



Effectiveness of Information Technology Infrastructure Library in Change Management

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Abstract— Change has been an important part of any organisation as it helps in the fulfilment of goals and objectives of the organisations by improving its work ethics and work culture. The fulfilment of goals of any organisation depends upon how well the organisation can manage the changes within itself. Most IT based enterprises are now using pre-defined best practices to handle changes within their organisation. ITIL (IT Infrastructural Library) is one such practice which is widely used by the IT enterprises for change management.

This research is focussed on finding the effectiveness of ITIL practices for change management. The primary focus of the research is to calculate the difference the ITIL practices make when it comes to handling and implementing change requests. The research has been carried out on two ITIL practising IT Enterprises based in India. An online survey approach is used in this research using a survey which comprised of 20 questions out of which 15 were closed ended ones along

with 5 which are open ended questions. These questions were used to collect the ITIL practitioner's responses on its effectiveness, its implementation issues, its advantages and disadvantages along with areas of improvement in the ITIL practices for managing change. The open ended questions were mostly for change managers, Team Leaders along Change advisory board members and were included in the survey to gain an insight regarding their experience while implementing change using ITIL and finding out the complexities involved in the procedure in an elaborate manner for analysis. An extensive analysis comparing the various pre, during and post implementation issues of ITIL practices to handle change has been carried out in this research. Vital facts and findings from the research have been recognized and highlighted which includes the pros and cons of ITIL practices. Also the critical success factors for ITIL practices along with areas of improvement have been discussed in this research and

recommendation for further study have also been discussed.

1. INTRODUCTION:

The introduction of the LAN, Client server technology along with the internet has directed the organisations to work upon their management skills and ethics so that they are able to shell out their products and services into the market very quickly and efficiently. The advancement from the industrial age to the information age has forced the organisation to follow their hierarchical methods and response the very quickly and rapidly changing markets (Bon, 2004).

Also the decision making authority has been now shifted from the higher level of the organisation to the lower level personnel and now focus is now on following a horizontal process across the organisation rather than the traditional vertical functions in which the decision making was entirely up to the higher levels only. This led to the development of efficient IT management processes and the above introduction serves as a background for it (Bon, 2004).

It all started in the 1980s when CCTA (Central Computer and Telecommunications Agency, now office of Government Commerce, OGC) were asked to develop an efficient and cost-effective approach for the use of IT resources for British public sector organisations. The objective was to develop an approach that was independent of any supplier. This led to the formation of Information technology Infrastructure library (ITIL) (Bon, 2004).

2. BACKDROP OF ITIL

ITIL was developed to cater the needs of the CCTA (Central Computer and Telecommunications Agency) now also called as the Office of Governance, OGC which was asked to develop a very

efficient and effective approach and methodology to optimize the IT resource usage for the British public sector organisations. Its main motive was the development of a systematic approach which has no dependency on any other supplier. These developments lead to the formation of the ITIL in 1980s (Bon, 2004).

ITIL comprises of elaborate description of a large number of IT practices which are important for any organisation apart from providing detailed checklists, numerous tasks, responsibilities and procedures which are adamant for any IT organisation for its efficient working. It contains all the processes which cover a major part of the entire IT service organisation (IBM, 2004).

The broadness of ITIL in terms of its processes and procedures, it caters the need of the IT organisation in various required aspects and they refer to it on regular basis to set new objectives, induce change and improve the work ethics (Bon, 2004).

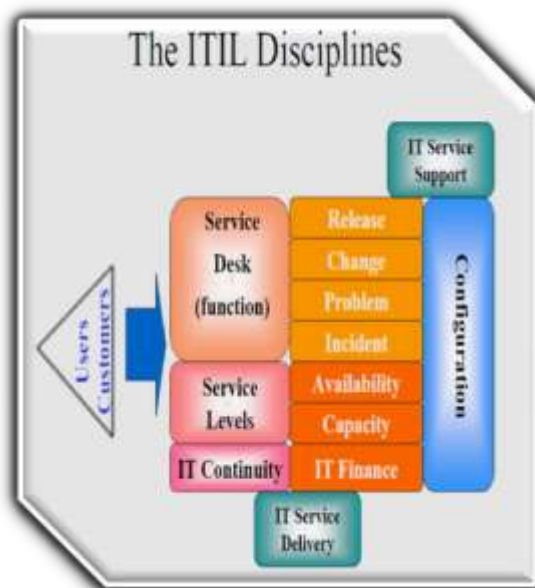


Figure 1: ITIL Disciplines

ITIL is split into two sections namely: Service Support and Service Delivery. It also contains eleven different disciplines

spread across the two sections. They are as follows:

ITIL can be divided into 2 major parts: Service Support and Service Delivery. Both these sections have eleven diverse disciplines divided in between the above mentioned two sections. They are:

