



HP Consulting Canada's Implementation of ITIL

***ITIL Best Practices as Tool to Achieve
High Availability***

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Overview

In today's demanding world of IT service delivery, organizations are re-evaluating their organization's ability to deliver true 7x24 hours of operation and 100% reliability. E-business and E-commerce imperatives are changing traditional customer and marketplace demands on IT. Unfortunately, organizations are finding that in either one of three areas: technology, process or people, they are falling short of having the infrastructure in place to truly deliver to these expectations. This is a result of the rapid growth within the client server world and the dynamic nature of e-service delivery requirements. As well, IT organizations have tended to place their focus on solely on technology and tools as the only enablers to deliver this level of high availability.

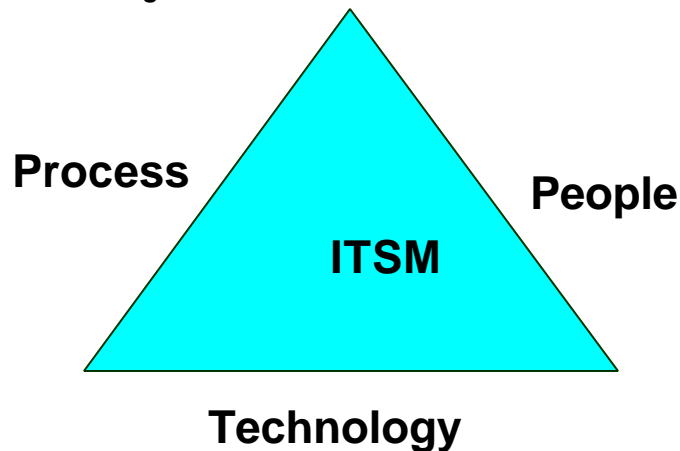
In truth, all three areas within the IT organization: people, process and technology, must become the focus of scrutiny. Only when integration between these three components of the IT infrastructure are realized will companies be able to truly deliver 7x24, 100% reliable services.

This paper discusses the three corners of the people, process and technology triangle, with specific focus on the process component and its role in completing the IT infrastructure to support high availability demands.

People, Process and Technology

To deliver on 7x24, 100% reliability demands, an IT organization requires the integrated infrastructure of people, process and technology. Each individually cannot deliver to this expectation. An integrated "*implementation triangle*" is required to achieve these levels of high availability.

The "*implementation triangle*"



An analogy for this "*implementation triangle*" is an aircraft. The plane represents the technology. The loading, scheduling, flying and routing of the plane represent the process and the pilot, air traffic controllers and service teams represent the people. The delivery of service to the flying customer cannot be realized if any individual component is missing from the equation. So it is with service delivery within an IT organization.

This analogy is useful to demonstrate a second key point. We would all like to believe this aircraft is a working representation of 100% reliability within the agreed upon hours of operation! In a plane such as the A320 Airbus, fly-by-wire technology is used to control the flying and landing of the plane. There are no manual cables or relays. In fly-by-wire planes, all functionality is controlled through the pilot's joystick and terminal, powered by an on-board Local Area Network. This is an example of a process control system. The service to the pilot

is completely IT-enabled, just as our businesses today are IT-enabled to the point where business is halted when there is an IT failure.

The processes to manage the successful introduction of change into the airplane's environment are crucial, as are the processes of Continuity Planning, Availability Management, Problem Management and Incident Management. Do these processes sound familiar? They should, as they are the same processes used to manage service delivery within an IT shop today.

ITIL as an Industry Standard – A Brief Introduction

The Information Technology Infrastructure Library (ITIL) has been dominant as the only public best practice for IT Service Management in the European Market for many years. ITIL defines the operational and strategic business processes required in the running of an IT shop. Organizations chose to implement ITIL to assist them in achieving control of their IT infrastructure and services while still maintaining the balance with the flexibility required to meet time to market demands. Companies on a path of Quality Management and continuous improvement start with defining their business processes to ensure that accurate and meaningful management information is made available for analysis.

Customers now place demands on IT organizations for 7x24 hours of operation and 100% service reliability. This level of service delivery can only be met when the technology, people, and the supporting business practices are in place to deliver on this expectation. As a best practice for IT Service Management, ITIL can be used as a framework to build the business process architecture required to deliver to this high availability expectation.

