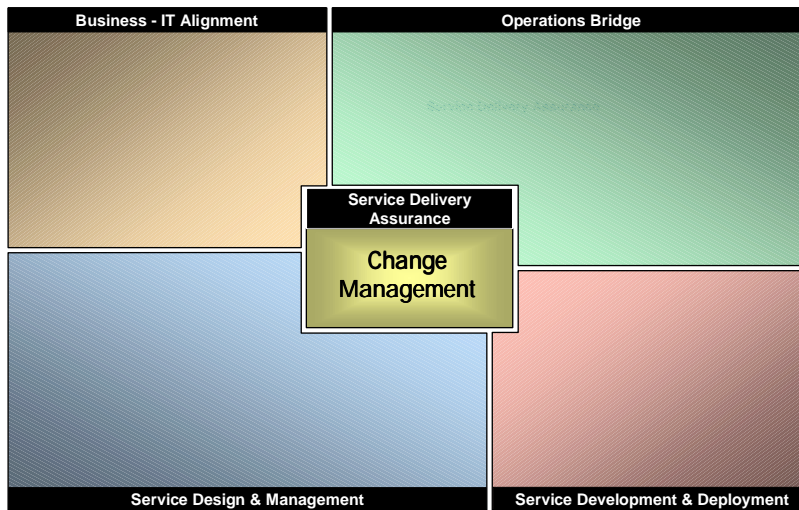


ABOVE AND BEYOND CHANGE MANAGEMENT

White Paper



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Process + Organization + Technology





Acknowledgements

The development of this white paper was a team effort, involving many people from different HP entities and countries. I'd like to take this moment to identify each team member by name in order to recognize the value of his or her contributions:

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1. INTRODUCTION

Today's rapid rate of change within business, service and technology requires IT to respond quickly, without adversely impacting the quality of IT services and the stability of the environment. Change is an inevitable aspect of an IT organization that is successfully enabling the goals and deliverables of the business. A key factor in the ability to effectively and efficiently deliver these new business requirements, while at the same time maintaining agreed upon levels of service within the current environment, is how well an IT organization manages this reality of change.

A formal Change Management process is essential for an IT organization to manage these changes in such a way as to reduce or eliminate disruptions to business activities. A formal Change Management process also ensures that all parties impacted by the change have been properly notified and that the risk associated with the change has been properly assessed.

Organizations that are starting on the path to introduce a formal Change Management process often come across the best practices described in the Information Technology Infrastructure Library (ITIL) from the Office of Government Commerce (UK) and Hewlett-Packard's Information Technology Service Management (ITSM) Reference Model.

In this article, five main design questions are introduced for Change Management that are not (directly) addressed by ITIL. For every question a proposed solution is described that is based on best practices from Hewlett-Packard. Most of the solutions are part of the standard Change Management process guide that Hewlett-Packard has developed based on ITIL and as part of the ITSM Reference Model.

The following questions are addressed:

- How do I prevent my Change Advisory Board to become bureaucratic?
- Is one Change Manager enough?
- Does Change Management need Configuration Management to be successful?
- How to improve staff's ability to perform an Impact Analysis?
- How to handle a large volume of minor changes?

The intended audience for this paper is IT Management, Executives and Project Managers who are considering the design and implementation of a formal Change Management process within their organization.

The Change Management process, as defined by the Information Technology Infrastructure Library (ITIL) set of best practices and detailed in the HP ITSM Reference Model, will not be described in detail in this paper. In the following two paragraphs ITIL and HP's IT Service Management Reference Model are briefly introduced.

1.1. WHAT IS ITIL?

ITIL (The Information Technology Infrastructure Library) has been dominant as the only public best practice for IT Service Management in the European market for many years. ITIL defines the operational, tactical and strategic support and delivery processes required for operating an IT organization.

