



# Best Practice Insights

Focus On: ITIL<sup>®</sup> Service Transition  
For ITIL 2011

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#### **Note to Readers**

**This publication highlights the key elements of the ITIL *Service Transition* publication and includes commentary on important concepts from BMC and ITIL experts.**

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# FOREWORD

Organizations are constantly changing, which has a significant impact on how the business, service providers, and their personnel work. The introduction or decommissioning of a service often requires significant changes that need to be managed and delivered through the service lifecycle. Where there is major change, there will be complexity and risk.

Many organizations deliver significant change through formal projects. Yet many projects fail to include the full service management, operational, and functional requirements. This often leads to project failure, or extra cost and risk.

Service transition defines expected service deliverables. It covers the assessment of the predicted performance of a service against the actual performance and management of any deviation and associated risks, before service acceptance.

Adopting service transition practices can enable service improvement. This can increase an organization's service management capability by ensuring that the introduction, deployment, transfer and decommissioning of new or changed services are well managed.

Current practices in this area involve significant levels of technical complexity around systems and architectures, which a wide variety of stakeholders and commercial entities may deliver. This is often called a "supply chain" of service providers and integrators, also known as the service integration and management (SIAM) concept.

# CHAPTER 1: INTRODUCTION

Think of the steps in service management like the steps in launching a space mission. Perhaps your strategy is to be the first nation to conduct scientific research by landing astronauts on Mars. In the strategy phase, you define the mission requirements and acquire all the needed approvals and funding.

The next step is to figure out what research you need. You assemble the best team to conduct the research and design a spacecraft that will safely travel to Mars and home again. In the design phase, you acquire all the technical expertise, requirements, and plans to architect and design the spaceship. Your team builds a new spacecraft to specifications. You may reuse some existing systems or designs, with modifications.

As you get closer to launch (similar to the transition stage in service management), you test everything to make sure it's working perfectly. If it isn't, you postpone the launch until the problem can be fixed. The fix might require you to pull back some services or further modifications to equipment that had seemed to be in perfect order. You keep the crew and all the teams informed during the entire process. When everyone is confident that everything is working, the spacecraft will leave the launch pad. The mission will now be in its operations phase.

In service transition, you'll conduct adequate testing and have the opportunity to pull back any services or modifications that won't deliver the value you expected. You'll be able to make fixes to prevent disaster, and you'll ensure a smooth transition by letting your stakeholders know what's happening and how it will affect them. As you implement your project, you'll provide essential support and oversight to make sure launches successfully. The ITIL Service Transition publication provides many more details about this process.

## AN OVERVIEW OF SERVICE TRANSITION

In the ITIL V3 approach, IT processes are part of a lifecycle, or continuum, in which you view IT services as business assets. The purpose of service transition is to maximize the business value of the IT services your organization provides, manage risk, and manage knowledge for decision support.

By following the guidance in service transition, you'll be able to manage necessary changes in the broader service environment. You'll have the big picture that allows you to make those changes with an awareness of their potential impact on the rest of the IT services, on the business, and on other factors.

Service transition considers more than just one project. It supports all services that are currently in transition. What's more, it provides support for these projects beyond initial implementation through the early stages of service operation.

## IT AS A SERVICE PROVIDER

IT is often viewed as a service to the business—one that creates value and can run like a business itself. Technology is a business asset that provides capabilities and resources to support business outcomes. These include business efficiency, business growth, and business transformation.

A large telecommunications company provides an excellent example of the various roles IT can play. When the company first released cell phones, IT performed a single-service function: enabling customers to make calls. Over the years, consumers and the business have demanded more. Today, cell phones are smarter and provide a host of services to the end consumer.

IT has developed many capabilities that have transformed the business. It can now participate in new markets and allow customers to make purchases. Users can take pictures, access email, and perform many other activities. In this company,



IT is enabling and growing the top and bottom lines. It provides a complex range of services that bring revenue to the business and value to its customers.

## A COMMON VOCABULARY

Let's start the discussion of the service management lifecycle with two terms defined by ITIL. To find these and other definitions, refer to the [ITIL glossary](#). For more complete discussions of these terms, see the ITIL Service Transition publication.

An IT service is provided by an IT service provider, and comprises information technology, people, and processes.

- A customer-facing IT service directly supports the business processes of one or more customers. Its service-level targets should be defined in a service level agreement (SLA).
- Other IT services (i.e., supporting services) are not directly used by the business. The service provider requires these to deliver customer-facing services.

Service management is a set of specialized organizational capabilities that provide value to customers in the form of services. IT services are aligned to, and support, business needs. A service management approach helps make the business more successful, reduces disruption, lowers costs, and increases revenue.

## WHY READ SERVICE TRANSITION?

Your IT team constantly plans new services or service changes, which they must then release into the service environment. The ITIL Service Transition publication provides you with best-practice guidelines to help you with this process. While giving you benchmarks for the basics, it allows room for customization according to your own business needs. As you plan, build, test, check, and deploy, you can make changes to cut the risk of failure or business disruption based on your own unique situation.

*Service transition helps manage risk. It ensures stakeholder readiness for your new, changed, or retired service.*

Service transition is helpful in a variety of situations, including the following:

- When changing or adding a service isn't as simple as it sounds. Making sure all systems work together can be complex.
- When one size doesn't fit all. The IT team may need to adapt and innovate.
- When you must make a change to an existing supplier, service, or service provider. Service transition can help ease the business into the switch.
- When replacing systems, hardware, and applications is more complicated than it first appears. There are critical dependencies to consider. Old and new software may not "talk" to each other. People may need retraining, and your processes may need updating. Each action has its own repercussions and costs. Service transition can help you predict the effects and cut the risk of failure during the changeover.
- Transferring services from one provider to another may have a ripple effect in ways you might not expect. Once again, if you follow the service transition guidelines, the change will be less painful and your success rate will increase.
- When the service management capability (i.e., people, processes, projects, the organization, or how it all works) of an internal or external service provider changes, service transition can help your organization adjust and adapt.

Service transition also provides early life support in the beginning of implementation, sustaining the project to ensure successful operation and that the requirements set forth in the service strategy stage are realized. Service transition helps manage risk and ensure stakeholder readiness for your new, changed, or retired service.

## SUMMARY

The ITIL lifecycle approach consists of looking at every service from its conception through operation and then retirement.

Most organizations start with continual improvement. But, if the organization is new, the strategy is the starting place. A continual improvement initiative supports strategy, design, transition, and operations. To address the strategy, first determine the market and the services you want to provide. Eventually, you will build the service, improve the service, test it, release it, and then put it into or take it out of operation for value realization. ITIL has formalized best practices for the full lifecycle of a service, yet allows for innovation and adaptation to each organization's unique circumstances.