ITIL itself is a theoretical set of best practices for process management, focused on the quality support and delivery of IT services. However, theory is never quite as elegant when translated into an actual implementation. In fact, implementation can become quite challenging and at times, even messy. Unfortunately, the translation of this theory into practice often results in a failed project. It is also interesting to note that organizations will often introduce new service and system management technology with the goal of improving the business. However, many of these implementation projects fail, as they haven't fundamentally altered their underlying business processes to accommodate the new way of doing business that the technology promised to deliver. In any major technology implementation, the integration between process, people and technology needs to be addressed. ITIL is an example of a methodology that can be used to address the process component of the implementation triangle.

It is in this arena of implementation integration between people, process and technology that HP Canada has emerged as one of the industry's top provider of ITIL IT Service Management consulting practices, based on their years of experience implementing the HP ITSM Reference Model.

Why Implement ITIL?

Why would an organization choose to embark on the implementation of ITIL business processes? Doesn't the old adage say "If it ain't broke, don't fix it?" Many organizations in today's technology enabled e-business environment are looking for ways to improve service delivery to meet the demand for 100% reliability required to provide 7X24 hour customer access. IT organizations that guarantee 99.5% availability of service in a "7X24" shop are actually "down" for 306 hours of the year. Most agree that nothing less than a goal of 100% reliability is acceptable in today's world of a true 24 hour, anywhere, anytime client access environment. Factored in with the complexity inherent in managing a complete extended

supply chain to agreed upon service levels, many organizations are looking to proven, best practices to assist with positioning themselves as industry leaders.

A 1999 Compass Analysis IT Survey presented the results of interviews with 650 CEOs from various countries on their expectations of their IT departments and CIOs. In this survey, Canadian CEOs had the highest expectation of IT for business performance improvement (55%). Overall expectations of IT enabled competitive advantage rated high with 39% of Canadian CEOs ranking it most highly but actual performance results in this area were the lowest - with only 16% rating performance highly. These Canadian CEOs do not differ from their counterparts all over the world. There is a strong need to link Information Technology's delivery directly to the strategic business goals in order to succeed in today's marketplace.

Lastly, the customer does not view service delivery in technology silos. They measure service delivery at three (3) touch-points to the business: On-the-Phone (service desks), Face-to-Face (consulting, installations and customer management services) and In-the-Screen (applications). A service is a product or output of the IT operation to it's customers. It is not an internal activity between departments. The definition of service management is the process of delivering IT services to the business user under predefined, contracted service level agreements (SLAs). These new service measurements are not achievable without major changes to the way business is conducted and metrics are collected and reported upon on IT today.

IT as a Utility

Expectations for IT are starting to mirror the expectations consumers have of a utility company. When you pick up the phone, you always expect to hear a dial tone. It is a rare occasion when you do not receive a tone. When you plug an appliance into the wall socket, you expect there to be electricity. The same expectations now apply to IT-enabled services.

When you receive a business PC from your company, you expect to have access to all the standard tools you require to deliver service to your customer. When you access the Internet, you expect to link to the site you've requested. When you access an ATM, you expect that the machine will accurately run your banking transactions within seconds.

These expectations exist, but, unfortunately, these levels of service are not always delivered. This is due to both the underlying technical infrastructures and processes in IT that were not designed to manage high availability. Utility systems were designed by engineers and as such, are managed as process control systems, such as nuclear power plants or jet airplanes. However, these sectors of business rely heavily on IT to enable their processes. We in IT need to adopt the same engineering view of service delivery to our customer if we are to achieve the same levels of reliability and hours of operation made available by the utility companies.

What is a Process?

A process can best be viewed as a definable set of inputs, tasks and outputs to produce a quantifiable result. For example, let's use the process of Order Fulfillment. The input is the customer's request for service and their expectations around price, delivery, etc. There are many tasks involving many people and even different departments to complete this order. The output of this process is a satisfied customer because the product order is received on time, at cost and is what they actually ordered and expected to receive.

This is very different from the "assembly line" approach to product or service delivery that was developed in the early years of this century just past. In the old model, one person would deliver a single repeatable task of the complete "assembly" process while having limited

interfaces to the inputs and absolutely no interface to the final product. This brings to mind the "I Love Lucy" episode where Lucy and Ethel are working on the chocolate candy assembly line with the unavoidable comic antics when the line starts to speed up. Albeit a chocolate lover's dream, but this episode demonstrates how quickly the assembly line process can breakdown when a change is introduced into its normal function.

