

ITIL Framework

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ABSTRACT

Over the last few years, the number of organizations that deliver information technology (IT) services is increased. There are some frameworks such as Information Technology Infrastructure Library (ITIL) for IT Service Management that consists of a set of guidelines that specify what an IT organization should do. However, they don't explain how to do it. For example, they specify that IT should allocate a priority for each incident that comes into the service desk, but they do not specify how to allocate those priorities. Here we implement the incident management process, problem management process, for understanding the how to works going the ITIL process. This methodology solve the all issues created by the unknown user.

Keywords: ITIL, BMC Remedy, Problem Management Process, Incident Management Process.

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I. INTRODUCTION

The ITIL skills base has produced good management practices for IT departments that have contributed to improving the services provided by the computing entities to their clients. Based on our experience in implementing these processes in industry, and our experience implementing enterprise resource planning (ERP) and project management, it has proved that there is a chance that these processes can bring added value, if applied to the enterprise value chain. Indeed, the definition of 'value chain' is; a set of functions dealing with input materials, transforming them into products or services to sell on to customers. Thus we were challenged to make analogies with the proposed ITIL phases. This project proposes an original approach by adopting the proposed ITIL methodology to manage enterprise value chain.

II. ITIL BACKGROUND

ITIL Background To define ITIL, one must position oneself in a context of continuous improvement of its services and referral requirements regarding both internal & external clients. ITs' concentration of efforts on customer value will contribute to a strategic alignment of IT services with the business enterprise. ITIL is defined as a set of best practices structured as multiple processes

communicating with each other. Each of these processes fulfills its role in order to meet the criterion of continuous improvement and customer satisfaction. Best practice organizations provide a structure approved by years of experience in large companies, globally recognized for their professionalism, to formalize their processes and optimize IT service management.

III. ITIL'S BUSINESS APPLICATION

Since ITIL acquires more and more ground in the market for information systems through its effectiveness and efficiency in service management, the IT policy makers have the evidence to justify their investment in its implementation. Indeed, it brings a pragmatic approach to address situations which CIOs are faced with, including, inter alia:

- Information technology is receiving more and more investment budget. It constitutes a significant burden for companies, especially those whose core business is not information systems.

- Information systems are increasingly complex. As long as computers have been trying to meet the requirements and demands of their individual customers, they have

found themselves facing an infrastructure and a large arsenal of applications that must be managed and maintained.

- With the advent of new information technologies and communications (social networks, etc.), users have become more knowledgeable and aware of the potential of new computers. Especially since software publishers have made applications more available (The advent of open source) and increasingly complex telecommunications infrastructure (mobile phone).

- As long as companies are spending enormous sums of money on infrastructure hardware and software, leaders expect a return on their investment and are beginning to optimize their spending. It is a context that has put CIOs in a difficult situation.

IV. PROPOSED SYSTEM



Fig. ITIL Process Model

1. Service Strategy:

Service Strategy is the origin point of the ITIL Service Lifecycle. It provides guidance on clarification and prioritization of service-provider investments in services. Service strategy focuses on helping IT organizations improve and develop over the long term.

It also provides guidance on how to design, develop, and implement service management [6].

2. Service Design:

Service Design focuses on the design of IT services and covers the architectures, processes, policies and documentation. It provides guidance for the design and development of services [7].

3. Service Transition:

ITIL service transition is to build and deploy IT services. Service transition also makes sure that changes to services and service management processes are carried out in a coordinated way.

It also provides guidance for development and improvement of capabilities for transitioning new and changed services into operations [8].

4. Service Operation:

Service Operation module focuses on the principles, Processes, operational activities and functions that enable organizations and individuals to successfully manage how their products and services perform.

It focuses on the coordination and execution of activities that enable the ongoing management [9].

ITIL Process Module:

1. Incident Management:

Incident management (IM) is an IT service management (ITSM) process area. The first goal of the incident management process is to restore a normal service operation as quickly as possible and to minimize the impact on business operations, thus ensuring that the best possible levels of service quality and availability are maintained. Incidents that cannot be resolved quickly by the help desk will be assigned to specialist technical support groups. A resolution or work-around should be established as quickly as possible in order to restore the service.

Incidents may match with existing 'problems' (without a known root cause) or 'known errors' (with a known root cause) under the control of problem management and registered in the known-error database (KeDB). Where existing work around have been developed, it is suggested that referencing these will allow the service desk to provide a quick first-line fix. When an incident is not the result of a problem or known error, it may be either an isolated or individual occurrence or may (once the initial issue has been addressed) require that the problem management process become involved, possibly resulting in a new problem record being raised and registered for future reference.

The activities within the incident management process include:

- Incident detection and recording
- Classification and initial support
- Investigation and analysis
- Resolution and record
- Incident closure
- Incident ownership, monitoring, tracking and communication
- Establish incident framework management
- Evaluation of incident framework management

Incidents can be classified as they are recorded, Examples of incidents by classification are:

Application

- Service not available
- Data issue
- Application bug

Report not coming up
Excel not downloading
Disk-usage threshold exceeded

Hardware

System-down (server issue)
Network issue
Automatic alert
Printer not printing
System issues

2. Problem Management:

Problem Management is the process responsible for managing the lifecycle of all problems. The primary objectives of problem management are to prevent problems and resulting incidents from happening, to eliminate recurring incidents, and to minimize the impact of incidents that cannot be prevented. The Information Technology Infrastructure Library defines a problem as the cause of one or more incidents.

