

NEED AND ASSESSMENT OF IT SERVICE MANAGEMENT MATURITY MODELS



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INTRODUCTION

IT Service Management is defined as a combination of people, processes and tools that are deployed to support the production environment or for delivering other IT services to internal & external customers. Given this, it is important that internal service quality be maintained at a level necessary for the organization to deliver quality products and services on an ongoing basis. IT organizations have turned to maturity models to find ways to define and map the processes being followed and the most likely results from adhering to them. This allows them to identify optimal ways to achieve the required maturity of the service levels and to then codify them for repeatability and predictable results.

The business needs of each organization are different and so are their IT organizations. IT Service Management today is also being impacted by the emergence of technologies like the Cloud and development approaches like Agile, Lean, and DevOps. Under the circumstances, it is now even more important to adopt an ITSM process that is at the maturity level needed to address the specific business needs of each organization.

This whitepaper is for CIO's, COO's, IT Managers, and Infrastructure and Operations Managers tasked with managing IT operations and service and support delivery.

The paper will establish at a preliminary level the need for adopting an ITSM Maturity Model and introduce at a basic level some of the most popular ITSM related models currently in use.

EXECUTIVE SUMMARY

1. IT Service Management is a combination of people, processes and tools that is deployed to support the production environment or for delivering other IT services.
2. ITSM has to be aligned with the specific business needs of the organization.
3. IT organizations need maturity models to define and map the processes being followed and the most likely results from adhering to them. This is to identify the maturity of the service levels the business requires and to then codify them for repeatability.

4. The objective of the IT organization adopting an ITSM maturity model is to use this as a basis for making continuous improvement.
5. ITSM Maturity models seek to isolate individual building blocks that come together to form the complete service delivery process. The organization then tries to assess its maturity in each of those constituent elements.
6. A variety of ITSM Maturity Models are available. These serve as starting points for organizations seeking to define their own models. The models differ in the number and nature of factors that they consider.

THE NEED FOR ITSM MATURITY MODELS

IT systems form the operational backbone of most businesses today. Organizations recognize that to deliver customer specific products and services, their internal systems have to perform at the required level consistently. There is also recognition that the IT systems are more than just the infrastructure but include the entire process built within the organization around delivering to the specific needs of the business. Given the important role played by IT systems, there is a need to examine them to identify if they are capable of delivering at the required service level whenever needed. The need is to find a way to assign a “score” to the maturity level of the organization's IT maturity that can then form the basis for internal and external benchmarking and facilitate continuous improvement.

ITSM DEFINITION: The Information Technology Infrastructure Library (ITIL) has defined ITSM as, “The implementation and management of quality IT services that meet the needs of the business. IT service management is performed by IT service providers through an appropriate mix of people, process and information technology.”⁽¹⁾ A few points emerge from this definition. First that this is a process and second that the process has to be aligned with the specific business needs of the organization.

Key to ITSM is focusing on the end-to-end process rather than on specific constituent elements. The first step before setting out to make improvements is to define where the process stands first. Maturity models are used by organizations to define the maturity of their processes.

Service delivery is achieved by leveraging the most appropriate technology solutions but is not dependent upon the specific technology platform. The focus is on the delivery of the complete service and on leveraging the appropriate process elements to do so. The management of individual IT elements and various technology platforms does not traditionally form a part of ITSM.

The technology landscape is changing with the wide acceptance of technologies like Cloud and Mobility. Development methodologies like Agile, DevOps, and Continuous Delivery are also impacting the levels of service the organization needs. The expectations from the IT systems are also evolving – from being a crucial support system earlier, the need now is for them to help fulfill some strategic intent like helping the organization deliver faster in a cost effective way.

PROCESS APPROACH: Key to ITSM is focusing on the end-to-end process rather than on specific constituent elements. Despite being a charter of the IT organization, there is a focus on the services provided by the IT systems rather than the systems themselves. The objective of the IT organization adopting an ITSM maturity model is to use this as a basis for making continuous improvement.

The first step before setting out to make improvements is to define where the process stands first. Maturity models are used by organizations to define the maturity of their processes. There are several maturity models available for organizations to choose from. These models are propagated by consulting firms, IT analysts and individual organizations but all of them seek to isolate several individual building blocks that come together to form the complete process. The organization then undergoes a process of self-examination by answering questions related to their maturity in each of those constituent elements. The building blocks are spread across the “People”, “Process”, “Technology” and the overall “Mission”. Taken together the values ascribed to the various building blocks gives the organization a datum to base improvement plans on.