The service transition part of the lifecycle focuses on how to roll out new or changed/modified/enhanced/ retired services to the business. It guides you through managing the change until it's ready for release and deployment, and then following it into successful operation. The goal is to cut risk and provide the knowledge needed for decision support in transitioning the services to a desired state—and to do it all in a timely and cost-effective manner.

# CHAPTER 2: SERVICE MANAGEMENT AS A PRACTICE

Service management gives customers value through IT services. The resources themselves have little business value until they are transformed into services.

Today, IT has adopted a service-oriented approach to providing value to the business and to its customers, both internal and external. For example, once you install an application, you maintain it and its supporting infrastructure to ensure it is operating as the business requires. This service orientation has its own challenges, as outsourcing and shared services increase the demand for service providers and service management.

## TWO SIDES OF A SERVICE

You can view each service in two ways. As you might expect, the business focuses on the service's desired business outcome, or the utility of the service. For example, many companies outsource their payroll to a financial management company. The company isn't purchasing the service; it is buying the outcome. In this case, they're buying on-time paycheck processing for their employees.

The other side of the service includes the many back-office processes and systems used to deliver and guarantee the service to the customer. In most cases, the company doesn't want to buy or operate a complex IT infrastructure. All it wants is the desired outcome of the service that its business requires.

The service provider aggregates the clients' needs and builds a shared process, a solution, and a control infrastructure to deliver the desired outcome. This aggregation allows the service provider to achieve an economy of scale. The clients are not exposed to the full cost and risk associated with managing the infrastructure and applications.

Chapter 2 introduces definitions that provide a basis for the ITIL framework and presents concepts that are essential to service management success. Significant points stressed in this chapter are value creation, the importance of organizing for service management, and the service lifecycle. The overriding message in this chapter is to think about how you architect the services you provide in the context of how service value is created and realized for your customers.

## Everyone in the organization should be considered a stakeholder for service management.

## STAKEHOLDERS

Service is everyone's responsibility, no matter what role they play or how they play the role to deliver and support services for their customers.

External stakeholders (e.g., the customers, users, and suppliers) should also be considered. These stakeholders and the organizational stakeholders are examples of the agency principle.

## UTILITY OF SERVICE

Customers want to achieve business outcomes by using services that fit their purpose. The utility of a service must support the customers' performance or remove a constraint. Customers can become very frustrated with a service that fits their purpose but lacks sufficient warranty for their use.



## WARRANTY OF SERVICE

This chapter provides guidance on warranty of service. You can communicate this to customers in terms of commitments to the availability, capacity, continuity, and security of the use of services.

- Availability - The customer can use the service under the terms and conditions upon which they've mutually agreed.
- Capacity - Ensures that the customer will be able to use the service at a specified level of business activity or that you will fulfill demand at a specified quality level.
- Continuity - Guarantees that the customer will be able to use the service even if a major failure or other unexpected event is experienced.
- Security - The customer's use of services will be free of specific risks.

Many of the services IT provides are considered commodities.

## You create a competitive advantage when you are able to deliver a certain level of warranty to your customers.

Customers, both internal and external, need to be confident that you can support their business strategies. Since service providers are always matching others' service offerings, you must improve your value proposition to stand apart. Use one or more of the service management processes to drive these improvements.

### Service Assets

According to ITIL, resources and capabilities are types of assets that organizations can use to create value for their customers. Resources are direct inputs to produce a service, while capabilities are the organization's abilities to utilize resources to create value. You can create differentiation and retain customers by developing distinctive capabilities that are difficult for your competitors to replicate.

### Processes

Processes have inputs or triggers, defined actions and activities, and an output or specific results. Processes also have metrics and deliver primary results to a customer in the form of services. Processes are executed by people and sometimes are enabled by technology implementations.

When processes are collaborative and integrated, the output from one process can provide input to the next process for the service you deliver or support.

Processes should also be efficient, effective, and economical for the services that the process supports.

## FUNCTIONS AND PROCESSES

While both functions and processes enable the IT team to provide service to customers, they are different concepts.

**Functions** are the specialized jobs performed by self-contained units that an organization sets up to achieve a specific outcome(s). An example of this is a network services team charged with engineering all, or a specialized part of, a company's network infrastructure.

**Processes**, as described previously, are the systems used to achieve business goals, sometimes enabled by technology. A process is an action or series of activities that creates change or transforms its input or trigger to move toward a specific goal and output.

Processes are usually delivered by and across multiple functions, so a “supply-chain” collaborative approach is required to both set up and deliver them.

## **SERVICE LIFECYCLE**

The service lifecycle is dynamic, as each stage of the lifecycle supports other stages. Specialization and coordination across the lifecycle are essential to deliver and support services. The service lifecycle should work as an integrated system that includes feedback mechanisms for continual improvement.

## **SUMMARY**

Service transition is the last stage in a project lifecycle before you go live. This place in the lifecycle is critical. The success of the project depends on the smooth transition into service operation.

Service transition facilitates the implementation of a project designed to meet customer specifications and service strategy inputs. A key goal of service transition is to ensure that you meet the expectations from the business. Effective service transition means the service is ready to move into operation with minimum risk, little negative impact, and good knowledge management for all stakeholders.

# CHAPTER 3: SERVICE TRANSITION PRINCIPLES

The principles that guide service transition are derived from service strategy. The value of a given service is determined by the business customer that consumes it.

## THE BASICS OF SERVICE TRANSITION

With effective service transition, the business and IT can move a project from development into operation. This practice has many dimensions, both on the business and IT sides. The overarching goal of service transition is to achieve the highest level of customer satisfaction.

This stage in the service lifecycle adds value to the business in several ways including the ability to handle a heavy volume of changes and releases for multiple customers. The Service Transition publication outlines several ways in which service transition benefits the business.

## HOW TO MEASURE SERVICE TRANSITION SUCCESS

The business adage, “You must measure what you treasure,” is equally true with service transition. Items that you care about need to be measured. If you don’t measure your progress, you can’t manage it. If you can’t manage it, you can’t improve it.

Following are some metrics that can help you achieve your service transition goals:

- How many service transition plans effectively deliver the results anticipated by business units?
- What percentage of all changes to services are managed by service transition?
- What are the change success rates of projects that use service transition?
- Does adherence to service transition reduce outages and negative business impact?
- Does service transition planning reduce unauthorized changes?
- What are the actual resources used in a deployment versus those predicted in service design?
- Are incidents, problems, and failed changes trending down?
- Are project budgets tracking with predicted values?
- What overhead does using service transition add to projects?