Problem Management includes the activities required to diagnose the root cause of incidents identified through the Incident Management process, and to determine the resolution to those problems. It is also responsible for ensuring that the resolution is implemented through the appropriate control procedures, especially Change Management and Release Management.

Problem Management will also maintain information about problems and the appropriate workarounds and resolutions, so that the organization is able to reduce the number and impact of incidents over time. In this, Problem Management has a strong interface with Knowledge Management, and tools such as the Known Error Database will be used for both. Although Incident Management and Problem Management are separate processes, they are closely related and will typically use the same tools, and may use similar categorization, impact and priority coding systems. This will ensure effective communication when dealing with related incidents and problems.

All the relevant details of the problem must be recorded so that a full historic record exists. This must be date and time stamped to allow suitable control and escalation. A cross-reference must be made to the incident(s) which initiated the "Problem Record":

- Service detail
- Equipment detail
- Date/time initially logged
- Priority and categorization details
- Incident description
- Details for all diagnostic or attempted recovery actions taken.

A good practice is to have a review for all major problems. The review should examine:

- The correct steps taken

- The problems encountered during the implementation of the solution
- The need to improve
- Prevent the recurrence of further similar incidents
- Third-Party/Vendor/Supplier involved in the implementation

The knowledge learned from the review should be incorporated into a service review with the business customer to ensure that the customer is aware of the actions taken and the plans to prevent future similar incidents from occurring. This helps to improve customer satisfaction and assure the business that Service Operations is handling major incidents responsibly and actively working to prevent their future recurrences.

3. Change Management:

Change management is an IT service management discipline. The objective of change management in this context is to ensure that standardized methods and procedures are used for efficient and prompt handling of all changes to control IT infrastructure, in order to minimize the number and impact of any related incidents upon service. Changes in the IT infrastructure may arise reactively in response to problems or externally imposed requirements, e.g. proactively from seeking improved efficiency and effectiveness or to enable or reflect business initiatives, or from programs, projects or service improvement initiatives. Change management can ensure standardized methods, processes and procedures which are used for all changes, facilitate efficient and prompt handling of all changes, and maintain the proper balance between the need for change and the potential detrimental impact of changes.

Change management within ITSM is often associated with ITIL, but the origins of change as an IT management process predate ITIL considerably, at least according to the IBM publication A Management System for the Information Business.

In the ITIL framework, change management is a part of "Service Transition" – transitioning something newly developed from the Service Design phase into Service Operation and aims to ensure that standardized methods and procedures are used for efficient handling of all changes.

Change management is a process used for managing the planned deployment of alterations to all configuration items in the configuration management database, that are a part of a business's live ("production") and test ("UAT") environments along with any other environment that a business wants to have under change management generally all environments that are under the control of 'ICT Operations'. It is not typically responsible for change within development environments.

A change is an event that is:

- Approved by management

- Implemented with a minimized and accepted risk to existing IT infrastructure
- Results in a new status of one or more configuration items.
- Provides increased value to the business (increased revenue, avoided cost, or improved service) from the use of the new or enhanced IT systems.

4. Asset & Configuration:

Service Asset and Configuration Management delivers a model of the services, assets and the infrastructure by recording the relationships between CIs. This enables a better assessment of outage impacts, change impacts, a better planning of technology refresh and software upgrades, and an optimization of assets utilization and costs.

The configuration items and their information can have different levels of details. The general rule is to not include attributes or relationships unless they create more value than the cost associated with maintaining them.

V. RESULT ANALYSIS



Fig 2. login page

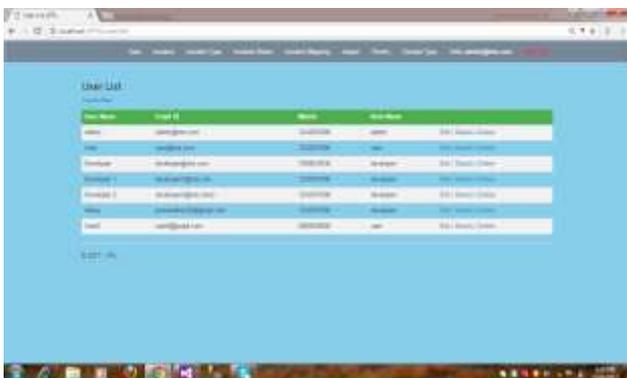


Fig 3. User list

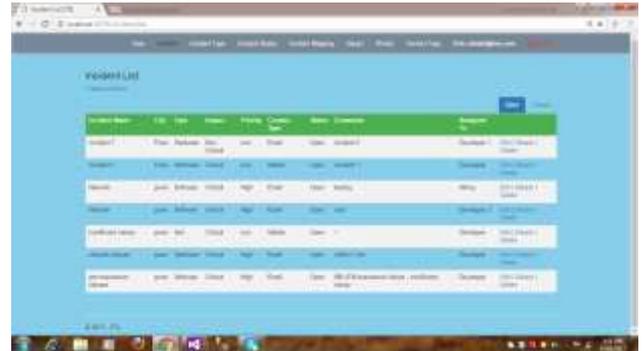


Fig 4. Incident list



Fig 5. Assigned list

VI. FUTURE SCOPE

Further work to this research can focus on designing and creating various really simple syndication (RSS) feeds for data collection towards business process data analysers that could identify the need for IT service support process reengineering, and a data decision support system (DSS) for real time intelligent business decisions.

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VIII. CONCLUSION

The ITIL skills have been designed to meet a need for structuring the IT service management process. Its philosophy has brought good results in terms of IT management and service improvement. The design of this repository also meets business functional needs as they are structured by the value chain as defined by the authors of management.

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