SIMPLE ITSM MATURITY MODELS

Every business has unique needs and operates under unique circumstances. This being the case no standard maturity model would be adaptable “as-is”. There are a variety of ITSM Maturity Models though that serve as effective starting points for organizations seeking to define their own models. The models range in complexity from the extremely basic to the deeply complex. The various models differ from each other in the number and nature of factors that they consider as well as in the specific industries they seek to cater to. The maturity models seek to identify the maturity of the organization across various processes. Examples of processes that maturity models focus on are:

- ▶ Incident Management
- ▶ Problem Management
- ▶ Change Management
- ▶ Configuration Management
- ▶ Release Management
- ▶ Capacity Management
- ▶ Availability Management
- ▶ Service Continuity Management
- ▶ Financial Management
- ▶ Service Level Management
- ▶ Service Desk

In this section, we will examine two simple maturity models:

MODEL 1:

Among the early models that were adapted to ITSM was the Value Chain based IT Growth Model propagated by a consulting services company⁽²⁾ in 1995. The model was designed to help organizations identify the stage of growth of various IT processes and focused on the value the organization could derive from the capabilities of the IT organization at each stage. It also defined the relationships between the various phases. As with all maturity models, the objective was for IT departments to be able to use the model to make the choices they needed to grow from maturity (growth) level to maturity (growth) level. This model identifies five process areas of focus:

- ▶ Production
- ▶ Incidents & Problems
- ▶ Changes & Configurations
- ▶ Service Level
- ▶ Development & Maintenance

Value Chain Based IT maturity Model

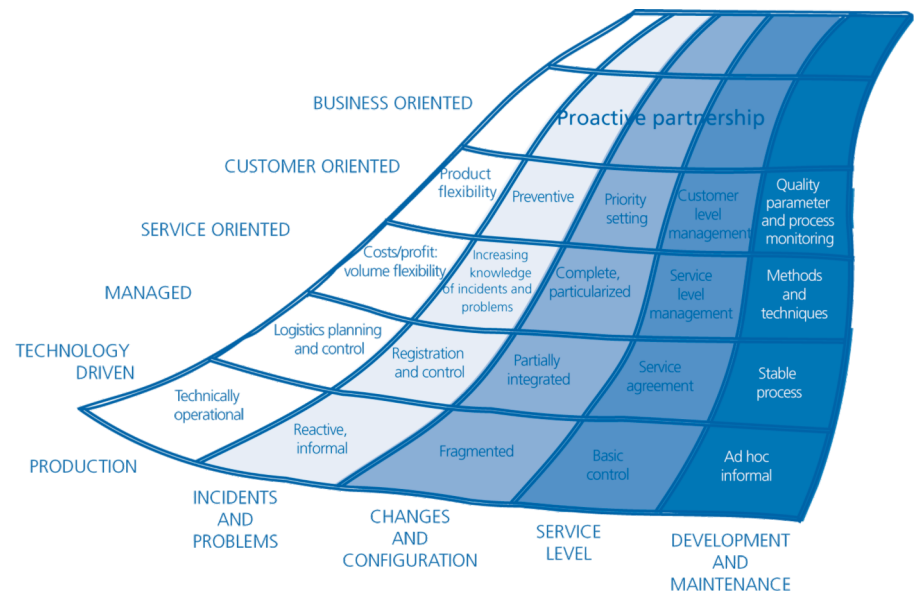


Fig. 1: Value Chain Based IT Maturity Model (1995)

Across each of these process areas the growth model identifies five stages of increasing value addition to the organization. These can be classified as:

- ▶ **Technology focused:** At this level the organization is focused on the technology and the objective is to create systems that automate the delivery of information.
- ▶ **System focused:** At this level the organization shifts the focus from the technology itself to how it is all brought together to create systems for information delivery. At this stage reporting and standardization start getting added.
- ▶ **Service focused:** At this level the focus is on how a combination of the technologies and systems can be leveraged to deliver the “service” the organization needs. To this extent greater degrees of prior planning and proclivity is introduced into the processes.
- ▶ **Customer focused:** This is the level at which the organization starts focusing outwards, on the customers, who will consume the services. The processes are tuned to anticipate the needs of the customers and hence build in greater degrees of flexibility.
- ▶ **Business focused:** At this, the highest, level the focus is on the business needs. The IT organization has the mandate of understanding the business needs and aligning itself, and all its processes, towards the achievement of these business goals.

As with all maturity models, organizations grow from one level to the next only after achieving mastery over all the previous levels.

Capability Maturity Model

MODEL 2:

The US Dept. of Defense Software Engineering Institute, in the course of the development of the Capability Maturity Model defined 5 levels of process maturity that can form the basis for a continuous process improvement initiative. These levels can be applied at each of the IT process areas outlined earlier.

↑ Performance Improvement ↓	Organizational Performance			Results
	Stages	Description	Characteristics	Opportunity & Quality
	Optimized	Feedback loops are in place to update standards	Synergy, evaluation and organization management	
	Managed	Standard processes have metrics	Problem prevention Process updates Resource accountability	
	Defined	Standard processes are defined and institutionalized	Tools & Templates central repositories training & job aids	Risk
	Repeatable	Processes are dependent on individuals	independent learning process-focused	
	Ad Hoc	Almost no repeatable processes Reactive management	Based on practitioner's abilities	

Fig.2: Capability Maturity Model- Levels and Characteristics

The levels are:

- ▶ **Ad-Hoc:** At this level no standardized processes exist or are documented. The approach is usually reactive and there are no policies governing actions.
- ▶ **Repeatable:** At this level some documentation exists to capture how tasks are carried out. These serve as the basis for action on activities that have to be performed repeatedly.
- ▶ **Defined:** At this level the processes are aligned to standards and there are clearly defined interfaces between the various different interdependent processes.
- ▶ **Managed:** At this level there is considered management of each process. This would include periodic reviews of all the policies and processes for effectiveness and for their suitability for ongoing application.
- ▶ **Optimizing:** This is the highest level and at this level the processes and policies are monitored and reviewed continuously with a view to identifying opportunities for continuous improvement.

