

Business Value in Implementing a Standard ITSM System

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Abstract:- Information Technology Service Management (ITSM) manages the complete lifecycle of IT Service processes from design to delivery. Some IT Organizations encounter difficulties in running their businesses because the delivered services often do not meet customer expectations. This could be due to a lack of experience in providing customer services, or more likely related to the way services are provided. In either case, organizations need a good IT Service Management system. Different ITSM systems can adopt any one of the many frameworks available including the Information Technology Infrastructure Library (ITIL), ISO/IEC 20000 or DevOps. In this paper, the focus will be on the business value of implementing a centralized IT service management model based on the ITIL framework along with the right support.

Keywords:- Information Technology Service Management (ITSM); Information Technology Infrastructure Library (ITIL).

I. INTRODUCTION

As IT functions continue to become increasingly service-oriented for most organizations, the overall direction has been to acquire IT tools to address needs. This causes an abundance of several IT tools, some of which perform overlapping functions. At the same time, it develops silos of services and frequently creates difficulties when integrating these products. Building a comprehensive IT service management solution that incorporates processes, technology, organizations, and governance activities is the right approach to solve many business-related issues and contribute effectively to benefit any IT organization.

In this technical paper, I will try to illustrate a step-by-step approach for designing ITSM processes, developing a communications strategy, analyzing stakeholders, identifying technology requirements, and building a transformation program. The ITSM model is a paradigm shift for IT functions as it allows them to focus on the provision of quality end-to-end IT services. Choosing the IT Infrastructure Library (ITIL) framework provides implementation guidance and a common communication to protocol.

II. HISTORY OF ITSM

The IT Service Management (ITSM) methodologies first use goes back to when IT businesses used mainframes. At that time, ITSM within a mainframe environment, typically had a centralized system and was available as stand-alone practices. Then, IT technology evolved and organizations used to get different IT services and tools whenever a need for supporting business operations and services arose. In some cases, organizations started encountering IT tools complexity and an increase in the cost of maintenance and associated manpower support. [1]

With the advent of different frameworks, ITSM technology advanced and in time reached high maturity levels. Information Technology Infrastructure Library (ITIL) was one such framework and suggested as a best practice for ITSM. ITIL was developed by the British Office of Government Commerce (OGC) based on input from industry leaders. ITIL provides some guidance and a common terminology for service management without being prescriptive about implementation. ITSM is focused on aligning IT processes and services with business objectives to help an organization grow.

III. ITSM FRAMEWORK

ITSM Framework refers to the collective processes and practices that are needed to manage and support Information Technology services. ITSM system can adopt any of the frameworks including the Information Technology Infrastructure Library (ITIL), ISO/IEC 20000, DevOps. As ITIL is the most widely used framework for ITSM, this paper will focus on the ITIL Service Lifecycle.

A. ITIL Service Lifecycle:

ITIL services lifecycles describe the process of initiating and maintaining IT services. ITSM departments can adhere to the principles of the ITIL lifecycle for IT services to be implemented and managed with optimal efficiency and efficacy.

B. ITIL Lifecycle Stages & Processes:

ITIL service lifecycle has 26 processes which have been segregated into five stages: service strategy, service design, service transition, service operations, and continual service improvement. These stages are interlinked and designed to enable the provision of consistent IT services. [2]

- **Service Strategy** stage has 5 processes:
 - Strategy Management for IT services
 - Demand management
 - Service portfolio management
 - Financial management for IT services
 - Business relationship management
- **Service Design** stage has 8 processes:
 - Service catalogue management
 - Availability management
 - Information security management
 - Service level management
 - Capacity management
 - Design coordination
 - Supplier management
 - IT service continuity management
- **Service Transition** stage has 7 processes:
 - Transition planning and support
 - Change management
 - Change evaluation
 - Release and deployment management
 - Service asset & configuration management
 - Service validation and testing
 - Knowledge management
- **Service Operation** stage has 5 processes:
 - Access management
 - Event management
 - Service request fulfillment
 - Incident management
 - Problem management
- Continual Service Improvement stage has 1 process
 - Seven Step improvement: Identify the strategy for improvement, define what you will measure, gather data, Process data, analyze information and data, present and use information, and implement improvement.

