

ISSUES IN IMPLEMENTING INFORMATION TECHNOLOGY SERVICE MANAGEMENT

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ABSTRACT

Information Technology Service Management (ITSM) is gaining popularity both in the public and private sectors. Organizations regard it as an opportunity to upgrade their IT service quality, improve business performance and gain competitive advantages. However, many ITSM implementation projects failed. In this study, we first review the process of implementing ITSM using the Limits-to-Value framework. Second, we identify major barriers in implementing ITSM. Organizations should take proper measures in overcoming these barriers to ensure successful implementation of ITSM.

Keywords: ITSM; ITIL; Limits-to-Value Framework

1. Introduction

Due to the forces of Internet and Globalization, the market that all organizations encountered is fiercely competitive and highly dynamic. The demand for revenue growth with cost containment, quick response to customers and seeking for new opportunities also struggle every private and public sector. In the current organization paradigm, Information Technology (IT) provides essential services for the organization to support its business. As the dependency upon IT increases, IT, previously as a supporting role, has become the determining asset that can generate business value and gain the competitive advantages for organizations. This transformation has resulted in an imperative need for the quality of the IT services. Providers of IT services, either internal IT department or external partners, can no longer be technology-focused but start to consider the quality they provide and focus on meeting the requirements and expectations of the customers.

Information Technology Service Management (ITSM) is a discipline for managing IT systems and its aim is to contribute to the quality of IT services. ITSM provides a framework to structure IT related activities and the interaction of IT technical personnel with business partners and users [Finden-Broun and Long 2005], and is often related with the British Government's Information Technology Infrastructure Library (ITIL). ITIL offers a set of "best practices" for managing IT services and is one of the most widely accepted approaches to IT service management in the world. Recently, a number of organizations implement ITIL and regard it as an opportunity to improve their service quality as well as their organizational competitiveness [Lynch 2006]. However, some factors that erode the value of IT services generated are observed, and become the barriers to the success of ITIL.

ITIL itself is not a panacea. Organizations need to identify and active deal with prominent barriers in implementing ITSM to increase their chance in. We first offer a review of ITSM, ITIL, and Limits-to-Value framework, and present the fad of adoption of ITIL, then, acquire the major barriers to succeeding in ITSM by reviewing literature and in-depth interviews with ITSM/ITIL practitioner and professional. Finally, some suggestions and managerial implications are discussed.

2. Literature review

2.1. ITSM

ITSM is a discipline for IT systems that is process-oriented in contrast to technology-oriented approaches to IT management [Wikipedia 2010]. The objective of IT Service Management processes is to contribute to the quality of the IT services [Van Bon, et. al. 2007]. Therefore, the providers of IT services should shift their focus on technology and internal organization to the quality of services they provides and the customers' satisfaction [Galup, Dattero, Quan, and Conger 2007].

In order to fulfill the goal of ITSM, there are four significant dimensions should be considered proactively. The first dimension is people, which are the major roles in ITSM framework, including customer, provider, supplier, and user. The second dimension is organization. Many issues must be well-managed, such as “How to achieve the ROI (return on Investment)?” “How to reduce the TCO (Total Cost of Ownership)?” “How to integrate the IT and Business strategy goals and planning?” “How to manage/control the frequently change?” “How to synchronize the IT, business requirements and cost?” “How to gain the competitive advantage by IT?” “How does the IT manager deal with the complex, distributed and large of IT system”? The third dimension is process. ITSM take the process approach which can systematically identifies and manages the linkage, combination, and interaction of a system of processes within an organization [BSI Group, 2010]. The last dimension is technology, including all the tools and products that enhance the effectiveness and efficiency of providing services. These four dimensions can regard as four pillars of ITSM and must take into account simultaneously.