2.1 Service Support:

- Incident Management
- Change Management
- Configuration Management
- Release Management
- Service Desk
- Problem Management (IBM, 2004)

2.2 Service Delivery:

- Availability Management
- Service Level Management
- IT Service Continuity Management
- Financial Management for IT services
- Capacity Management (IBM, 2004)

3. ACTUAL PROCESS FOR MANAGING CHANGE USING ITIL PRACTICES

The figure mentioned below explains in detail the actual change management process followed by the IT Enterprises and how the change request is made, processed, approved, implemented, tested and finally reviewed. In the figure the prominent sections are in the form of the:

- Change Initiators
- Request For Change Department (RFC)
- Change Managers
- Change Advisory Board (CAB)
- Change Designers
- Change Implementers
- Change Testers

These departments interact in a ITIL defined manner to implement change in the IT enterprise.

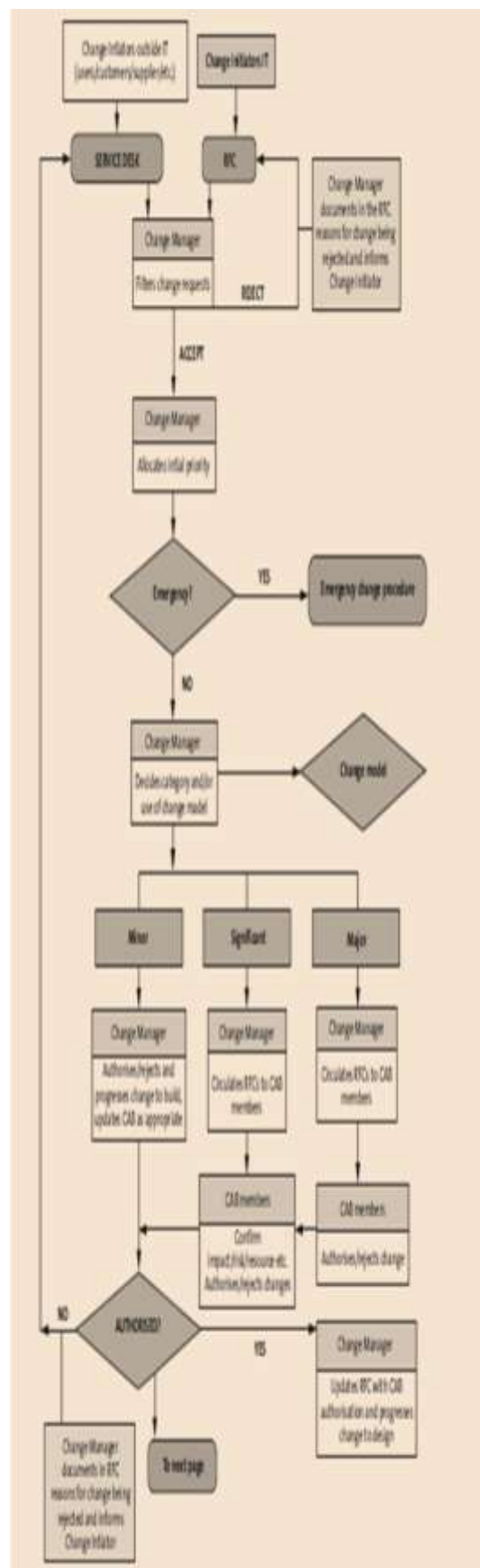


Figure 2: Change Management Procedure Using ITIL Practices

4. EFFECTIVENESS OF CHANGE MANAGEMENT WHEN APPLIED THROUGH ITIL PRACTICES:

Effective change management through ITIL is the establishment of new IT management processes which are beneficial and improve the on various operational and governance features of the IT industry in the following manner:

EMA (Enterprise Management Association) suggests that by the use of automation techniques in change management greater efficiency, cost reliability along with increased profits can be achieved. It states that the usage of Change management techniques like ITIL through automation can reduce the application deployment time along with the time spent in the management of patches by nearly 50% and also the operating system deployment time can be reduced by 68%. Also a further 83% reduction can be achieved in the field of virus and spyware management (Enterprise Management Association, 2010).

Evidently lesser time in deploying, maintaining and correcting system issues coverts into greater cost effectiveness.