In the IT business, we deal with change on a daily basis and are required to deliver on these changes while still maintaining stability within our existing infrastructure and services. The difference in a process based organization is that the inputs and the outputs are well defined and the focus of all the people involved in performing various tasks are placed on the delivery of quality service to customer.

The Challenge with Today's Business Processes

Most processes in an IT organization have been built over time on an as-needed basis as the business and the supporting technology grew to allow for automation of some of the tasks within the process. This has led to a "silo" view of service delivery. This is extremely visible in IT organizations where each technology is an organizational silo, responsible for and measured on the delivery of their own piece of the pie. We are even starting to see the emergence of "service silos", where large service areas, such as SAP, are attempting to manage delivery in technical isolation from other service areas.

During the mainframe-centric years, this model of technology silos was functional within the organization, especially given the unique technical specialties of the individual platforms. But with the implementation of client-server and distributed technology, the complete end-to-end service, as seen by the client on their screen, began to cross many of the traditional functional silos. This is why we now look to our business processes, which, by nature, cut across all the silos in an organization.

Many of these processes today show the patchwork signs of accretion. Let's use an eggshell as an analogy for a process. Empty the contents of an egg and drop the eggshell on the floor, causing it to break into many pieces and then glue the pieces back together. The glue represents the waste within the process. This in turn represents the opportunities for improvement. The less glue, the more efficient and cost effective the process will be to deliver. It has been estimated that all processes contain approximately 20- 40% of waste.

Continuous Improvement (TQM) and IT

In an attempt to meet this expectation of IT as a utility, some organizations have chosen to undertake continuous improvement initiatives in order to "improve the efficiency of a process while reducing costs and cycle time".¹ The goal of continuous improvement is "to reduce the waste or those portions of the process that do not contribute to the end result."²

The process of continuous improvement can be defined as "the unending betterment of a process based on constant measurement and analysis of results produced by the process and the use of that analysis to modify the process".³ Continuous improvement processes are tightly interwoven with the theories of Quality Management, which are supported by the Total Quality Management (TQM) best practice.

These theories are not new. They've been standard management teachings for over 50 years. They all deal with process identification and measurement. In the next section, we'll

¹ "The Performance-Based Management Handbook"; U.S. Department of Energy and Oak Ridge Associated Universities

² "The Performance-Based Management Handbook"; U.S. Department of Energy and Oak Ridge Associated Universities

³ U.S. Department of Energy Quality Management Implementation Guidelines

take a closer look at the theories, tools and the current best practices that are used to manage quality and continuous improvement within an organization.

Quality Management Overview

The big-hitters in the Quality Management field are recognizable names⁴.

Dr. Edward W. Deming introduced the Deming or the Plan-Do-Check-Act Cycle. This cycle is a methodology applied to problem solving that places focus on the customer as the most important part of the assembly line. His theory, along with others, was adopted by the Japanese, which resulted in the Japanese competitive edge that was felt worldwide, especially by corporate North America during the 60's and the 70's.

Dr. Joseph M. Juran, who proposed a quality trilogy of Quality Planning, Quality Improvement and Quality Control, once again focused on meeting the expectations of the customer.

Another key contributor is Dr. Philip Crosby, who is best known for his manufacturing concepts of Zero Defects and Do It Right The First Time. It is interesting that he introduced the belief that delivery of low quality products or services is not the fault of the front-line workers, but is the top-down responsibility of senior management to introduce and wholeheartedly support quality and continuous improvement within an organization.

Dr. Kaoru Ishikawa introduced a simple version of statistical techniques that are used to facilitate quality control in an organization. He recommended the use of the Ishikawa (cause and effect) Diagram and the Pareto diagram to be used by quality circles to manage quality improvement initiatives.

Dr. Shigeo Shingo developed Poka-Yoke and the concept of monitoring tasks within the assembly process with technology to identify the source of a defect. He did not believe that statistical quality control systems and processes alone could achieve the goal of zero defects, as they were reactive in nature. He proposed to stop the process when a defect occurs; to perform problem management to identify the root cause of the problem in order to prevent the problem reoccurring in the future. This was the only way that zero defects could be proactively achieved. He believed that eventually, with this type of proactive approach, no statistical quality control would be needed.