## THE POLICY ANGLE

A formalized policy is necessary to ensure service transition efforts succeed. The IT management team should define and document the objectives with whoever is accountable for the service transition activities in the organization. This policy should fit with existing systems of control and process and governance frameworks.

The ITIL Service Transition publication describes several basic service transition policies and the lists of principles and best practices associated with them. These include the importance of defining and implementing a formal service transition policy, making sure that service transition is used whenever a service changes, using a common framework, providing for the transition of knowledge, correcting your course as needed, ensuring quality, and more.

## SUMMARY

Due to the changing, competitive nature of business today, requirements for value (e.g., utility and warranty) are always increasing. You need higher performance and fewer constraints to keep your customers—many of whom are no longer loyal today. They may switch to the lowest-cost-benefit provider or a better offer in the blink of an eye. Organizational governance, policies, and performance optimization are important principles for service value. You must be on a never-ending quest to improve both utility and warranty. Following the ITIL V3 guidance can help accomplish that goal.

# CHAPTER 4: SERVICE TRANSITION PROCESSES

This chapter represents the heart of the ITIL Service Transition publication. The core of service transition is encompassed in seven processes and associated activities:

|                                                   |                                         |
|---------------------------------------------------|-----------------------------------------|
| Transition planning and support                   | Change management                       |
| Service asset and configuration management (SACM) | Release and deployment management (RDM) |
| Service validation and testing (SVT)              | Change evaluation                       |
| Knowledge management                              |                                         |

This booklet highlights each process by addressing the ITIL definition, the goal, the business benefits, and other factors.

## PROCESS 1: TRANSITION PLANNING AND SUPPORT

A good planning team is worth its weight in gold. The maturity of the organization depends on how well the transition team can plan and manage all IT projects and change requests in the queue. Without planning and support, an organization will be reactive in nature. This will prevent it from growing into the kind of service and value culture that best-practice organizations enjoy today.

### Definition

Transition planning and support — “The process responsible for planning all service transition processes and coordinating the resources that they require. These service transition processes are change management, service asset and configuration management, release and deployment management, service validation and testing, change evaluation, and knowledge management.”<sup>1</sup>

### Goal

This process has two goals. First, through careful planning and effective resource coordination, it ensures that you have achieved all of the requirements identified during service strategy, instituted in service design, and documented in continual service improvement. Second, it helps you pinpoint, manage, and mitigate potential risks that might disrupt service or cause it to fail during the service transition stage of the lifecycle.

### Business Benefits

Service transition is primarily concerned with ensuring the customer and business receive the anticipated result(s) outlined in the service strategy, service design, and continual service improvement, while experiencing minimum risk of service disruption or failure. An integrated approach to planning and support will help you succeed. The outcome will be your ability to handle a greater numbers of changes, releases, deployments, and retirements with less work, less risk, and a higher degree of success.

1 ITIL English 2011 Glossary. <https://www.axelos.com/glossaries-of-terms>. See Transition Planning and Support. © Crown copyright 2011. All rights reserved. Material is reproduced with the permission of the Cabinet office under the delegated authority from the Controller of HMSO.

### Key Factors to Consider

The service design team provides service transition with inputs in a service design package. Continual service improvement provides inputs within the continual service improvement register. Each service should have a release policy that describes details such as roles and responsibilities, exit and entry criteria, and release frequency. See the ITIL Service Transition publication for examples of service transition planning tools.

Be sure to track the progress of a service change. Measurements recorded during service transition enable us to create reports, track the effects of a dynamic environment, and amend transition plans. Plan the release and deployment in stages, as the outcome of each stage has some level of uncertainty. Use proven release and deployment models to reduce risk.

The ITIL Service Transition publication describes the role of triggers in requests for change (RFCs). It also provides lists of key performance indicators (KPIs) to plan and support service transition.

Of course, each company has unique policies and will need to adapt ITIL to its own requirements. Many organizations need professional services or experienced people to guide them through marrying ITIL best practices with their internal needs, policies, and procedures.

## PROCESS 2 – CHANGE MANAGEMENT

Careful change management will save money and time by reducing the business's exposure to risk, lessening the impact of any service failure or disruption, and preventing failure altogether.

Changes are strategic, tactical, or operational. Within these areas they can be either proactive or reactive. The intent of a proactive change is to seek benefits or value to the business or the customer, such as streamlining a service or avoiding risk. A reactive change is generally made to correct an immediate situation that impacts the business or the customer in terms of the service levels promised, quality of service, or quality of service experience.

- Change management: “The process responsible for controlling the lifecycle of all changes. The primary objective of change management is to enable beneficial changes to be made, with minimum disruption to IT Services.”<sup>2</sup>
- Request for change (RFC): “A formal proposal for a change to be made. An RFC includes details of the proposed change, and may be recorded on paper or electronically. The term RFC is often misused to mean a change record, or the change itself.”<sup>3</sup>

### Goal

Change management is designed to help you avoid, exploit, or accept the associated risks when your customers' requirements demand new solutions and services from IT. This process will help you provide the most value to your customers while reducing disruptions. It will also help in aligning your IT services with the business needs.

### Business Benefits

All other lifecycle activities depend on change management to manage the risk of changes to production infrastructure; reduce the number of outages and service interruptions; increase the first-fix rate associated with problem, incident, and event management; and maintain high change success rates.

### Key Factors to Consider

Studies from several analysts and IT think tanks show that weak change management can lead to high volumes of urgent and unplanned work. This work is performed at the expense of important, planned work. Since we can rarely put off outages and firefighting, this demand-oriented work can often sideline projects or preventive activities. It may also lead to mistakes

<sup>2</sup> Ibid. See change management

<sup>3</sup> Ibid. See request for change



and oversights, causing more disruption to the business and services provided. The longer this pattern dominates, the more unreliable the IT environment becomes. It can deteriorate to the point where infrastructure availability problems literally manage IT staff.

## Managing change effectively enables business continuity, operational value, and reduced risk.

IT's responsibilities are to support the business and its customers' outcomes, operate services already in production, and transition new services into production. In these cases, change is inevitable. Managing change enables business continuity, operational value, and reduced risk.

In times of extreme system use or critical business operations, it is common for organizations to institute a change freeze. For example, many online commerce sites ban all changes from November through the end of January. For many retail businesses, the busy holiday shopping season is the worst possible time for a system failure.

The bottom line is that effective change management ensures that changes to the environment go through a proper approval and post-review process. This helps to reduce the risk to ongoing operations.