2.2. ITIL

The Information Technology Infrastructure Library (ITIL), which was developed by OGC (Office of Government Commerce) of UK government, offers a detailed description of “best practices” for IT service management. The goal of ITIL is to provide a framework of best practices that organizations can use as a guideline for managing their IT organizations [McLaughlin and Damiano 2007]. Five core titles are included in ITIL v3, which are:

1. Service Strategy
2. Service Design
3. Service Transition
4. Service Operation
5. Continual Service Improvement

These doable guidebooks provide comprehensive guidelines on all aspects of end-to-end service management, cover the complete spectrum of people, processes products and the use of partners, and are the most widely used management approach to the delivery and support of IT services and infrastructure. Moreover, these guidebooks were based on various successful or failed experiences, providing a common language to speed up the communication and collaboration within and across organizations.

2.3. The pervasive adoption of ITIL

According to the itSMF Asian Region Survey (2008), 54% of organizations have either partially or fully implemented ITIL v2 and a significant number of organizations have fully implemented ITIL. Another survey conducted by Dimension Data (2008), queried 370 CIOs from 14 countries across 5 continents, concluded that nearly 60% of American CIOs are working with ITIL, and outside the United States, 66% of 270 organizations have implemented ITIL [Dubie, 2008].

Another report from Internal Revenue Service (IRS) shows the amazing outcomes of ITIL adoption in U.S. organizations. For instance, Procter and Gamble saves \$125 million of IT cost, Shell Oil can upgrade their software in less than 72 hours and potentially save 6000 man-days working and 5 million dollars, Caterpillar raises their hit rate of target response time for resolving Web incidents from 30 percent to 90 percent of the time. The Microsoft’s 2004 IT Forum Conference also noted that recent studies were showing an IT service organization could achieve up to a 48 percent cost reduction by applying ITSM.

Beyond the quantitative advantages above, some qualitative benefits were recognized by practitioners [Sanders, 2010]:

1. Improved customer satisfaction
2. Improved ROI of IT
3. Improved morale of service delivery and recipient staff
4. Reduced staff turnover
5. Lower costs of training, especially as the ITIL standard become widely adopted
6. Improved systems/applications availability
7. Improved IT employee productivity
8. Reduced cost/incident
9. Reduced hidden costs that traditionally increases substantially the TCO
10. Better asset utilization

Moreover, an itSMF Asian Region Survey in 2008 outlines top six driving forces for adoption ITIL, which are improved quality and efficiency of IT services, comply with management business requirements, follow global standards, reduce IT cost, achieve regulatory compliance/standards/certification, and address a specific IT operational issue [itSMF, 2008]. For all these promising benefits, the ITSM bandwagon based on ITIL has swept world widely.

2.4 The Limits-to-Value Framework

Chircu, Kauffman, and Keskey proposed the Limits-to-Value framework to assess the barriers encountered in IT investment [Chircu, Kauffman, and Keskey 2001]. They recommended a two-stage process (i.e, valuation and conversion) to analyze the

barriers during the value transformation of IT, as depicted in Figure 1. During the IT valuation process, managers should consider the organizational and industrial aspects. The conversion process corresponds to the implementation phase and the subsequent use of the system. They suggest that managers, who are interested in maximizing the realized value, should identify what limits the value, which regards as value barriers. The final performance can be maximized only when managers plan ahead to deal with these barriers in advance.