POPULAR ITSM MATURITY MODELS

There are a number of standards within the scope of the overall ITSM practice. In this section, we will look briefly at some of the most popular ones.

ITIL: ITIL (formerly known as the Information Technology Infrastructure Library) is among the most common reference set of practices for ITSM and is claimed to be the most widely accepted ITSM approach. ITIL first originated among the UK Government agencies as an attempt to define a common set of standards that could govern the adoption of IT management practices by various government agencies and private companies. The current version, the 5th, is the 2011 edition. ITIL is closely aligned to the needs of the business and enables organizations to use their IT processes optimally. ITIL is currently owned by Axelos, a joint venture between the UK Government and Capita.

The best practices contained in ITIL are contained in 5 core volumes:

- ▶ **ITIL Service Strategy:** this aims to understand the aims of the business and the customer.
- ▶ **ITIL Service Design:** this helps convert the service delivery plan into a plan for achieving the business objectives.
- ▶ **ITIL Service Transition:** this focuses on creating capability to deliver new services as & when needed.
- ▶ **ITIL Service Operation:** this focuses on the capability to manage these new services.
- ▶ **ITIL Continual Services Improvement:** this focuses on making small and large improvements in the services delivery

Some other well-known ITSM frameworks are:

- ▶ Business Process Framework (eTOM)⁽⁵⁾ is primarily for telecom service providers.
- ▶ COBIT (Control Objectives for Information and Related Technologies)⁽⁶⁾ is a framework developed by ISACA for IT Management and governance.

"Massive organizational transformation [brought by ITSM] can prove to be difficult. Altering the beliefs, habits, roles and responsibilities of so many people engaged in such a wide variety of activities across the enterprise can appear, at the outset, to be an impossible task. But when undertaken with care and planning, the results are overwhelmingly positives."- Rodrigo Flores, Bill Fine and Troy DuMoulinis.

- ▶ FitSM [5]⁽⁷⁾ is a collection of standards for lightweight service management. A key facet is that several of the standards are published under the Creative Commons Licenses.
- ▶ SO/IEC 20000⁽⁸⁾ is the international standard that addresses the delivery of IT services. The model has several similarities with ITIL.
- ▶ MOF[6]⁽⁹⁾ (Microsoft Operations Framework) has, in addition to providing guidance across the IT life cycle, a specific focus on services delivered using Microsoft technologies.

ITSM MATURITY ASSESSMENT

At its core the purpose of an ITSM maturity assessment exercise is to deliver a plan to move the IT and Service Delivery organization from the current maturity level to the desired maturity level.

We have previously established that ITSM is dictated by the business needs. Thus the first step in the assessment exercise should be to identify the specific business challenges that need to be addressed and to then map them back to the IT service delivery processes that could be impacting that business pain points. Then assigning a priority to the business issues thus identified will help to allocate priorities and hence decide the order in which the service delivery processes should be examined. This is also the time to decide which processes will be assessed – a decision based on the business priorities.

The next step is to map each of the chosen processes including all interdependencies. At this stage the organization will also be able to identify the information about each process necessary for completing the assessment.

Before moving to the next stage the organization will have to decide what ITSM strategy or framework they will use as a guide from among the many available. The questions to answer at this stage are whether the assessment will be undertaken once or will it be repeated periodically, are you seeking certification and whether your organization would undertake the assessment internally or with an external vendor?

Once the strategy and the framework have been decided and the required information is gathered the assessment should be undertaken. The assessment should form the basis for a clear plan for action to graduate the chosen processes from the current maturity level, where the business is being adversely impacted, to a maturity level where the business challenges are being satisfactorily addressed.

The crux of the exercise is the plan and the implementation and this is where organizations can derive real value. An excellent reference "Defining IT Success through the Service Catalog" by Rodrigo Flores, Bill Fine and Troy DuMoulinis puts it to the mark. They quote, "Massive organizational transformation [brought by ITSM] can prove to be difficult. Altering the beliefs, habits, roles and responsibilities of so many people engaged in such a wide variety of activities across the enterprise can appear, at the outset, to be an impossible task. But when undertaken with care and planning, the results are overwhelmingly positives."

CONCLUSION

Given the critical and increasingly strategic role IT systems play in the business operations of most organizations today, it has become more extremely important to have a focus on the continuous improvement of these systems. To be able to define the improvements that are needed it is necessary to define the current maturity of the services delivery processes so this can form the basis for comparisons and then for continuous improvement plans.

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