### Change Management Concepts

RDM and SACM should be tightly coupled with change management. Some immediate benefits of their integration include balancing release and change activities better with managing configurations and understanding the potential impact of proposed activities before they begin.

During change management, each change has associated tasks that happen either sequentially or in parallel. The tasks include risk and impact analysis, planning, and approval before implementation. Such activities should be supported by an established workflow. A critical success factor for a complete risk assessment and impact analysis is an accurate and reliable configuration management system (CMS). This booklet discusses the CMS later in this chapter and in Chapter 7.

There are three common types of RFCs:

- **Standard changes are often preauthorized.** They represent low-risk, common activities with a known outcome. For example, these can be services entered into the service catalog. The user community can select from the request fulfillment service to order cloud services, new users, modifications to applications, and access rights, for example. Standard changes can also be routine, low-impact IT changes).
- **Normal changes should follow the change management process from the beginning of the process and include all activities.** You should assume that the impact of these changes to the business is significant until you determine that they are low impact. If the changes are low impact or insignificant, you can follow the standard change procedures. Then prioritize, authorize, and schedule the changes. Change management coordinates the change implementation, while release and deployment execute the change.
- **Emergency changes follow the same flow as a normal change but on an accelerated timescale.** You can minimize testing and documentation so that adequate personnel are available to accommodate the release and rollout. This compensates for the high risk involved. Following implementation of an emergency change, you should fully document it and, if necessary, test it in the future. This will ensure stability of the implemented change.

It is not best practice to approve a change request for a high-impact emergency change that does not contain a detailed back-out or remediation plan in the event of failure. Be sure to describe how you will restore the affected service or infrastructure to its original state if the change fails and you have to abort it.

While some changes truly cannot be undone, the goal of change management is to reduce such activity to a bare minimum. If the proposed change will be irreversible, it must be fully tested to ensure it will work as planned.

### **Careful Planning for Improved Success**

To effectively and consistently evaluate proposed changes, develop a standardized impact risk assessment form, which change assessors can use to objectively evaluate each request. Consider the potential of the proposed RFC to disrupt services, as well as the consequences of change failures. The assessment can be modified over time to reflect lessons learned and unique business constraints.

See the ITIL Service Transition publication for lists of the primary tasks for managing general change activities or individual changes. These activities include planning for, scheduling, communicating, and authorizing changes; creating remediation plans; measuring, controlling, and reporting changes; change impact management; and continual improvement.

Preventing risky activity is one benefit of change management, but the power of planned work through effective scheduling is equally important. In many organizations, several critical resources are required for any substantive change. By combining like activities and grouping discrete changes into broader release packages, you can deploy critical resources more efficiently.

The schedule of changes (SC) contains all pertinent details about approved and scheduled changes. Establishing dedicated maintenance windows will improve change success rates and increase operational efficiency. You can then package multiple changes into a single release and test all changes together as a single release unit. These windows must be established in accordance with the needs of the business. Typically, you should schedule these windows outside of peak business activity. Make sure they're large enough to accommodate regular maintenance activities without disrupting the business. A large window also accommodates rollback if necessary.

## **Besides reviewing proposed changes, the change advisory board (CAB) must also review changes that you have already implemented.**

An essential component in every proposed change is the projected service outage (PSO) time. This estimates the time it will take IT to complete the change-related activity along with restoring service to affected business customers. The SC and the PSO are primary elements of approved changes. They must be derived in concert with business stakeholders to create ample time to plan alternate activities or other ways for business staff to stay productive. They are also major determinates of scheduling and resource planning.

### **Put Your Trust in the CAB**

The CAB's role is to evaluate and oversee proposed changes, and to evaluate the categories of proposed changes that are not defined as standard, before and after approval. In addition, the CAB validates that you have tested higher-impact changes and documented them wherever possible.

Your CAB meetings should include the key stakeholders who have responsibility or accountability for the service or the stakeholders you must consult, such as the service owner, representatives from the business areas affected, problem management, incident management, and/or service asset and configuration management.

Besides reviewing proposed changes, the CAB must also review implemented changes. The lessons learned and the resulting recalibrations can be well worth the effort. The CAB also helps improve the change management process itself.

There are several reasons to review all the changes after you have implemented them. A review will tell you whether the change actually met its desired outcome and objectives. It will also tell you if you have satisfied stakeholders with the end results. You'll be able to identify any unexpected conditions (e.g., performance side effects and functionality issues) and determine whether the change required more or fewer resources than planned. A change review will also verify whether the change met budget targets and was implemented during the proposed PSO window. You can also ascertain the success of rollback, in the case of change failure.

### **ECAB to the Rescue**

Not enough time to convene a full CAB meeting? Or is it too late in the process? Emergency change advisory board (ECAB) to the rescue. This smaller group of CAB members must have the authority to make decisions in case of emergency. Create a policy and outline the procedures required to invoke the ECAB and what steps are involved once it convenes. The ECAB is charged with representing business and technical perspectives. This should ensure the best change decisions, no matter what the situation. You must not use the ECAB to circumvent the normal CAB meetings and must only use it in an emergency situation.

An astronaut is not going to let go of the controls to complete a report while stabilizing a crippled spaceship. In the middle of an emergency, you won't have time to do all the paperwork that ITIL requires either. The documentation can wait until you have the situation under control. When you implement an emergency change, most likely you won't be able to test it thoroughly, so you need more people to help. You can come back afterward to retrofit the actual change process and release documentation, and then update the SACM later.

### **Change Management KPIs**

Metrics are essential before, during, and after a change. Metrics help you understand causes, effects, trends, and the speed of the IT response. Metrics provide factual data for decisions.

When using metrics, be sure to understand the goal of any process or function. If you understand the goal, you can decide what outcome you want to create. From the outcome, you can derive the key performance indicators (KPIs). Each process and function should show an improvement toward the goal of that process and the service supported by the process.

Refer to the ITIL Service Transition publication for a list of KPIs for change management, along with examples of common metrics used to measure change.

## **PROCESS 3: SERVICE ASSET AND CONFIGURATION MANAGEMENT**

The effective use of business assets to deliver a quantifiable return is one of the classic attributes of a successful manager. This concept extends into the management of IT service assets. It articulates the underlying value of service asset and configuration management. Service asset and configuration management are closely associated. However, there are different consumers of service asset data versus configuration management data. The knowledge management process can help distinguish the data needed for various stakeholder decisions. Organizations may want to have one person or function accountable but have separate coordinated responsibilities for asset and configuration management.

### **Business Benefits**

SACM manages all of the service assets from cradle to grave and is a key player in supporting all service management processes, including change, incident, and release management.