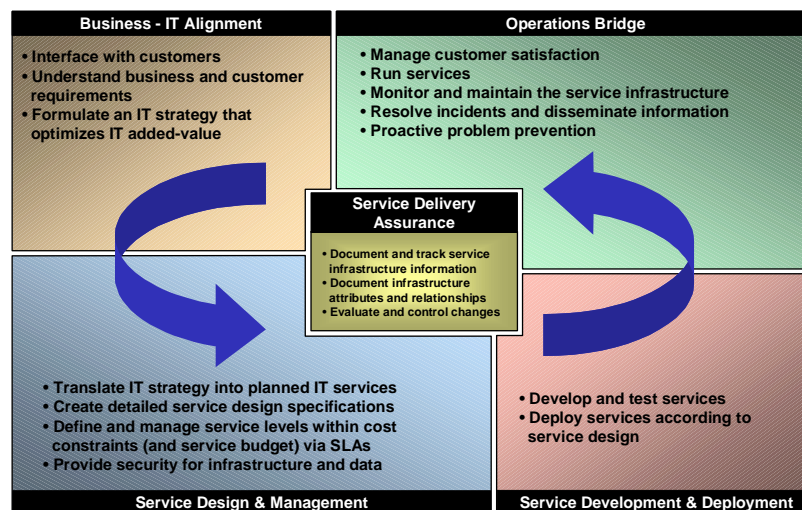
Organizations choose to use the ITIL best practices to enable them to achieve control over of their IT infrastructure and services, while still maintaining the balance with the flexibility required to meet time to market demands. ITIL itself offers theoretical best practices for IT process management, focused on the quality support and delivery of IT services. However, theory is never quite as elegant when translated into an actual implementation project. In fact, implementation can become quite challenging and at times, even messy. Unfortunately, the translation of this theory into practice often results in failed projects.

The ITIL books have been in existence since the end of the 1980's. Since that time, many people have criticized the books, and this led to the new ITIL Service Support book that was introduced in 2000, followed by the new ITIL Service Delivery book. Of course, there is now a new set of critics for this updated version of the books. We have to remember that every book that is written has critics. Especially the books that everyone wants to read and are becoming a trend. It is a fact that most of these books do not survive the new wave of books that are introduced in the market, leaving a lot of management books old and out-dated after 3 years. The ones that remain will be updated with new ideas and therefore maintain their place in the market. The ITIL books are an example of books that have proven themselves over time

1.2. HP'S IT SERVICE MANAGEMENT REFERENCE MODEL

HP has developed an ITSM Reference Model based on ITIL as the underlying best practice. This model consists of four quadrants: Business to IT Alignment, Service Design and Management, Service Delivery Assurance, and Service Development and Deployment.

The HP ITSM Reference Model



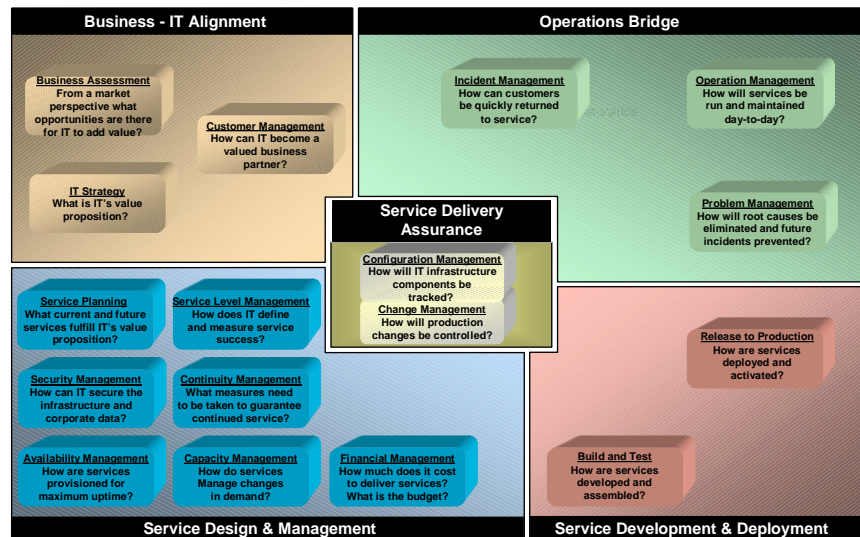
Development and Deployment and Operations Bridge. All supported by the Service Delivery Assurance processes at the center.

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

- Define current IT environment (as-is);
- Identify gaps and desired state (to-be);
- Use standard terminology;
- Place 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.

The processes included in each quadrant are listed, along with the question they address, in the following diagram:

Questions Addressed by ITSM



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.