ITIL Processes				
Service Strategy	Service Design	Service Transition	Service Operations	Continual Service Improvement
Strategy Management	Service Catalogue Management	Transition Planning & Support	Access Management	Seven Step Improvement
Demand Management	Availability Management	Change Management	Event Management	
Service Portfolio Management	Information Security Management	Change Evaluation	Service Request Fulfilment	
Financial Management	Service Level Management	Release and Deployment Management	Incident Management	
Business Relationship management	Capacity Management	Service Asset & Configuration Management	Problem Management	
	Design Coordination	Service Validation & Testing		
	Supplier Management	Knowledge Management		
	IT Service Continuity			

Table 1: ITIL Process

C. ITIL Functions

Function is a team or a group of people who perform a set of activities. ITIL defines four functions as Service Desk, Application Management, Technical Management, and Operations Management.

- Service desk: This is a function who will be the first point or single point of contact for end user issues.

- Application management: This is a function who will manage the application development and maintenance issues.
- Technical management: This is a function who will manage the technical expertise for the ITSM processes and operations.
- Operations management: This is a function who will manage the day to day operations with respect to IT operations control & IT facilities management. [3]

ITIL Functions			
Service Desk	Application Management	Technical Management	Operations Management

Table 2: ITIL Functions

IV. STANDARD ITSM SYSTEM IMPLEMENTATION

A successful ITSM implementation process is carried out in four main activities. The first activity is *planning* which includes all kinds of assessments and preparations. The second activity is *development* which illustrates the effort and ensures that it suits the organization. The third activity is *deployment* which covers the establishment of missing ITSM processes and the implementation of the right ITSM product. The last and important activity is *Support and Maintenance* which ensures the sustainability of the service management with new technologies and continual service improvement. These four activities should be aligned with best practices ITSM frameworks. An example is ITIL services lifecycle.

A. PLANNING:

- **Assess the Organization to Identify IT Business Requirements:** It is very crucial to understand what services an organization needs from its IT department and which services are not performing as expected. Examine the service management processes and identify the weak and strong areas. Keep in mind the organization vision and mission and work toward achieving their goals. Identify the gaps in the organization's ITSM processes. Start by evaluating the organization's service management maturity. Where is it now, and what does the ideal ITSM look like? Is the current ITSM implementation preventing desired business goals from being achieved?. Assess how much you can spend on ITSM implementation.
- **ITSM Design:** Organization designs the IT processes according to best practices frameworks. A process is a sequence of activities which has some inputs, triggers, outputs and delivers specific outcomes to the customer. ITIL, for example, has around 26 well-defined processes. These can be followed as a reference to design all related events required to have the system in place.
- **Coordinate for feedback & requirements:** Meetings are held with service management stakeholders to get their feedback and all service management requirements.
- **Adopt ITSM Framework:** There are many Service Management frameworks such as Information Technology Infrastructure Library (ITIL), ISO/IEC 20000, DevOps. Organization should find out which of these best suits its needs.
- **Select the right ITSM Tool:** Organization should look for the right IT tool that can meet all the Service management stakeholders needs. There are many ITSM tools in the market and an organization should first look for possible tools that can potentially meet its requirements. It is a good idea to start with completing a Proof Of Concept first to ensure that the selected tool will fit and meet stakeholder requirements.

B. Development

- **ITSM Planning Work Stage:** Carry out Gap Analysis to find out what gaps exist between the current state of the IT organization and the planned service vision. Identify and prioritize actions to close these gaps.
- **ITSM Process & Functions:** Work on developing the appropriate ITSM processes and functions as needed by the organization. ITIL documents on services lifecycle are good references and guidelines to start documenting the organization ITSM processes and functions.
- **ITSM Supporting Tools:** After selecting the right ITSM software tool and procuring the number of licenses the organization needs, start by preparing the infrastructure and the necessary hardware and software required for implementing the software. Simultaneously, start aligning the ITSM tool with the organization's processes and functions preparing it to go live in production.
- **Building Communications Step-By Step:** Before going in production, awareness sessions should be given to the stakeholders to be ready to the change.

C. Deployment

- **ITSM Transformation & Change Overview:** Usually stakeholders get used to the existing service system and are reluctant to change. Adapting to an ITSM culture requires a program of Organizational change. This includes educating staff and management on new ITSM practices, holding frequent meetings to get stakeholders on board with ITSM solutions, gathering feedback, dealing with resistance, and communicating to customers about ITSM activities. [4]
- **Implement the ITSM supporting Tools:** After testing the ITSM tool and ensuring that it is the appropriate tool that serves all ITSM processes, functions and stakeholders, deploy it and move it into production.