# The savings inherent in the proper management of assets, software licenses, and configurations can be massive.

The SACM processes and knowledge output are crucial to the effective management of changes, releases, service level agreements, warranties, compliance, and cost controls.

## Key Factors to Consider

You use SACM to protect the integrity of configuration items (CIs) and the service assets they contain through the entire service lifecycle. It monitors, controls, and reports on the status of the CI and service configurations under management. It uses a comprehensive CMS to track, manage, and control configurations. It also provides up-to-date and accurate information and status about assets to other processes (e.g., change management) and other departments (e.g., finance).

The ITIL definition of a configuration item includes “any component or other service asset that needs to be managed in order to deliver an IT service. Information about each configuration item is recorded in a configuration record within the configuration management system. It is maintained throughout its lifecycle by service asset and configuration management. Configuration items are under the control of change management. They typically include IT services, hardware, software, buildings, people and formal documentation such as process documentation and service level agreements.”<sup>4</sup>

ITIL defines a service asset as “any capability or resource of a service provider.”<sup>5</sup> ITIL’s definition of an asset includes “any resource or capability. The assets of a service provider include anything that could contribute to the delivery of a service. Assets can be one of the following types: management, organization, process, knowledge, people, information, applications, infrastructure or financial capital.”<sup>6</sup>

SACM must create a logical model of the IT infrastructure. This model, or map, details the dependencies and relationships between the CIs and service assets. The model is also crucial for other process areas, such as change management. The relationships between CIs can illuminate potential risks and service impacts. In problem management, SACM can point the way from a failed CI to the services it impacts.

For SACM to deliver this valuable contextual information, it is imperative that the records kept in the CMS are as accurate as possible. The data is used for decision support across the service lifecycle.

Compliance with legislation, such as the Sarbanes-Oxley Act of 2002 (SOX), requires that the CEO and CFO of public corporations attest to having an effective system of internal controls for financial reporting. Most modern business financials are derived from IT systems, especially enterprise resource planning (ERP) and customer relationship management (CRM) systems.

## Managing CIs and Service Assets

SACM is not only responsible for managing CIs and service assets from their inception to their retirement, it must also manage their configurations. Asset management is accomplished in various ways, depending on the type of assets.

For infrastructure assets, baseline the software and configurations and have them automatically audited against the baseline. This alerts SACM and change management when an unauthorized or inadvertent change is made to the asset. SACM works with the respective process area to resolve the issue (i.e., either with a rollback or change approval) and then updates the CMS to reflect the new state.

<sup>4</sup> Ibid. See “Configuration Item.”

<sup>5</sup> Ibid. See “Service Asset.”

<sup>6</sup> Ibid. See “Asset.”

Some organizations find that only certain types of infrastructure should be under the SACM umbrella. Lower-cost and less-critical infrastructure, such as mobile devices, may not be included. In other organizations, a great deal of money can be made or lost at the desktop level (by stock traders and analysts, for example). Other larger companies may want to manage only mission-critical, shared service infrastructure under SACM. Start with an understanding of the business needs and drivers in your company. Reflect those needs in your initial SACM policy.

You can protect service assets with some form of content-revision control. These assets need many levels of documentation and agreements that define the services. SACM is responsible for keeping pointers to the original documents and verifying that they are in their last known state.

## Get a global view of all assets that could potentially be affected by an outage or service interruption.

SACM is also responsible for managing the entire lifecycle of the assets and the associated cost—from their purchase, installation, use, and retirement. Establishing a controlled environment in which the desired run state of every CI is both known and protected is critical to reliable operations. Not only does effective SACM contribute to reliability, but it also enhances predictability for new or modified services that are launched into production. By ensuring production configuration consistency, it is possible to bring the exact production configurations into the test environment. This ensures accurate and consistent quality assurance activities.

### Take a Global View

SACM hinges on an accurate relational model of assets, services, and infrastructure. The logical model created by SACM is essential to other processes that depend on understanding the complicated and ever-changing relationships between IT assets. This information is crucial to problem and incident management, change and release management, and planning operations; it will help reduce the risk of protracted outages and service interruptions.

### The Configuration Management System

Storing the data in model form for all CIs under management, as well as their contextual relationships, requires a configuration management database (CMDB). The CMDB needs to be fed by auto collection tools and requires federation to source data. You must also analyze the data and the findings presented. This procedure helps you create a configuration management system (CMS).

You can use a CMS for a wide range of business processes. For example, a CI could be a maintenance contract with a third-party supplier. It would contain the actual contract as an attachment, as well as information about the supplier, the organization, the contract signing and expiration dates, and any related service level agreements (SLAs). The same record could also contain a relationship to a service the contract underpins.

Some organizations may need many federated CMDBs. In this case, the detailed CIs that describe staff, service, and system owners, as well as supplier and vendor data, come in very handy. Imagine trying to figure out why a service is down, only to find that the faulty CI is located in another hemisphere and maintained by a third-party vendor.

With a CMS, you have related normalized data that can give you contact information, associated incident or problem records, a view of all work and configuration changes performed, and a detailed list of the services and SLAs from the provider. Chapter 7 of this booklet discusses the CMS and CMDB in greater detail.

## Security Counts

Within SACM, a secure store is a place where IT assets are located. A secure store comes into play when the asset needs to be in a known working state, such as a service spare or replacement parts. The secure store is a major component in a successful service continuity or restoration program.

Another critical security measure is to place master software libraries, file storage, copies of all developed and controlled software, and master copies of system documentation in the data manipulation language (DML), as mentioned earlier. The CMS and DML both contain a variety of critical information. Develop a backup and restore policy for this data.

## Choosing the Right Level of CIs

Start planning a CI's identification with a single, critical business service. Don't try to deal with the entire catalog at the outset. Using a top-down, "straw-man" approach with a service will show you just how much detail you need to achieve benefit.

The primary value of the CMS is the relational dependency model it creates. Focus on capturing the relationships to the shared and common infrastructure, such as incidents, problems, etc. Also focus on gathering the versioning and configuration baseline data necessary to traverse and track known configuration states with a high level of confidence.

Establish naming conventions from the beginning for consistency and to reduce confusion. For quick identification, consider barcoding the CIs or using radio-frequency identification (RFID).

## The Importance of Audits

Developing an audit approach to managing the CMS and its contents should be based on the risks. If your company is regulated, there may be serious drivers to maintain configuration management integrity. These may reach far beyond the normal management concerns present in many companies. If an internal or external audit group audits your organization, these activities may constitute part of a control self-assessment. Either way, talk with your IT auditors to understand their auditing criteria and guidelines (e.g., COBIT).