2. CHANGE MANAGEMENT DESIGN ISSUES

2.1. HOW DO I PREVENT MY CHANGE ADVISORY BOARD TO BECOME BUREAUCRATIC?

A challenge for many organizations is to implement a formal Change Management process that is not bureaucratic. The current ITIL Change Management process is perfectly suited for small to medium size organizations i.e., not too many changes, one Change Advisory Board (CAB), and off we go! But what do we do with the organizations that have to cope with a large number of changes, a large number of people involved in the CABs, a large set of services that are highly distributed? A Change Management process with only one CAB, can stifle a large organization, possibly causing the process to be circumvented if it is considered to be too slow. This is where we have to look at a governance structure for CABs.

Governance, in terms of the Change Management process, implies there are various 'levels' of authority for the approval of changes. For example, to borrow terms used by a government model, these different levels of authority could be described as: Federal, Provincial and Municipal, with the higher governance levels taking precedence over lower levels. These governance levels would allow a degree of autonomy, for example at the local Municipal Level, while still providing the required consistency of process at higher levels. When too many changes are controlled at the Federal Level, an unacceptable amount of bureaucracy can develop. Alternatively, if too many changes are allocated to the Municipal Level, then there is a loss of focus on accomplishing Federal Level Change Management objectives. Therefore, it is important to maintain a balance amongst all levels of governance.

QUESTION #1 – HOW DO I PREVENT MY CAB TO BECOME BUREAUCRATIC?

Solution

Introduce Governance structure

Set-up Change Advisory Boards on:

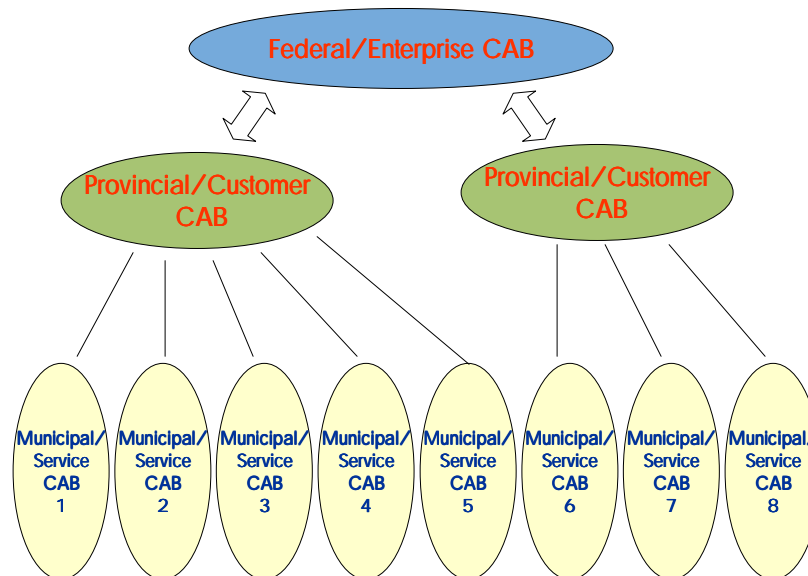
- Federal level
- Provincial level
- Municipal level

Introduce customer or service focus within CABs.

The three levels of governance (Federal, Provincial and Municipal) can have individual Change Managers assigned accordingly. Municipal Level Change Managers will have change approval authority for self-contained changes within their municipal area. If a Request for Change impacts some other municipal areas, outside of their own area, then the Request for Change (RFC) is passed onto the appropriate Provincial Level Change Manager for approval. It is then the responsibility of the Provincial Level Change Manager to determine whether the change impacts only their provincial area, in which case the Provincial Level Change Manager may approve the change; or whether indeed the Request for Change impacts another provincial area outside of theirs, in which case the Request for Change is passed onto the appropriate Federal Level Change Manager. It is recommended to have only one federal Change Manager.

Other terms to use instead of Federal, Provincial and Municipal can be: Enterprise, Customer and Service. In the following diagram a structure of different CABs is presented.

Change Advisory Board Structure



It is recommended to focus each of the CABs on a customer group(s) or (set of) service(s). One key activity in the design of the process should focus on defining the boundaries for each CAB. Examples of changes can assist in the communication of the proposed CAB structure.

