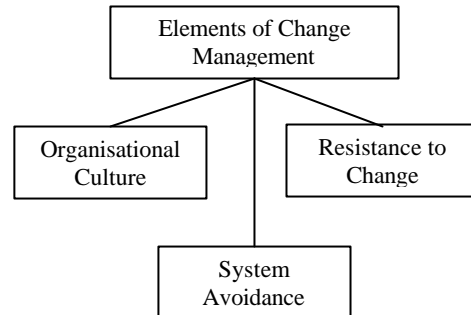

Figure 2: The elements of change management that a company need to be aware of

5.1   Organisational culture

Organisational culture is a system of shared values and beliefs about what is important, what behaviours are appropriate and about feelings and relationships internally and externally (CIPD, 2007). Organisational culture is the most important element that an organisation needs to look into before initiating any changes. The culture will depend on attitudes, values and beliefs of the users. The study empirical data suggest a number of areas that the case company needs to focus on, which include lack of information sharing, focused more on technology rather than information requirements, and poor communication.

5.1.1. Lack of information sharing.

As can be seen from the data collected, the utility company studied is lacking in information sharing between the employees. Although there are several departments that have their own Knowledge Management systems, information sharing between the departments are very low. This was also manifested that there are duplications of systems that have the same functionalities in various departments.

5.1.2. Focused more on technology.

The company appears to be focused more on technology rather than information requirements. From the data gathered from interviews and validation sessions, the utility company has been focusing more on the technology rather than looking at what the users really need for their daily tasks. The company would update the system according to the latest technology, when the important element that is important in managing the business is the information requirements.

From the study, it was also shown that system updates are done either daily or monthly, although the users still cannot obtain the information that they require for their daily tasks. Any organisation should look into fulfilling users' needs in terms of executing the users' daily tasks rather than spending money on unjustified solutions.

5.1.3. Poor communication.

Poor communication is another element that will weaken the change process. Without a proper communication, information might be lost or become incorrect. From the study, lack of communication can be seen between ICT Department/Function and the other departments. Most of the interviewees feel that ICT Department/Function should understand the departments' business processes and recognise the information flow before developing any system. Currently, some of the information that the users need are not available in the systems that they are using and this lead to the development of the departments' own systems/applications.

The study shows that, there are some information and messages that do not reach the intended recipients in a particular department. Although information need to be shared between departments, not all of the messages were received by the intended recipients. Most of the time, the information and messages were made available via the company's intranet or shared through emails. However, not all employees were aware of the information and messages that were published in the intranet, and since the email was only sent once or twice; most of the users do not appreciate the importance of these information and messages.

Working in silos is another element that the management needs to be aware of when imposing changes. This can be the implication of poor communication between staff. From the study, it can be seen that most of the departments in the case company were working in silos. For example, referring to Table 2, there are more than one division that has two (2) different systems, used by two (3) different departments, but perform the same function. This might be the result of departments working on their own and this will then lead to impractical spending.

Table 2: List of Systems/Applications with Similar Functions

Staff Training Systems	Project Management
• Training Database (Division 1 – Department 1)	• Distribution Project Management System (Division 3 - Department 1)
• Database Training (Division 1 – Department 2)	• Project Tracking Information System (ProTIS) (Division 2 - Department 1)
• Sistem Pemantauan Latihan Dalaman	

(Division 5) • Staff Training System (Division 8) • Training Database (Division 7)	• PPR Online (Division 2 - Department 2)
IT Asset Management • IT Database (Division 1 – Department 1) • IT Database (Division 1 – Department 2)	**IT Helpdesk Services** • IT Helpdesk (Division 2 - Department 1) • Service Desk and Service Alliance (Division 8)

5.2   Resistance to change

Based on the data collected, there were several users that resisted to changes caused by the new applications implemented. Examples of these changes include the migration from using spreadsheet to ERP system. This might be due to their negative perception, to hide their weaknesses, and uncomfortable with changes.

When there is a change in a company, the staff will have numbers of positive and negative perceptions. Increase in workload is example of the negative perceptions. It is common among staff when new application were introduce in the company. Staff feels that having a new system will require them to learn a number of new things and that will increase their daily workload. Therefore, a clear explanation on how the new system will help them to do their work and how it will help in making their job more efficient should be given, and buy-in from the target users should be obtained.