Dr. Shingo's belief closely mirrors the goal of IT Service Management. Only through proactive monitoring and removal of defects in the infrastructure will IT be able to achieve the service levels and high reliability statistics that the utility organizations deliver today.

These theories and tools represent pieces of the quality improvement puzzle. The best practice associated with quality and continuous improvement to achieve this quality is TQM or Total Quality Management.

Two key best practices that can be used to facilitate continuous improvement are ISO and ITIL. There are other best practices (like the Capability Maturity Model - CMM), but these are more specific to a discipline, such as software development and maintenance. CMM ratings can also be used to assess process maturity within an organization.

⁴ Research for Quality Management in this section is based on The Performance-Based Management Handbook from the U.S. Department of Energy and Oak Ridge Associated Universities and a Quality Management paper presented by Christopher Fung of the De Montford University in the UK.

ISO 9000⁵

The International Standards Organization (ISO) presents a set of best practices for managing quality in an organization. ISO 9000 is the Institute of Management Foundation Programme in Managing Quality. ISO 9001 describes Quality Systems. ISO 9002 describes Q.A. in Production and Implementation. ISO 9003 describes Q.A. in Final Inspection and Test and BS 7850 describes the Total Quality Management best practice. Organizations can follow the ISO 9000 set of quality initiatives to achieve international certification that is recognized worldwide.

The three basic stages for ISO 9000 include:

- Quality Manual policy document that describes the corporate intentions for quality management;
- Departmental Procedures and;
- Specifications relating to specific contracts.

ITIL

The British Government, represented by the CCTA (Central Computer and Telecommunication Agency), developed ITIL in 1986. It is the only publicly available best practice for IT Service Management. Various consulting and computing firms have developed proprietary versions of process based management collateral. The ITIL best practice, accessible to all, is a collection of 32 books with the Support and Delivery modules structured into 2 distinct sets of 10 books:

- Service Support that includes Help Desk, Problem Management, Change Management, Configuration Management and Software Control and Distribution and;
- Service Delivery that includes Service Level Management, Capacity Management, Availability Management, Contingency Planning and Cost Management.

The theory presented in these books addresses the goals, objectives and activities of the individual business processes. The books also demonstrate the inherent dependencies and holistic interweaving of each of the processes. All are essential to the management of an IT infrastructure with a goal to deliver "...optimal service provision to the customer at justifiable costs"⁶

IT Service Support Processes

The Service Support processes are:

- Help Desk
- Problem Management
- Change Management
- Configuration Management
- Software Control and Distribution

These are the processes required to provide control of the IT infrastructure whilst still maintaining the flexibility needed to meet time to market business drivers. The key benefit achieved upon implementation of these processes is the ability to collect accurate management information about the IT infrastructure. It's been said, "if you can't measure it, you can't manage it." And if you can't measure it, you can't improve it!

⁵ Research for ISO in this section is based on a paper published at www.redbricks.org.uk

⁶ CCTA

Help Desk

The goal of the help desk process is to be the primary contact point for customers, to restore the service to agreed upon service levels as soon as possible and to manage the incident life-cycle through to resolution. The activities of the help desk process are to act as the customer interface to IT, to manage the incident control process including assignment of priorities and management of escalations, to provide support for business applications and the to produce management reports. Some of the benefits of the help desk process are better utilization of IT support staff, centralized collection and reporting on incident data and improved management of the resolution of incidents.

Problem Management

The goal of the problem management process is to stabilize the IT environment through identification of the root cause of incidents in order to eliminate the reoccurrence of future incidents. The activities of the problem management process are incident control (second level support), problem control (identify the root cause) and error control (identify the known error and raise the Request for Change to remove the error from the infrastructure). Some of the benefits of the problem management process are proactive identification of problems before they cause incidents, a lower number of recurring incidents and increased credibility of IT services due to quality improvement.

Change Management

The goal of the change management process is to ensure that formal procedures are followed for the fast and efficient handling of changes to the IT infrastructure in order to reduce the number of change related incidents. The activities of the change management process are managing Requests for Change, approving changes, scheduling changes, overseeing the building, testing and implementation of the change, assessing the change for risk and the management of urgent changes. Some of the benefits of the change management process are improved quality of IT services as change-related incidents are avoided, the ability to manage many changes while reducing the risk of implementation and improved quality of changes based on checks and balances throughout the change management process.