You can take several actions to reduce the risk of failed changes or unexpected implementation results:

- Routinely audit the variance between the configuration baselines contained in the CMS and the actual, deployed production environment.
- Physically verify the existence of CIs in their native environment (the data center of the DML).
- Before allowing a release to process, perform an extra verification of the supplied documentation.
- Audit after a release to make sure the CI's actual configuration conforms to the expected baseline.
- Audit via discovery tools to find any CIs that are not in the CMS.

If you notice a significant level of variance in any audits, develop a remediation plan. Also, increase the frequency of the audits until you have addressed the situations driving the variance.

## PROCESS 4: RELEASE AND DEPLOYMENT MANAGEMENT

The scope of release and deployment management (RDM) includes the various systems, processes, and functional roles required to build, effectively test, plan, and ultimately deploy a release to establish a service into the production environment.

## Definition

- Release and deployment management: “The process responsible for planning, scheduling and controlling the build, test and deployment of releases, and for delivering new functionality required by the business while protecting the integrity of existing services.”<sup>7</sup>

## Goal

The overarching goal of RDM is to build, test, and provide the capability and resources to deliver the services conceived by service design or continual service improvement, which are based on business stakeholder requirements.

## Business Benefits

Through effective RDM, IT can provide immense business value by shifting resources to the lifecycle point at which the cost of defect repair is lowest. Just as in manufacturing, the cost of defect repair multiplies as the product moves down the assembly line. It increases considerably when the item leaves the factory.

By developing a rational approach to managing software and configuration releases and their subsequent deployments, you can dramatically reduce the cost of outages, rework, and unplanned work.

**Through effective RDM, IT can provide immense business value by shifting resources to the lifecycle point at which the cost of defect repair is lowest.**

RDM benefits the business by ensuring that you turn changes around faster due to less rework and firefighting. This process is significant as it relates to agile provisioning for cloud computing services. RDM makes certain that services delivered actually meet business needs and goals. It provides a consistent approach to repetitive and low-risk work, such as rolling out changes. It also creates a consistent, verifiable, and auditable approach.

## Key Factors to Consider

Release units should be defined by policy that governs and provides guidance on what kind of releases can take place and what their cycle is. ITIL defines a release unit as “components of an IT Service that are normally released together. A release unit typically includes sufficient components to perform a useful function. For example, one release unit could be a desktop PC, including hardware, software, licenses, documentation, etc. A different release unit may be the complete payroll application, including IT operations procedures and user training.”<sup>8</sup> A release unit can be based on a cloud-provisioning blueprint.

Release and deployment can be considered from two different approaches:

1. The “big-bang” approach focuses on delivering releases to production all at once.
2. The “phased” approach plans the delivery rollout in controlled waves.

Releases can also use the push/pull approach. See the ITIL Service Transition publication for a discussion of the many variations and options based on these approaches.

<sup>7</sup> Ibid. See “Release and Deployment Management.”

<sup>8</sup> Ibid. See Release Unit.



Establishing release windows is also paramount to determine how many releases and of what type you can schedule during a given period. Coordinate with the SACM and change management processes to determine a time window that avoids collisions.

See the ITIL Service Transition publication for specific activities around release and deployment guidelines, their respective pass and fail criteria, and how to build and test releases before their deployment to production. The publication provides detailed and practical, tactical guidance for building an RDM program.

### **Early Life Support**

Early life support (ELS) details the activities and controls necessary to transition a new or modified service into service operation in a controlled manner. Transition and operations work together for a defined period after implementation.

The ITIL definition of early life support is “a stage in the service lifecycle that occurs at the end of deployment and before the service is fully accepted into operation. During early life support, the service provider reviews key performance indicators, service levels and monitoring thresholds and may implement improvements to ensure that service targets can be met. The service provider may also provide additional resources for incident and problem management during this time.”<sup>9</sup>

The ELS plan specifies the activities and is defined in the service design stage. ELS outlines which resources are necessary to resolve operation support issues in the shortest time. The ELS plan operates for a defined amount of time and contains specific exit criteria based on the overall performance of the new or modified service.

### **Key Metrics**

The KPIs for release management include measuring the variance between service requirements and actual performance; a reduced number of incidents caused by the new or modified service; an improvement in user satisfaction trends; a reduction in unplanned work associated with a new or modified service; and a reduced level of variance between the planned end state and the actual end state of CIs.

## **PROCESS 5: SERVICE VALIDATION AND TESTING**

ITIL provides comprehensive guidance on service validation and testing (SVT), including levels of testing and various test models. SVT is about reducing the lifecycle costs of services and release packages by catching defects, incorrect assumptions, and missed design elements before they hit the production environment.

The validation step is the last chance for ensuring that the new or modified services meet strategy and design requirements and that you will achieve the expected benefits. The testing step is critical yet often neglected because of time and budget constraints. This may be at the expense of other services and, ultimately, at the expense of the business. This adds far greater cost and time delays. Proper testing will help ensure that an implementation or change is successful. Remember, the goal of service transition is to ensure little or no disruption to the business while making additions or changes that are important to the business. Validation and testing is the final “catch-all” step; it must be used.

## **Services that are properly validated and tested are reliable.**

The applications team will be eager to get the new service into production, but operations will want to ensure that the system has been appropriately tested. Remember, it costs less to fix problems now than it will cost later. Once the service is in production, the service operation team will most likely be held accountable for any failures, regardless of the cause.

<sup>9</sup> Ibid. See Early Life Support.

## Definition

- Service validation and testing (SVT): “The process responsible for validation and testing of a new or changed IT service. Service validation and testing ensures that the IT service matches its design specification and will meet the needs of the business.”<sup>10</sup>

## Goal

SVT aims to provide quality assurance (QA). This is accomplished by validating that the service provided fits its purpose and will be usable by its customers. SVT also includes testing that the service or release actually functions reliably.

## Business Benefits

Services that are properly validated and tested are reliable. They also provide the business value and remove constraints conceived during the service strategy and design stages.

## Key Factors to Consider

KPIs for SVT include reductions in the following: effort and cost to build the test environment, unplanned work associated with SVT, incident- and problem-related activities associated with SVT, the overall balance of errors across the whole lifecycle, and the number of known errors documented in earlier testing phases. The KPIs will aid the continual service improvement process too.

You’ve invested a lot of time and resources in developing a strategy and designing how you will provide the service. Don’t transition it into production without putting it through a rigorous test process.

## PROCESS 6: CHANGE EVALUATION

Change evaluation is concerned with understanding whether the performance value of a proposed activity is acceptable and whether it will provide enough return to guarantee budget (or prove return on investment [ROI]) and later adoption.