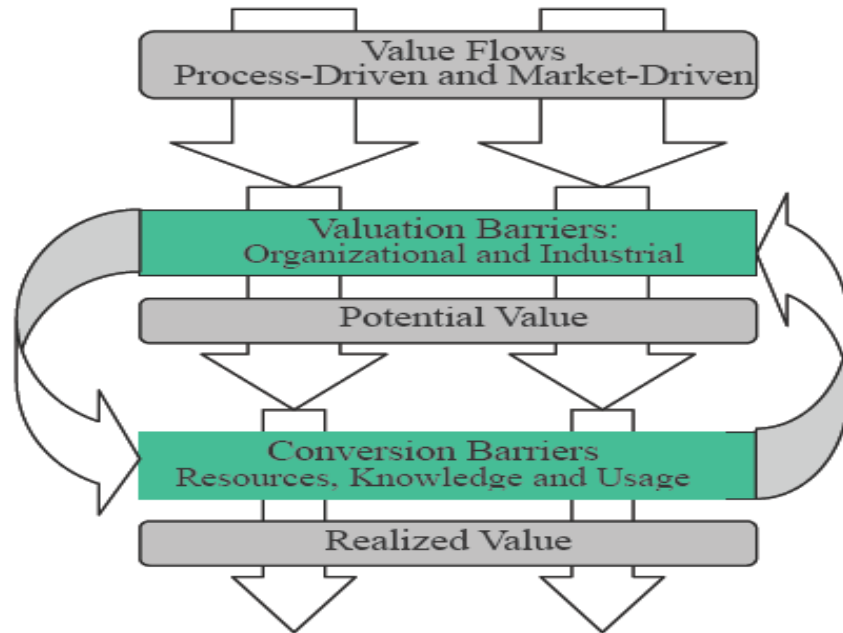


Figure 1. The Limits-to-Value Framework

3. Barriers to the success of ITIL

Although the global ITIL adoption rate (66%) is relatively high, some barriers are observed and erode the outcome after implementation. A U.S. ITIL expert Ho, a product manager at Compuware and also a reviewer on the ITIL V3 foundation books, pointed out, "The interest level is growing around ITIL but that doesn't mean it's a perfect fit for all organizations." She also addresses the issue of resistance to adopting ITSM, and compiles a list of causes that impede the success of ITIL, which are change, measurement, process limitations, investment, buzzword bandwagon, process selection, complexity, executive expectations, organization size, and stifled creativity [Dubie 2007]. These fears and confusion around ITIL will cause the resistance to the efforts. For instance, ITIL promotes the need for measurement and report on the service quality, and it makes IT staff felt been watched constantly. In addition, adoption of ITIL represents great culture shift, the staff related to ITIL may fear their jobs become irrelevant or even obsolete, and this resistance will stall the process of implementation.

Another report about current ITIL/ITSM application status conducted by KPMG in 2007 [Lynch 2006] concluded the major challenges of implementing ITIL for organization in Taiwan as listed in Table 1. The top five challenges are culture, integration with current process, ITIL/ITSM related knowledge, appropriate management tool, and clear measurement target.

Table 1. Major Challenges of Implementing ITIL

| Major challenges | Percentage |
|--|------------|
| Culture shift | 17.2% |
| Integration with current process | 15.5% |
| ITIL/ITSM related knowledge | 13.8% |
| Appropriate management tool | 10.3% |
| Clear measurement target | 10.3% |
| Project within budget | 8.6% |
| Insufficient internal professional staff | 8.6% |
| Project on time | 5.2% |
| Managing consultants | 1.7% |
| Incapable and inexperienced consultants | 1.7% |

In a research conducted by itSMF, which is a non-for-profit organization and a prominent player in development and promotion of IT Service Management, it describes top ten success factors of adoption ITIL as depicted in Figure 2 [itSMF 2008].