Configuration Management

The goal of the configuration management process is to identify, track and report on all components that make up the IT infrastructure. The activities of the configuration management process are the:

- identification of Configuration Items (CIs) that make up components of the IT infrastructure;
- control of the changes to recorded CIs via the Change Management process;
- managing status accounting of the lifecycle of each CI and;
- ongoing verification of the accuracy of the data in the Configuration Management Database (CMDB).

Some of the benefits of the configuration management process are the identification and recording of all CIs in the infrastructure to facilitate the tracking of assets and the ability to provide supporting data to the other IT business processes. The CMDB allows for the establishment of a baseline configuration in the case of a disaster.

Software Control and Distribution

The goal of the software control and distribution process is to ensure that only tested and correct versions of software are released into production and to manage the storage of production software. The activities of the software control and distribution process are the management of the Definitive Software Library, managing the software releases including the release policies, conducting software audits and

managing the distribution of software. Some of the benefits of the software control and distribution process are the controlled management of software distribution such that known software resides on known CIs over multiple locations, improved quality of the software, better management of software licenses and the reduction of risk due to virus infection.

IT Service Delivery Processes

The Service Delivery processes are:

- Service Level Management
- Capacity Management
- Availability Management
- Contingency Planning
- Cost Management

These are the processes that begin to introduce quality measurements into the organization. It should be noted that is extremely difficult to achieve a successful implementation of this set of processes without the underlying foundational processes described in the ITIL Service Support Set.

Service Level Management

The goal of the service level management process is to ensure the agreement to and the monitoring of IT services delivered to customers. The activities of the service level management process are to develop a Service Catalogue, to negotiate Service Level Agreements, to review accounting policies and underlying support agreements (with internal IT departments and vendors) and to monitor, review and report on IT service level delivery to the customer. Some of the benefits of the service level management process are increased professionalism dealing with customers based on measuring and delivering to realistic, value-priced service levels, improved quality of service delivery due to proactive monitoring of service levels and managing customer demand for service enhancements.

Availability Management

The goal of the availability management process is to predict, plan for and manage the availability of services to meet service level agreements with the customer. The activities of the availability management process include reliability (MTBF - average up-time), security, resilience or freedom from failure, the ability of IT to operate its services (maintainability), the serviceability of IT based on vendor support contracts and the monitoring and reporting on IT availability. One benefit of the availability management process is the ability to determine and meet service levels based on an infrastructure that is planned for and implemented to support the various IT services. Another benefit is improvement in the ability to set and justify costs and charging based on infrastructure requirements to meet agreed upon service levels.

Capacity Management

The goal of the capacity management process is to ensure that the right capacity is available in the right place at the right time in order to meet agreed upon service level commitments. The activities of the capacity management process are managing capacity via demand management, workload, performance and resource management and capacity modeling in order to meet IT service levels. Some of the benefits of the capacity management process are a reduction in incidents caused by inadequate capacity and the management of costs through demand management and pricing rather than purchase of bigger and faster IT components.

Contingency Planning

The goal of the contingency planning process is to be able to cope with and recover from a disaster. The activities of the contingency planning process are identifying the risks and threats to the IT infrastructure and the development, testing, implementation and communication of the contingency plan. The benefits of the contingency planning process are having an organized tested plan in place to restore IT services as quickly and as cost effectively as possible following a disaster situation.