## Definition

- Change evaluation: “The process responsible for formal assessment of a new or changed IT service to ensure that risks have been managed and to help determine whether to authorize the change.”<sup>11</sup>

## Goal

The goal of change evaluation in the service transition process is to evaluate the actual versus the predicted performance of any service change. By looking at the expectations that were set before the change, you can determine the following:

- Were expectations met?
- Was the performance in line with expectations?
- What lessons can you learn for the next change or release?

## Business Benefits

Protecting business value is at the heart of this process. The more effectively you evaluate the change and service implementations, the better those activities will serve the business. The data gleaned from this process can be translated into goals for continual service improvement efforts. The value can be both in the present, by rectifying situations where the delivered value is not in line with the expected value, and in the future, by improving the activities and processes that produce the new service or release.

<sup>10</sup> Ibid. See Service Validation and Testing.

<sup>11</sup> Ibid. See “Change Evaluation.”

### Key Factors to Consider

The ITIL Service Transition publication outlines a policy to support change evaluation. The first step is to evaluate service designs and changes before you deploy them into production. Second, get the customer or primary stakeholder to sign off any variance between actual and expected performance. Otherwise, reject the change, roll back, and start again with a new change. Third, complete a customer engagement package to document acceptance sign-offs or rejection intent. The primary outputs of this process are the evaluation reports that flow to change management.

## PROCESS 7: KNOWLEDGE MANAGEMENT

An IT organization's ability to deliver on its promises to the business depends on its knowledge of how to act and respond in a variety of situations. Being successful at multiple levels requires the ability to understand the situation at hand and to evaluate the options and risks. This includes the tribal knowledge within individuals' heads.

### Definition

- Knowledge management (KM): "The process responsible for sharing perspectives, ideas, experience and information, and for ensuring that these are available in the right place and at the right time. The knowledge management process enables informed decisions, and improves efficiency by reducing the need to rediscover knowledge. See also Data-to-Information-to-Knowledge-to-Wisdom (DIKW); service knowledge management system."<sup>12</sup>

### Goal

The goal of KM is to improve both the quality and availability of critical data, and to enable accurate management decisions that serve the business. ITIL defines the scope of KM as the entire service lifecycle.

### Business Benefits

Knowledge management provides value to the business in several ways.

It enables better service quality through increased IT efficiency along with increasing the understanding among IT staff of the value of services provided to the business.

It ensures that IT staff know who is depending on its services, how much they are consuming, any particular service-related constraints, and any shortcomings or issues the customers are currently experiencing with the services.

Knowledge management keeps the company's intellectual property separate from that of competitors and outside service providers. To ensure effective transition from design to operation, critical knowledge and lessons learned from past implementations must be available. Passing information to stakeholders to make a go- or no-go decision is a major benefit of knowledge management.

Knowledge management should influence how you collect data and transform it into knowledge for stakeholder decision support.

### Key Factors to Consider

**The entire organization benefits from knowledge management and the ability to make collaborative decisions.**

<sup>12</sup> Ibid. See "Knowledge Management."

ITIL defines a service knowledge management system (SKMS) as “a set of tools and databases that is used to manage knowledge, information and data. The service knowledge management system includes the configuration management system, as well as other databases and information systems. The service knowledge management system includes tools for collecting, storing, managing, updating, analyzing and presenting all the knowledge, information and data that an IT service provider will need to manage the full lifecycle of IT services.”<sup>13</sup>

Challenges in KM include deciding what to capture and how to maintain it, transferring the knowledge, and measuring the value.

In building an effective knowledge management system, keep in mind that people like to protect their knowledge, especially when there are rewards and recognition for doing so. The ultimate goal is to foster a secure environment in which you reward people for sharing. With a free flow of knowledge and wisdom, people grow, the organization grows, and management is able to make the wisest decisions possible. Knowing both skills and people resources will enable you to assemble the appropriate teams for project work and change evaluations, for example.

## **SUMMARY**

By understanding the seven processes associated with service transition, you will be able to more effectively move your services into operation. All the process areas are important. If you use one without the other, you will have gaps in your capability to deliver and support high-performing services for your customers.

<sup>13</sup> Ibid. See “Service Knowledge Management System.”

# CHAPTER 5: MANAGING PEOPLE THROUGH SERVICE TRANSITIONS

Two essential service transition activities are managing communication and managing organizational and stakeholder change. The ITIL Service Transition publication emphasizes garnering early business support for the proposed transition. This is where service transition must embody organizational change and development tactics that work well in your particular corporate culture.

## ORGANIZATIONAL CHANGE MANAGEMENT

When IT rolls out a new service, it's not enough to roll out a new technology without any processes in place. If so, the technology is useless and you will not create value for the business. Likewise, if you have the best technology in place and the best processes defined, but the people aren't trained to run the new service, you also will not realize full value. As most CIOs will tell you, you want an equal balance among the enabling technology, the processes, and the people to reap the full value for the business. You must also educate people on the business value of a new system and train them on its use.

Be sure you have a solution adoption strategy. Maturity assessments, gap analyses, and business simulations provide an opportunity for IT organizations to view the benefits that they can gain by adopting new processes. When people can experience the new possibilities through simulations, they're more likely to buy into the idea and get excited about it.

Often, it then becomes easier to achieve the necessary organizational development and to move to the next level of maturity.

### Adjusting to Change

Address the emotional cycle of change; without the support of the people involved, there will be no change. To cut the time required to accept changes, establish the role of service transition as providing the following:

|                                                                        |                                                     |
|------------------------------------------------------------------------|-----------------------------------------------------|
| Leadership that embraces the change                                    | Planning that supports adoption by the organization |
| The development of capabilities needed for the change to take place    | Metrics that you can use to manage the process      |
| An inclusive, "everyone's-opinion-counts" style of feedback management |                                                     |

Communication is key to success; let people know about training, installations, and success. Celebrate success!

## SUMMARY

While the efforts to manage service transition fall under many process and activity areas, the broad approach to managing organizational change must evolve to include the needs and voices of business stakeholders. By including these valuable voices throughout the lifecycle, changes will ultimately deliver more of the promised value to the business. Be sure to balance IT stability with the business need for change too. Be careful to manage your projects so that you achieve quick wins. To evaluate project success, use factual KPIs and data, as well as expert opinions from your stakeholders.

# CHAPTER 6: ORGANIZING FOR SERVICE TRANSITION

The SACM process presents some classic organizational challenges. Its activities are not confined to a departmental silo but are spread across the entire IT organization. It is crucial that the activities are mapped into these discrete departments or units as organizational responsibilities. This approach allows department managers to have SACM at the heart of their immediate operating principles and goals.