By using this CAB structure it is possible to develop one single Change Management process for large IT organization with a possibility to incorporate the distributed IT functions in your Change Management process. For example an IT group hierarchically placed within the customer organization could be seen as a municipal CAB.

2.2. IS ONE CHANGE MANAGER ENOUGH?

According to ITIL, the amount of work for a Change Manager is staggering. The Change Manager has to approve changes, record changes, manage CAB meetings, control the process, improve the process, and lots more. This is not feasible in most larger organizations. The best way to cope with this challenge is to introduce different roles within Change Management. The following roles have been proven successful in many organizations:

Change Management Process Owner

The process owner owns the process and the supporting documentation for that process, oversees the process, and ensures that the process is followed by the organization. The Process Owner is also responsible for the approval of all proposed changes to the process and the development of process improvement plans. This is not a full time role. There is a possibility to combine this role with the Federal (or Enterprise) Change Manager role.

Change Manager

The Change Manager is responsible for ensuring that all changes are reviewed and ensuring that changes flow through the Change Management Process. The Change Manager chairs the CAB meetings and ensures that all changes are considered for approval. As described in ITIL the Change Manager can approve minor changes if necessary. In case of a more complex CAB structure there could be different Change Managers (see previous paragraph).

QUESTION #2 –IS ONE CHANGE MANAGER ENOUGH?

Solution

Separate role definitions for:

- Change Management Process Owner
- Change Manager
- Change Coordinator
- Change Owner
- Change Sponsor

Change Coordinator

The Change Coordinator performs the administrative tasks associated with a change. This means the Change Coordinator ensures that all changes are recorded, scheduled, and that all parties involved with the change have the information that is needed for the change to progress through the process. In smaller organizations, this task role can be easily combined with the Change Manager role. The Change Coordinator will prepare the documentation for the CAB and will record changes in the Change Management system. Another name for this role could be Change Administrator or Change Domain Coordinator.

Change Owner

The role of the Change Owner is to take a change through its lifecycle. The Change Owner presents the change to the Change Advisory Board for approval at all phases of the change, and monitors the progress of a change ensuring it progresses through the process according to schedule. The advantage of this role is that the Change Manager or Change Coordinator is not a stakeholder in the actual change. They ensure that the process is running smoothly. The Change Owner is accountable for the end result of the change. For example a project manager for the implementation of a technical change is assigned the role as Change Owner. The person who requests or initiates the change could perform the role of Change Owner. The most important factor about the assignment of the Change Owner role is that the accountability for change ownership and the subsequent change success is clearly identified. It is often inaccurately assumed that the Change Manager / Change Coordinator roles are accountable for the success of a change, when indeed; these roles are solely accountable to ensure the process is effectively managed within the organization.

Change Sponsor

The Change Sponsor is the individual that approves the change from business perspective. This role is created to avoid a conflict of interest when decisions have to be made on approval of the change from a budget perspective (change sponsor) or from an implementation need perspective (change owner).

By distinguishing between these roles, it will become easier to assign roles to different staff members in the organization. This will ensure that all tasks are being performed and that the right people with the correct skills can focus on these activities.

2.3. DOES CHANGE MANAGEMENT NEED CONFIGURATION MANAGEMENT TO BE SUCCESSFUL?

The Service Support book (OCG, 2000, page 165) describes: "...it is generally accepted that Change Management and Configuration management are best planned and implemented concurrently...". Within the Service Support book this is recognized as a controversial statement, but unfortunately it is not further explored in the book.

In a perfect world Change Management benefits from Configuration Management, but unfortunately we do not live in a perfect world. Several successful Change Management process implementation projects did not have any Configuration Management initially. For every organization, an assessment needs to be completed on how Configuration Management would benefit Change Management. The question is how and when do we need Configuration Management?

Configuration Management can provide information about the relationships of Configuration Items and therefore, provide an understanding of the impact of changes to the infrastructure components. It is a fact though that even without a Configuration Management process, the Configuration Item (CI) Owners bring the knowledge of impact assessment / infrastructure integration to the Change Advisory Board table that you can never, even with a full functioning Configuration Management process, replace the essential and experiential knowledge of the CI Owners in your organization.