Cost Management

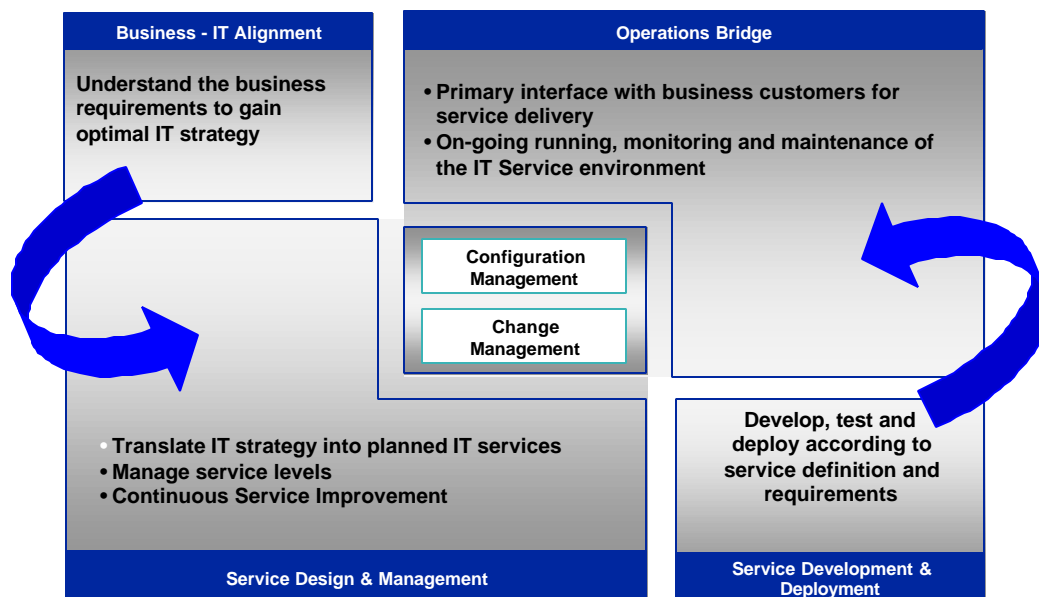
The goal of the cost management process is to understand the cost of delivering IT services and, if required, identify charges to recover the costs for the IT services in a manner that is fair and equitable. The activities of the cost management process are the setting of costing and charging policies for the IT organization and to produce management reports. Some of the benefits of the cost management process are that the costs of provisioning IT services are known and communicated and that costs are recovered in a manner that positions the organization's services favorably in the marketplace.

The Challenges with ITIL

- Based on a mainframe-centric IT infrastructure and set of services;
- Doesn't take into consideration the changes introduced with client server technology;
- Mostly theory with guidelines for implementation;
- Implementation of business processes, as experienced by the HP ITSM Consulting Practice in Canada, have provided a deeper insight into recommendations for repeatable implementation successes.

This year, the ITIL books are being re-written to reflect the changing nature of IT. A British Standards Institute (BSI) Code of Practice reference model has also been developed as a pre-cursor to the ITIL support and delivery process modules.