On a larger scale companies like Proctor & Gamble, Barclays, IBM, Boeing are using ITIL to implement change management within their organisations (Lewis & Schwartz, 2009)

For example: A company Wachovia which has been merged to Wells Fargo in 2009 had been implementing change management using ITIL and currently works on the ITIL's V3 framework. The production system consultant lead at Wachovia, Paul Ruppel states that the company has made saving and cost benefits of 20 million pounds by improving the efficiency of the processes by following the ITIL's change management service portfolio. It brought a change in the working of the company and its products

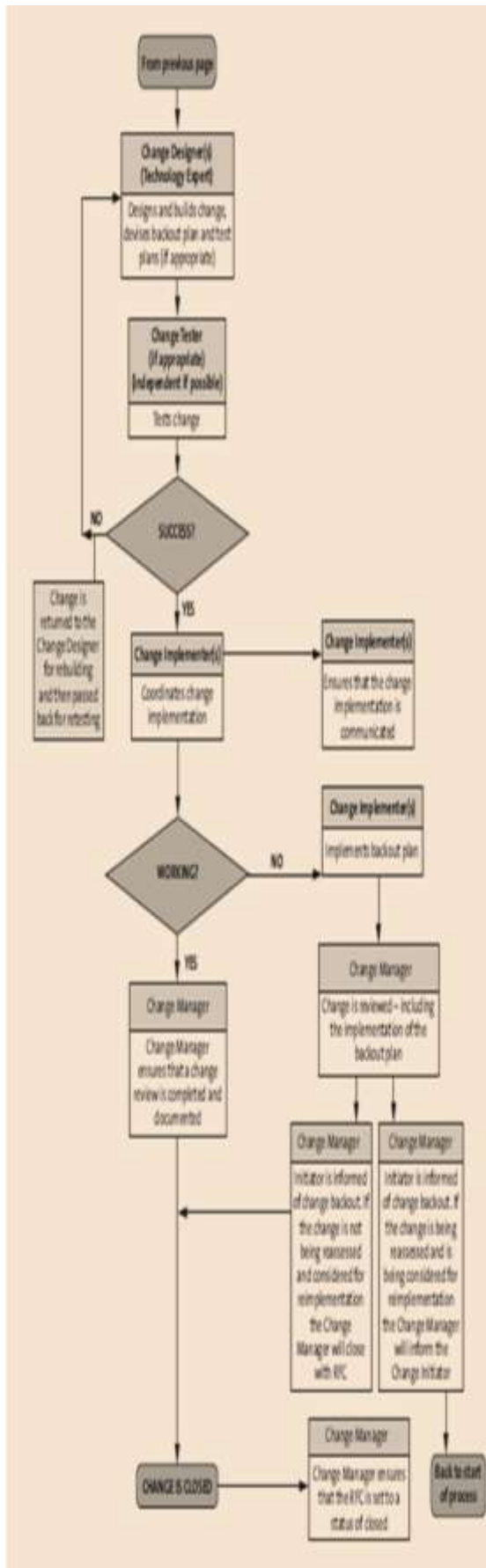


Figure 3:

shifted to a new market segment and change management using ITIL helped the company reduce man power and increase efficiency (Betz, 2011).

Ruppel discussed the changes that were implemented using ITIL. The company had categorized the events giving each of them a number and level of a criticality in terms of the business and it helped the business to calculate how much money is lost per second when any incident occurs and also understand the severity of the incident in a much better manner (Guglielmo, 2009).

Thus it can be seen that by the use of ITIL in change management procedures COST EFFECTIVNESS can be achieved on a larger scale in an IT environment.

4.1 Barclays Global Investors IT is another IT company following the ITIL's change management process and has achieved benefits from their previous working environment. Barclays achieved greater IT reliability in terms of its processes and systems and plans after the implementation of change management using Hewlett- Packard Co's Service Manager Suite which follows ITIL practices. The improved reliability of the systems along with the processes involved and reduction in the down time of the systems have improved the work efficiency and reliability within the firm. The down time has significantly reduced by 46% from the previous management procedures involved (McBride, 2009).

4.2 Satyam IT services, a multibillion dollar enterprise in India implemented ITIL after the CEO of Satyam was arrested on charges of faking contracts and showing profits and a scam of 250 million pounds. The company was overtaken by Mahindra Tech, another leading IT giant in the Indian market segment and Sat yam's work force had to go through a rigorous change in terms of work ethics, products and management procedures and required a proper change management Tool. ITIL was

introduced into the IT firm and change was introduced to its 10000 employees working in all parts of India. Also the new work ethics and working scenario and management had to be formulated using ITIL so service level agreements are not affected and the previous clients are not lost due to the heavy reshuffle (Chou & Chou, 2009).

Therefore it can be summed up that the effectiveness of change management is increased when implemented using ITIL's practices by improving in the following segments:

- The alignment of Business requirement to IT services is improved.
- Visibility and communication capacity between the business and service support staff is increased.
- Improved risk assessment capability.
- ITIL reduces the impact of change on the Service Level Agreements (SLA's).
- A better assessment of the cost to be incurred for the change to be implemented.
- Lesser changes need a fall back procedure or back-outs and even if they occur they are performed more effectively.
- High quality of service along with reliability and cost effectiveness than normal change management.
- Increased productivity along with greater capacity to absorb a large volume of changes (Brenner et al, 2001).

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