Another reason why people resist to change is to hide their incompetence. This might be because the users are not IT literate. This usually happen to senior staff that have been working for a long period of time, for example, more than 20 years.

There are also staff that were uncomfortable with changes because they were not happy to do new task other than their usual routine. Changes had been perceived as an element that interrupts their daily routine. Changes might also be viewed as something that requires a lot of effort and participation.

5.3   System avoidance

The research findings demonstrated that some of the users avoid using the system for their daily tasks. In the users' opinion, the system was hard to use and not user friendly. This might be due to lack of training and/or difficulty in understanding the system documentations/manuals. When a user found that it is hard

to learn about or use a system, they started avoiding it. Users that poorly supported the system will not be able to use software or applications to its full potential and will waste time and effort trying to solve relatively simple problems. This will attracts high opportunities costs. Users that avoid new system might still be using the old method: using spreadsheet. The majority of spreadsheet models are estimated to contain at least one error and these errors can be replicated and amplified through the use of incorrect output in other applications. If this happens, the integrity of the system can be questioned. Users that avoid using new systems/applications might also find it hard to keep up with their colleagues who are using the systems.

6.0 RECOMMENDATION

Several recommendations can be adopted in order to assist changes. As stated by Aladwani, change can be divided into three (3) phases – knowledge formulation, strategy implementation and status evaluation [2]. However, the approach that can be implemented for this case study would be communication, facilitation and support, and participation.

6.1 Communication

As explained in section 6.1, poor communication has been observed in the utility company. Communication should be improved in the company by making sure that any information or system that is being introduced is understood by all users. According to Jones et. al., a constant and practical communication is one of the key in case study conducted on Internal Revenue Services. Information should be repeated to ensure that all users understand their tasks and why there are doing that tasks (Jones & Calderone, 2004). As explained by Klein, whenever the top management take the effort to explain and sit together with their subordinates, a better organisational change has been achieved (Klein, 1996).

A two-way communication should be implemented in order to get a better impact from any changes. Face-to-face communication will impact better than through single communication (Klein, 1996). User should be explained clearly on their task and what they need to do. Clear information should be received by all recipients and should not stop 'halfway'. There should be more than one person from each department that attends a course or training in order to make sure the information is being delivered to all parties.

6.2 Facilitation and support

Facilitation and support also play important role in adopting change management. Most of the users are not satisfied with the number of trainings conducted by the ICT Department/Function. Trainings were conducted only once, and users are then left to explore the system on their own. A series of training should be conducted to the same group of users to make sure the users understand the

system fully before training other users at their stations. The trainers also need to make sure that the users understand the previous training before they can proceed to the next training. Full cooperation and good communication need to be obtained from all departments in making this a success.

6.3 Participation

Participation from all users is crucial. Participation from the users should be established from the first stage of implementing any new system. As clarified by Fui-Hoon et. al., involvement from the users should be as early as during the design phase (Fui-Hoon, Lee-Shang & Kuang, 2001). Users' input should be valued and taken into consideration in the development stage. If there is no proper buy-in from the users from the early stage, users will never trust the system, and may continue having negative perspectives towards the system. The management might not be getting the full support from staff during the earlier stage, but speaking to individuals that resist change, might help in making the individuals understand the reasons and the need for these changes. It can also helps explains what is the company's expectation and how changes can affect their lives and people around them (Jones & Calderone, 2004).

7.0 CONCLUSION

Based on this study, the change management activities for the company could be improved in a few ways. Users need to know why the new systems are necessary and how the systems will assist, improve and enhance users' work. Involving users throughout the system development stages may helps to extinguish users' fears and increase users' buy-in. Users of the systems should be correctly identified for requirements gathering. Users' comprehensive job functions should be captured so that systems can fully support users' tasks.

The same person that provided the users' requirements should be called back for user acceptance test. User training should be done when the system is completed and not when while significant changes are expected to be made. Training participants should be correctly identified and not just to fill in seats in the training sessions and they should allow users to retake training if they feel that this is necessary. Training courses should be reviewed and improved if users' competency post training has not been up to mark. Continuous training on the systems should be provided. Users need to be given feedback on how the systems have benefited the business especially when the users are not able to appreciate their contribution as a whole by using the system.

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