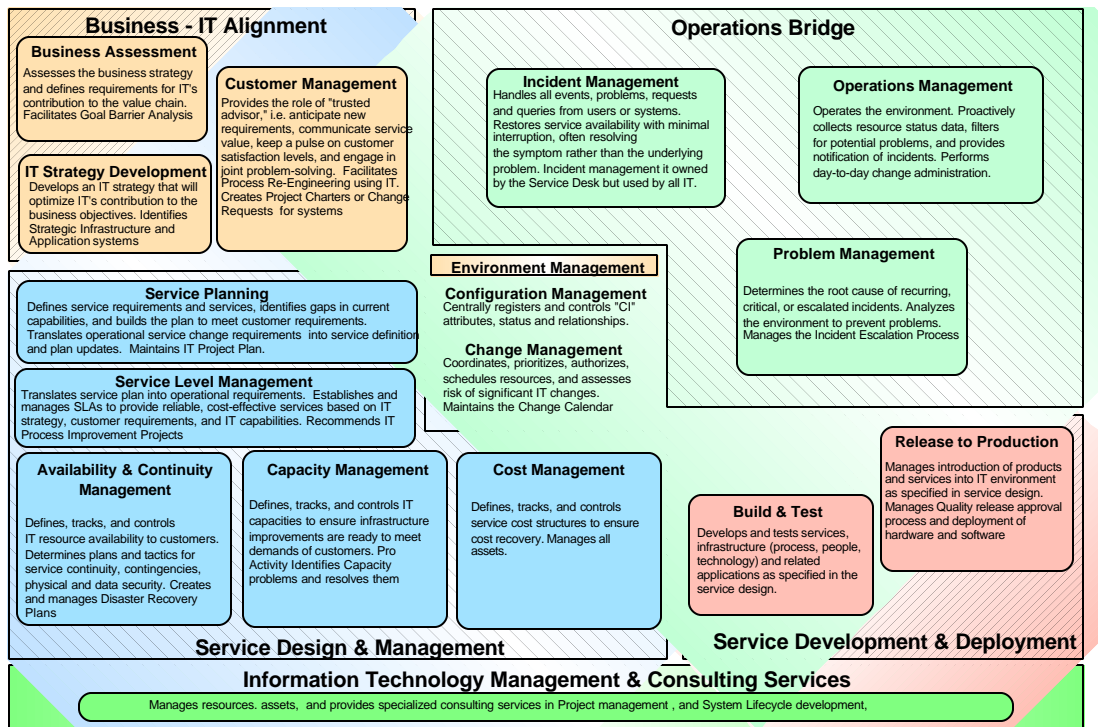
HP ITSM Reference Model



HP has developed an ITSM Reference Model based on ITIL as the underlying framework. This model is divided into 4 quadrants: Business to IT Alignment, Service Design and

Management, Service Development and Deployment and Operations Bridge all supported by the Environment Management processes of Change and Configuration Management.

The processes included in each quadrant are listed, along with their various activities, in the following graphic:



The benefits of the HP ITSM Reference Model are the ability to:

- Define current IT environment (as-is);
- Identify gaps and desired state (to-be);
- Use of standard terminology;
- Places ITIL into a framework to complete the picture of how IT as a business should be run;
- Prioritize planned IT work efforts;
- Identify critical process linkages;
- Link problems to processes;
- Link organization to services;
- Target areas for potential process-enabling technologies;
- Identify insourcing and outsourcing opportunities

For more detail on the HP ITSM Reference Model, please refer to the January 2000 HP ITSM Reference Model White Paper Version 2.0, authored by Jeff Drake of Hewlett-Packard Consulting.

HP Consulting Canada's Implementation of ITIL

Included in this section is a brief discussion of HP Consulting Canada's ITSM Practice implementation experiences with the Operations Bridge, Service Development and Deployment and the Service Design and Management modules as they relate to the ITIL Service Support and Delivery processes.

Incident and Problem Management

- Call the Help Desk process "Incident Management " to differentiate from the organizational entity;
- Separate Incident Control activities from Problem Management due to the conflict in timelines for delivery of the processes (immediate vs. weekly / reactive vs. proactive).

Change and Configuration Management

- Introduce the concept of governance (Federal, Provincial and Township) as it applies to process implementation so as to eliminate unnecessary overhead while maintaining control over changes to the IT environment;
- View the Configuration Management Database (CMDB) as a logical grouping of databases vs. a single physical database;
- Apply the concept of governance to the CMDB data – keep only what is required at the Federal level to run the business and maintain detailed data in technology specific tools, such as Ciscoworks or use tools such as SMS to dynamically query for complex relationships.

Software Control and Distribution

- Key challenge in Release to Production is ownership to avoid "over the wall" syndrome from development teams to operations and the Help Desk – addressed with the identification of specific activities within the Build and Test and Release to Production processes with clear definition of activity ownership;
- Apply rigorous testing and development lifecycle methodologies to infrastructure components as well as to software components.

Service Level Management

- Minor emphasis on SLAs to begin process implementation – need to establish baseline metrics;
- Major emphasis placed on Key Transaction Monitoring using ARM technology;
- Implement process to achieve proactive monitoring of service levels.

Capacity Management

- HP ITSM Reference Model is focused on standard capacity design and management that can be corporately measured;
- Manage capacity through Application Transaction Monitoring based on Service Views;
- Focus on services, not just components of the IT infrastructure.

Availability Management / Continuity Management

- HP places the processes together in the model due to the inherent integration of the pair - good continuity management allows for limited availability interruptions and the IT infrastructure must be designed to support this level of availability;
- Emphasis on designing the technical infrastructure to support the hours of operation and reliability guarantees within those hours – recommend use of this terminology to describe availability in the organization.

Cost Management

- Need to include costing and charging for overall service usage.

Service Planning

- New addition by HP to highlight the importance of translating IS strategy into tactics;
- Defines solution architectures and implementation plans for services;
- Translates projects into infrastructure and application initiatives and tracks them on a master IT plan.

HP ITSM Process Guides

“HP Consulting Canada has developed CD-ROM based IT process guides which provide directed design for the rapid implementation of business processes. Based on ITIL standards, these guides provide the real-life "how-to" elements to design IT processes and procedures, identify related roles, responsibilities and policies. Templates and forms in the guide also facilitate this high-speed design process”⁷.