QUESTION #3 – DOES CHANGE MANAGEMENT NEED CONFIGURATION MANAGEMENT TO BE SUCCESSFUL?

Solution:

Assess need for Configuration Management before linking it with Change Management
Address only necessary links with Change Management

The support of impact assessment of changes by Configuration Management will also not happen in the first phase of introduction of Change Management. As described in question #4, the relationship between the Configuration Items is not the sole contributor to the impact of changes. In many cases, other factors are more important to establish the risk for implementing a change.

Configuration Management provides an administrative function in support of Change Management. This means recording the pertinent information of the changes to the Configuration Items in the IT infrastructure in the Configuration Management Database (CMDB). The recording of Request for Changes and the related information to support the Change Management process is an activity performed within the Change Management process.

In the design phase for Change Management, organizations often find themselves caught up in the need to address Configuration Management. By postponing the Configuration Management process implementation, after Change Management is introduced, the following benefits will arise:

- The Change Management project will be shorter, thus providing the organization with earlier benefits of process improvement;
- After Change Management is introduced, there is a better understanding of what the value of Configuration Management can be to the organization.

Unless there is a pressing need to understand the current infrastructure (the need for an inventory), leave Configuration Management alone and focus all your efforts on Change Management in order to gain the immediate benefits of service delivery stability when managing change within the organization.

To get a better understanding of what Configuration Management entails, please read the white paper Activating Configuration Management in an IT Organization by Abbey Wiltse (HP, June 2001 – version 1.2).

2.4. HOW TO IMPROVE STAFF'S ABILITY TO PERFORM AN IMPACT ASSESSMENT?

Assume that there is a Change Management process in place. The staff begins to realize how it works and are desperately trying to follow the process. Then some changes fail, although these changes were addressed in the Change Advisory Board (CAB). So now what? It becomes clear that the CAB members (or their staff) did not perform a proper impact assessment and is not clear to them on how to do that. To provide more clarity on this topic, a procedure for impact assessment needs to be setup and staff needs to be trained on the new procedure. A Change Impact Assessment procedure should consist - next to the activities - a standard set of questions. The answers for these questions will not only be used to assess the change, but also to categorize the change (Minor, Medium and Major) or to decide at which governance level this change should be handled. It is recommended to have standard questions for the impact assessment with standard answers, where the standards answers (parameters) could be different per service offered to the customers.

The questions could include the following:

- How many times have we successfully implemented this change before?
- What is the risk to the business of not implementing this change?
- Was a test performed (if possible)?
- What is the number of users affected by this change?
- What is the number of affected configuration items for this change?
- What are the costs of the change (end to end)?
- What are the costs of not implementing the change?
- What is the number of resources required to implement the change?
- What are the skills necessary to implement this change?
- What are the skills necessary to support the implemented change?

An addition to the questions is to identify the difference between risk related questions and impact related questions. The advantage of separating the questions in these two categories is that different people and/or skills are necessary to answer the questions. For example the question "What is the risk to the business for not implementing the change?" addresses organizational RISK whereas the question "What is the number of users affected by the change?" addresses organizational IMPACT.

QUESTION #4 – HOW TO IMPROVE STAFF'S ABILITY TO PERFORM AN IMPACT ASSESSMENT?

Solution

Develop a Change Impact Assessment Tool for individual services:

- Develop relevant questions
- Develop relevant answers to the questions
- Assign weight factors to the answers.



Asking only the question without providing guidance for the answer results in inconsistent answers. Identifying parameters or creating a restricted list of potential answers to the questions will result in consistency. For example:

QUESTIONS	PARAMETERS
What is the number of resources required for this change?	A. One resource B. Two or three resources C. More than three resources
How many times have we successfully implemented this change before?	A. More than 50 B. Between 10 and 50 C. Less than 10

The easiest way to categorize the change after the questions are answered is by introducing the following concept: If one of the answers is C (highest possible risk or impact) the change will be assessed as a major change. If the highest answer is B, the change will be assessed as a medium change. This can also be applied to assess on which governance level the change needs to be handled, for instance if the change affects all the customers it needs to go through the Federal Change Advisory Board.

An advanced rating scheme could be developed the moment the organization has gained experience with the Change Management process (This could mean that certain questions have a higher weight than others). Be careful not to over engineer this and to make it too complex, especially in the beginning of process implementation efforts.