D. Support and Maintenance

- **Support and Manage the Services:** After implementing an ITSM solution that is mainly managed by the software, technical support is needed to handle potential technical issues.
- **Maintain and Improve the Service:** The ITSM System needs to be maintained by technical support who will look after system upgrades and bug fixes to ensure high availability of the system. At the same time, system support should continue service improvement by identifying the strategy for improvement, defining metrics, gathering data, processing data, analyzing information and data, and presenting and using information.

V. ITSM CHALLENGES

The challenges that organizations face with implementing IT service management (ITSM) depend on the current state (baseline) maturity of the IT organizations. For a lower maturity level organization, it is a fundamental shift in the way it delivers services to the customers and how customers engage IT in providing specific services.

Fundamental shifts leading to transformations do not happen overnight and need a consistent and steady approach to incrementally and iteratively improving the services provided by IT organizations.

Some organizations with emphasis on technology management encourage departments within an IT organization to operate in silos, each a silo of a specific technological product. Mature *service* organizations manage their respective technologies in order to integrate with business needs. A change from being a technology management organization to a service-oriented (IT Service Management) organization is a major shift and requires transformation in how IT thinks, plans, and delivers its services to its customers. [5]

VI. ITSM IMPLEMENTATION PROCESS

Implementing best solution of ITSM in an organization, starts with rebuilding its IT infrastructure on a standard IT Service Management (ITSM) Model to improve IT services to its core business. It would be a major change in its IT Service Management Model by acquiring a complete ITSM solution that can be used for logging and tracking tickets, Change Requests, Configuration Management Database (CMDB), Asset Management, Service Catalog, Smart reporting and creating a Knowledge Base.

A. Program Structure & Roles

A project should be initiated to implement ITSM solution. The following teams and positions can be created to support the project:

- a) ITSM Project Champion
This is the person who leads the IT Service Management Organization. He is on board at the start of the transformation program. He is the overall decision maker in the whole project as he is responsible for delivering the overall project objectives. He provides status updates to Executive Management and helps resolves issues that may need senior management approval and support.
- b) ITSM Steering Committee
This is a management committee that can be established to guide and oversee the direction of the entire transformation effort. Members of this committee discuss all project matters and make decisions resolving issues in line with goals and an organization's mission statement. The committee should conduct periodic meetings to monitor Program progress and issues.

- c) ITSM Core Team
This team consists of a number of professionals that are responsible of the success of the project. They coordinate with the stakeholders, management, support, financial entities, contracts, and training providers.
- d) ITSM Project Lead
Manages the project and assists the core team in accomplishing their tasks. Makes all coordination and necessary meetings with all ITSM stakeholders to keep the project on track. Responsible to help resolve issues that need extra help and to review and accept new requirements.
- e) ITSM Technical Support Team
This team should contain the right technical support who are in charge of developing, testing and moving the ITSM tool into production.
- f) ITSM Subject Matter Experts Team
This team consists of ITSM consultants and other skilled personnel who assist and help with many of the ITSM transition tasks. Some of these members can lead major tasks or subprojects in the program.
- g) ITSM Training Coordination Team
This team manages the coordination of training requirements with the right entities to enroll ITSM technical support staff in training courses.

B. Program Stakeholders Feedback

As the ITSM program or project gets started, a kick-off meeting should be conducted with all members of ITSM Steering Committee. A presentation can be given to show what the organization currently has in terms of IT Services, what is lacking, and the project plan to bridge the gaps.

ITSM Core team should held meetings with all stakeholders including IT support groups to get their feedback and solicit future IT services requirements.

Expected feedback could be that the call center is overwhelmed with a continuous increasing number of customers' calls/emails and there is a requirement of in increasing the manpower to cover the day-to-day activities.

Other groups might need to automate some of manual tasks and require a central knowledge management database for public usage of technical documentations, and so on.

- a) ITSM Tool Selection
ITSM core team here has the responsibility to look at the market and review all suitable products. They should share with the steering committee all candidate tools with their pros and cons to select one ITSM tool under the consideration of the organizations targets, stated objectives and the contractual guidelines.

b) ITSM Tools Implementation

Once the right tool got selected, ITSM Implementation Project should be initiated and project members from ITSM SME team should be identified and assigned to handle related subtasks in the project. The project regular progress update meetings should be conducted for the ITSM steering committee.