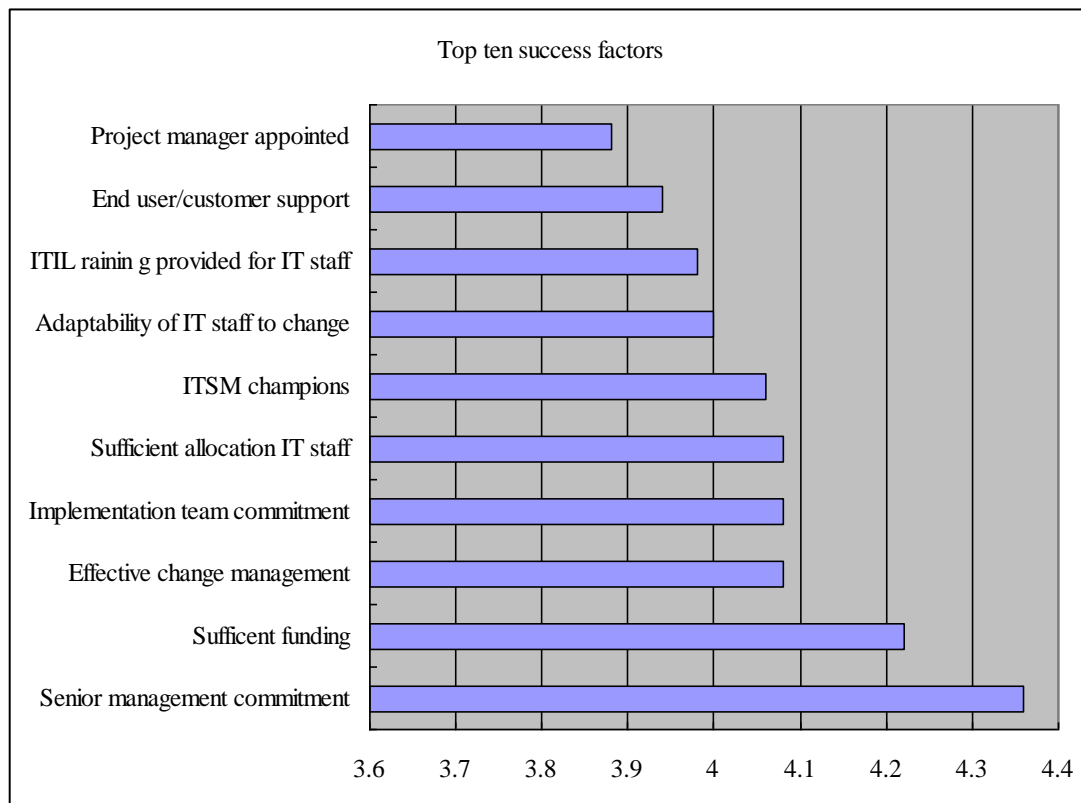


Figure 2. Top Ten Success Factors of Adoption ITIL (Source: itSMF 2008)

In addition to the archival data, we conducted in-dept interviews with industrial practitioners in two companies, one company is the PC vendor, and another is the telecommunications service provider. The interviews consisted of interviewing with vice-president of the business group, leader of the certification team, chief information officers, and the process managers. The first firm took the incremental strategy to receive the accreditation after 6-year preparation. As the vice president pointed out, “we start from the IT problems which are the most emergent and must be improved immediately, namely, and then expand to all the processes of ITIL.” After the successful adoption of ITIL, he also asserted that the availability rate of firewall system had enhanced to 99%, and the engineers had built up the cost-benefit concept for providing the services with reasonable resources. The second firm initiated the implementation ITSM discipline by examining their readiness firstly, they also considered the long-term requirements of IT governance, as the senior management put it, “We start small, but think big.” All interviewees confirm implementing ITSM is an imperative for IT department; yet, some barriers are observed and should be overcome proactively.

As listed in Table 2, we adopt four-dimension lens (People, Technology, Processes and Organization) from ITSM discipline and the Limits-to-Value framework to category those major barriers proposed by the interviewees into two stages.

Table 2. The Major Barriers to Succeeding in ITSM/ITIL

| Stages | Dimensions | Major Barriers |
|-------------------------|--------------|--------------------------------|
| Valuation Stage | People | Lack of commitment |
| | Technology | Inappropriate management tool |
| | Processes | Misalignment between processes |
| | Organization | Resistance to change |
| | | Lack of resources |
| Conversion Stage | People | Insufficient team allocation |
| | Organization | complexity |

Source: Constructed by the author

4. Discussion

Organizations that regard ITSM/ITIL as an opportunity to improve their performance and gain competitiveness should pay attention to those barriers, which can erode the value of implementation.