Not every question will be relevant for every change. These questions are not taken into account until they become relevant. It has to be recognized that every service or customer could have different parameters assigned to the various questions. That is not a problem as long as the procedure is documented and the staff are fully aware of how to use the questions during an impact assessment. Ultimately, a certain skill level and sound judgment is expected to be exercised by the change management process performers. Over time and with experience gained, this understanding can be added to the impact assessment procedure as part of an organization's knowledge management practices.

2.5. HOW TO HANDLE A LARGE VOLUME OF MINOR CHANGES?

ITIL describes the concept of standard changes. The definition according to ITIL of a standard change is (ITIL Service Support Book, pg 173): "A standard change is a change to the infrastructure that follows an established path, is relatively common, and is accepted solution to a specific requirement or set of requirements". The key is that tasks are well known and proven, costs are known and consistent, and authority is effectively given in advance. This is a good way to handle these changes, but the fact is that Change Management is still involved with these relatively minor changes.

It is still expected that Change Management will define the procedure for standard changes and will monitor the activities in the procedure. A large volume of changes will inundate the Change Management process and, once again, the process becomes a bottleneck to the organization. It is unfortunate that this is not further defined within ITIL, because experience has shown that this is a major

challenge in a lot of organizations For instance, what will be done with all the Moves, Adds and Changes (MACs) that are common in the everyday practice of running an IT-enabled business?

The following solution is proposed. Instead of labeling these changes **standard**, it is better to introduce the concept of **delegated changes**. Other terminology used to define these types of changes is pre-approved or institutional changes. On a regular basis, delegated changes are handled outside the Change Schedule. However, every delegated change will initially go through the Change Management process before it is designated as delegated. The Service Desk function or the Operations area within the organization often performs these changes.

QUESTION #5 – HOW TO HANDLE A LARGE VOLUME OF MINOR CHANGES

Solution

Delegated Changes instead of Standard Changes
Only Management Information is required from the group that performs the changes.

Definition of a Delegated Change

- Delegated changes are pre-approved by a CAB before authorization of the change is delegated;
- Delegated changes are executed only by a CAB-approved group - if a new group wants to execute the same delegated change, this has to be approved by the CAB;
- Delegated changes are recorded and tracked by the approved group and reports on delegated changes will be presented to the appropriate Change Manager;
- Every delegated change procedure is accompanied with a defined scope and time constraint statement (for example these changes are implemented on a daily basis with no potential impact on the IT environment);
- If a delegated change fails (or has an impact on the IT environment) it needs to be reviewed and possibly entered into the Change Schedule for review and re-approval;
- The group that is responsible for the delegated change will define the process to handle these changes.

For example, Operations has a lot of minor, daily changes. The Change Manager meets with the Operations Manager to “negotiate” the list of pre-approved changes. This brings it within the auspices of the Change Management process, meaning that they have agreed to this finite list. The Change Manager receives on a weekly basis reports from Incident Management regarding the incidents that have been occurring due to unplanned changes. If there are a number of incidents being reported against any delegated change, that then becomes the trigger to sit down with that manager to discuss these changes, and to explain that this change now has to go through the Change Management process.

This approach accomplishes two goals. First, it follows one of the basic process tenets – keep it simple...a process that is overly bureaucratic will not be used! And second, it eliminates disagreements with the delegated manager over making a specific change subject to the formal Change Management process, because there is now data showing that this is a real issue that impacts delivery of service to agreed upon service levels.



3. CLOSING

The different solutions offered in this paper create an environment where high impact, fairly complex changes are handled by the appropriate CABs. Common, routine and simple changes are pushed down to the performer's level, effectively taking away a lot of the repetitive work from the different CABs, so that they can focus on the real issues. This ensures that the Change Management process will not be bureaucratic and ineffective.

A good Change Management process will reduce costs, improve service levels and just makes it a lot more fun to work in IT.

Have Fun!



4. REFERENCE MATERIAL

HP ITSM Reference Model White Paper – Version 2.0, Hewlett-Packard Company, Jeff Drake, 2000

Change Management Process Guide – Version 2.0, Hewlett-Packard Consulting (Canada), 2001

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