VII. BUSINESS VALUE ADDITION OF ITSM

Organization should ensure that the appropriate mix of people, processes, and technology are in place to provide value to business. The ITSM value added to business can be seen in many areas as follows:

A. Information Technology (IT)

- *IT Service Desk Efficiency*: Implementing the right IT service management software can position an organization's service desk for success. ITSM Software with ITIL-certified solution is capable of handling call centers' demanding daily workload. ITSM software is able to tackle incidents, manage change requests, track assets, handle help desk requests, and more in the targeted organization. [6]
- *Corporate Process Automated*: Automation can lead to a high level of consistency, repeatability, and control. As an organization can figure out what they actually want to do, automation is truly incredibly powerful. The automation includes incident resolution, Alert driven notifications, and service request management. IT Service processes will be automated so employees will be freed from the burden they carry from many repetitive low value tasks that keep them from what's really important to the business operations they serve and support.
- *Employees Productivity*: ITSM system increases the productivity when it acts proactively to detect incidents and resolve them before customers call. It prevents IT issues before they happen. The system has the ability to identify and address repeated problems. It also has analytical capabilities to measure and improve IT performance. [7]
- The right set of ITSM features and capabilities are necessary for organizations to enhance end-user experience and boost employee productivity. Services will be provided in a faster way and self-services will be available for customers use.

B. Business

- *Services*: With ITSM system in place, IT availability and performance get better which cause customers and IT users to get more done. Customers should know what services are available and how to use them. [6]
- *Service Catalog*: ITSM Service Catalog is the access point to all products and services offered by IT. The use of a Service Catalog greatly facilitates user self-service capabilities, reduces management costs and improves the user experience by providing detailed information about their requests. ITSM Service Catalog should always be maintained by updating

the available services and removing the obsolete ones. [8]

- *KPIs*: KPIs are metrics measuring how effectively specific business objective associated with IT performance are achieved. It can be used to measure the service availability, First Call resolution rate, time to resolve issues, customers/users satisfaction, cost per contact, tickets/calls reopened. [9]

C. Cost Reduction

With standard ITSM system in place, the total cost will be dramatically reduced. This is a result of many factors; some of which could be related to optimizing licenses, cut in manpower due to automation, less cost of maintenance on integrated systems and components and others.

D. Customer Satisfaction

Customers with automated ITSM processes, ITSM self-services, fast response and accuracy in data will definitely be satisfied. This includes the increased speed of issue resolution and service provisioning. All this is in addition to the high availability of operations and human error minimization. [10]

VIII. IMPORTANT THINGS TO CONSIDER

During the ITSM Implementation Project, there are some important things to be aware of and need to be considered in the following areas:

A. Scope of Work

It is crucial to setup a clear scope of work of the ITSM implementation project. This should cover the main goal of the project, deliverables, involved entities, planned activities, related requirements, and the timeline. The scope of work should be studied ahead of time, and get approved by all stakeholders including the implementors before starting the implementation. It is not a good practice to keep updating the scope of work during the implementation because you will end up extending the deadline of the project and this will cause different issues could end up in a failure in the project execution

B. ITSM Licenses Capacity

The cost of ITSM products licenses is expensive. ITSM Project Lead should figure out how many and what types of licenses are needed once the ITSM system goes live. The project Lead should consider the growth of support staff, users and devices and should plan it right taking the dedicated planned budget in his/her consideration.

C. ITSM Implementation Document

It is very important to document the ITSM system installation procedures that covers the performed work step by step and all related configurations. This document is necessary as a reference in case the system need to be rebuilt or upgraded. At the same time, it will be always needed for the knowledge transfer.

D. Required Training

There should be a dedicated training budget for the support staff who will be maintaining the system when it

goes live into production. This training includes technical courses and certifications in all supported ITSM areas.

IX. CONCLUSION

IT Service Management is an integral part of designing an efficient software and IT infrastructure. IT organizations must deploy IT Service Management into their work processes to realize the benefits of the transformation. Many factors contribute to the success of implementing ITSM in an organization and results in remarkable efficiency gains. Senior management support plays a critical role in the success of implementing ITSM in an organization. A senior manager who acts as project champion is vital. It is crucial to make efforts to develop close relationship with the vendors who can assist and transfer technology to the support staff. ITSM team members need to have an effective change management process to move the culture from technology focus to service oriented. The change involves organizational restructuring, careful planning, and reinforcement of the project objectives. Effective project governance, execution and staying focused on the project objective contributes significantly to the success of the ITSM implementation project.

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