Each guide contains:

- Overview
- Service Management Process Summary
- Roles and Responsibilities
- Service Management Policies
- Service Management Process Details
- Glossary
- Appendices - key supporting documentation

Process Guides are currently available for Incident and Problem Management, Change and Configuration Management, Release to Production, Continuity Management, Availability Management, Capacity Management and Cost Management. The HP ITSM consultant practice members have had extensive experience with the issues involved in implementation of these business processes and with the contents of each process guide. A significant number of the ITSM consultants have achieved the highest level of ITIL certification; IT Service Management Masters Level.

Customers can choose from a variety of services from this practice, including:

- Purchase of standard process guides only;
- Services to customize the standard process guides to the customer's organization;
- Process implementation support;
- HP OpenView IT Service Manager/ Service Desk technology implementation support;
- IT Assessments;
- Facilitation of Barrier Analysis and Strategic Development sessions.

HP ITSM OpenView ITSM Product Suite

The key feature of HP's OpenView IT Service Manager product is that it supports the ITIL processes of Change Management, Configuration Management, Help Desk (Incident Management), Problem Management and Service Level Management out-of-the-box. Only minor user-specific configurations, such as contact names, support group names, etc., are required to support the ITIL processes in a customer environment. This is an important factor when compared to the customization effort required to coax non-ITIL compliant tools into supporting ITIL compliant business processes. Quick "plug-ins" supports the integration to IT Support Management tools such as PerfView, MeasureWare, IT/O and Network Node Management. This integration enables the operational components of Capacity, Availability and Service Level Management and allows for automated alerts to generate incidents in the Incident Management module.

The recently released Service Desk tool (V2.0) initially enables the Incident, Problem, Change and Configuration Management processes and allows for simple integration to Support

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Management tools. As with IT Service Manager, Service Desk is ITIL compliant. Future releases of Service Desk will support the Service Level Management process. This product is positioned for those organizations that have not already made a significant investment in ITSM process enabling tools such as Tivoli, Remedy or Peregrine.

Implementation Challenges

The decision to implement ITIL best practices may appear to be an easy one; given today's business drivers to move IT to a "utility" model to support the 100% reliability expectations of the e-business world and given ITIL's place in enabling the process component of a continuous improvement / quality management initiative. But there are costs associated with the implementation of business processes in an organization.

To deliver quality IT services, one must address the people, process and technology issues. Costs will include the development of new ITIL-compliant business processes, the purchase, configuration and implementation of supporting tools, staff training, internal marketing and the management of change within the organization.

Management of change activities are the most difficult to quantify in time and dollars, but it is here that you will make or break your implementation project. The key management of change issues⁸ experienced when implementing business processes in an IT organization are:

- Loss of autonomy with the new understanding that a change to the IT infrastructure can possibly affect the ability of the organization to deliver to agreed upon IT service levels;
- Greater individual accountability for the reliability, performance and availability of owned components within the IT infrastructure;
- Managing the shift in power from Application groups to the Infrastructure group – this is the only way that IT infrastructure can manage and control to a known state;
- Managing the changes to employee value proposition - from "911" to "411" – paying people to prevent fires, not rewarding them for fighting fires.

Ultimately, for any process implementation project to be successful, it is imperative that the value of continuous improvement is clearly defined by and is completely embraced 110% by the senior executive. Likewise, the success of a technology implementation project will be determined by the attention paid to the people and the processes that will be experienced with the introduction of the new technology.

The expectation to achieve competitive advantage through improvement enabled by IT is unanimously held by most CEOs. And with devices such as Internet-enabled PCs becoming the next new appliance in the average consumer's household, the expectation of IT operating as a utility is today's new reality...not tomorrow's.

IT organizations need to initiate a thorough review of their people, process and technology infrastructures and begin the work to integrate these three (3) elements of the "*implementation triangle*" to meet the demands for high availability that all in IT are facing in this new millennium.

⁸ HPC ITSM Consultant QuickStart Training Manual; Bill Dupley, 1999

This paper would not have been possible without the dedicated focus on knowledge management practiced by the HP Canada team of ITSM Consultants. A special thank you is made to Bill Dupley for his support and guidance as the ITSM Practice Lead in Canada and for his dedication to the teaching and sharing of his experiences and knowledge with all the ITSM Consultants not only in Canada, but worldwide.

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