In the valuation stage, organizations should consider all four dimensions. "Lack of commitment is the most dominant one among those barriers. The commitment barrier includes senior management's insufficient support and the staff's incomplete awareness. As one practitioner points out, "We take the bottom-up approach to implementing ITIL and start from awareness training." The barrier relates to technology is inappropriate management tool, such as the unclear target, inefficient and ineffective measurement, and with no relative incentives. ITSM takes a process-oriented approach, if current processes are rigid and cannot be aligned, it will limit the performance. On the organization dimension, resistance to change may result from unfavorable perceptions, increasing overload, and lack of knowledge. Each of these barriers will decrease the value that ITSM can generate. Another organizational barrier is lack of resources. IT investment requires the support from both financial and human resource aspects. As the ITSM expert put it, "The implementation is a continuous job, set up quick-wins target and show to the top management can consolidate their confidences and ensure the ongoing support."

In the conversion stage, the organizations have implemented ITSM and the previous processes have been redesigned. If project manager is not appointed, the project team are not sufficient allocated, and the IT staff are reluctant to learn new skills, the value can not be fully realized. Another barrier on organization dimension in this stage is complexity. ITSM project is much more complex than other project because it relates to a process which crosses departments, and it requires more collaboration and communication.

5. Conclusions

As several major barriers to succeeding in ITSM implementation were elaborated, we suggest that organization should antecedently identify what the barriers are both in valuation and conversion stages. Next, take action to diminish them proactively. For valuation stage, the actions can include building commitment for adopting ITIL, establish the culture of change, setting up explicit and achievable target, redesigning processes, acquire financial resource support, et al. For conversion stage, the actions can involve performing training program to enhance skills for dealing with complex ITSM project and establish well-allocated team to fulfill the goal. Only when these barriers are properly identified and eliminated proactively, the expected value of ITSM implementation can be fully achieved.

REFERENCES

- BSI Group, <http://www.bsigroup.com/en/Standards-and-Publications>, retrieved April 20, 2010.
- Chircu, A. M., Kauffman, R. J., and Keskey, D., "Maximizing the Value of Internet-based Corporate Travel Reservation Systems," *Communication of the ACM*, Vol. 44, No. 11, pp. 57-63, 2001.
- Dubie, D., "ITIL adoption increases in U.S., proficiency still lacking," *Network World*, February 29, 2008, retrieved May 20, 2009, at www.networkworld.com/news/2008/022908-til-adoption.html.
- Dubie, D., "10 reasons ITIL spooks IT managers," *Network World*, October 24, 2007, retrieved May 20, 2009 at www.networkworld.com/news/2007/102407-til-fears.html.
- Finden-Broun and J. Long, "Introducing the IBM Process Reference Model for IT: PRM-IT Sequencing the DNA of IT Management," *IBM Global Services*, July 2005.
- Galup, S., Dattero, R., Quan, J.J., and Conger, S., "Information Technology Service Management: An Emerging Area for Academic Research and Pedagogical Development," *Proceedings of SICMIS-CPR*, USA, April 19-21, 2007.
- itSMF, *itSMF Asian Region 2008 Survey Report*, Information Technology Service Management Forum, 2008.
- KPMG, Taiwan ITIL/ITSM Application Report, 2007.
- Lynch, G., "Most Companies Adopting ITIL Practices," *CIO Magazine*, March 1, 2006.
- McLaughlin, A. and Damiano, F., "American ITIL," *Proceedings of SIGUCCS*, Florida, 2007.
- Sanders, M., "Why Implement ITIL in Your Organisation?" retrieved May 1, 2010, at <http://www.articlesnatch.com/Article/Why-Implement-Itil-In-Your-Organisation-/810111>.
- Wikipedia, http://en.wikipedia.org/wiki/IT_service_management#_note-0, retrieved March 20, 2010.
- Van Bon, J., et. al., *IT Service Management: An Introduction*, A Publication of itSMF International, Van Haren Publishing, UK, 2007.