One person or function should always be accountable for each IT service, process, and function. This ensures that someone is always looking for efficiency, effectiveness, and coordination of all responsibilities, information, and consultation required for all of IT to operate as one entity.

## COMMUNICATION DURING SERVICE TRANSITION

Expectation setting is an important aspect of service transition. The business will develop requirements and set a timeline for their completion. It's the role of the service transition team to communicate with the business and set expectations. It may turn out that IT will not be able to deliver the requirements within the time frame desired by the business. Therefore, the business may need to prioritize the critical elements to be accomplished within the time frame and select any requirements that can be pushed out to the next phase.

An effective service transition includes all relevant stakeholders, not just IT staff, in the processes of scheduling and resourcing. During testing, validation, and deployment, there are many essential communication and touch points. Be sure to engage the business early in the project's lifecycle to reduce potential problems.

*The biggest value of the RACI model is that it clearly describes the roles that people should play in service transition.*

### Defining Roles

The ITIL Service Transition publication describes generic and specific roles needed during the transition stage. Different people may take on different parts of the roles defined in the RACI model, depending on the process.

It identifies who is accountable for particular areas, who needs to be informed of activities, and who should take specific actions. This comprehensive list of roles and responsibilities helps eliminate confusion and ambiguity.

The transition management team is responsible for participation in the full ITIL lifecycle. It works with the business strategy teams, as well as with the design and operations teams, to ensure that a new or improved service meets their collective requirements.

## SUMMARY

Keep in mind these success factors:

- A single person or function is accountable for every process, service, or function.
- The process, service, or function owner for service transition works closely with the other lifecycle teams. For example, when rolling out a new service, the transition team helps set expectations. They should be involved at the beginning of the design stage.
- The transition team also helps with unit and integration testing. In the service operation stage, the transition team evaluates whether the rollout meets the original requirements.



# CHAPTER 7: TECHNOLOGY CONSIDERATIONS

Technology supports the service transition process in two important ways:

1. It supports the tools that affect the entire service lifecycle.
2. It supports the service transition part of the lifecycle and smaller elements.

## ENTERPRISE-WIDE TOOLS

The first main category of systems supporting service management is the tools that affect the entire lifecycle. Examples of are an integrated IT service management system and dashboards.

## THE IMPORTANCE OF A COMPREHENSIVE IT SERVICE MANAGEMENT SYSTEM (ITSM)

To meet business demand for dependable, technology-driven services, IT organizations need integrated service management processes. Consider these technology components as interrelated parts of services that IT provides to the business.

Look for an ITSM solution that integrates with ITIL processes and removes silos of disciplines and services. An effective service management suite will also have a CMDB, workflow platform, and user interface. This will help integrate and automate processes across the solution. This unified approach provides proactive and continual improvement of service availability, quality, and cost-effectiveness in complex enterprise environments.

## DASHBOARDS PROVIDE VISIBILITY INTO IT PERFORMANCE

A dashboard solution provides interactive, right-time access to service support metrics. This helps IT management optimize decisions and accelerate IT's alignment with business goals. Look for a dashboard solution that aligns best-practice metrics with KPIs. The following features are also useful:

- Leverages an intuitive, graphical interface with right-time metrics aggregated across IT processes
- Enables a cross-functional view of IT
- Provides “just-enough” drill down, as well as trending capabilities across business services
- Supports customizable, personalized, and role-based views for KPIs
- Provides useful reports for decisions rather than reporting just for the sake of reporting
- Integrates with a service knowledge management system architecture

## Solutions That Support Service Transition

The second category of IT systems includes the service management tools and technology to perform data mining, database management, release and deployment, publishing and more.

## Improving Efficiencies and Service Quality Through Knowledge Management

The ITIL Service Transition publication discusses knowledge management in the context of document management, records management, and content management. You can improve call center efficiencies by providing agents with quick answers and solutions to issues. In addition, web-based self service options allow employees or customers to find their own answers 24x7. It is important to use natural language search, which reduces the number of issues directed to a service desk.

Look for a solution that provides the following features:

- Rich HTML authoring to deliver best-practice authoring with extensive, rich-text HTML editing tools
- Searching and security features. These enable users to search across multiple sources using natural language query
- A self-help capability to allow users to search for their own solutions and create their own tickets
- Enforceable authoring process and notifications. This helps ensure that knowledge is up to date, consistent, and adheres to corporate standards
- News flashes and watch lists. This ensures users can see important notices and learn about changes or new solutions created in their category of interest

## **AN INTERDEPENDENT WORLD**

Today's workplace is an interdependent environment. Colleagues, customers, and suppliers around the globe share calendars, send instant messages, exchange emails, and use technology in many ways that increase collaboration and productivity. The DIKW model mentioned earlier is essential for decision support. This should be architected in an SKMS fashion to enable stakeholder collaboration using the same data sources from the CMDB or CMS.

One way in which groups from disparate locations are coming together is by using collaboration tools. These provide an area where members can share ideas, projects, or other knowledge assets. Recognizing and rewarding members for their contributions can foster the free exchange of knowledge.

## **AUTOMATING PROCESSES IN A CHANGING BUSINESS ENVIRONMENT**

Workflow management allows us to manage knowledge assets as they move through a specific process. An example in the ITIL Service Transition publication is a request for change (RFC), which moves through a defined process from creation to release and deployment.

Look for a workflow management solution that provides a consolidated service process management platform. This should include automating and controlling service management business processes as well as a requesting centric, workflow-based architecture. An effective system should also include prebuilt modules for notifications, escalations, and approvals, as well as the ability to track business activity to measure business process performance.

## **CONNECTING TECHNOLOGY, PROCESS, AND ORGANIZATION**

Although the publication does not specifically mention run book automation (RBA), it deserves mention.

RBA solutions enable you to streamline IT operations by automating routine, labor-intensive, error-prone tasks and leveraging systems, applications, and tools across silos. They also help automate release and deployment tasks.

By uniting management systems and technologies with best-practice processes, run book automation delivers a unified service delivery capability. RBA not only overcomes the barriers of technology, process, and organization (i.e., people), but also unifies the parts to work together efficiently and provide dependable service delivery.

RBA solutions provide monitoring and measuring capabilities. These ensure that you know how the automation is affecting the overall process. This also enables you to adopt a continual service improvement program—another cornerstone of ITIL.

Refer to Chapter 7 of the ITIL Service Transition publication for a more thorough list of supporting systems.

## THE IMPORTANCE OF A CONFIGURATION MANAGEMENT SYSTEM

A variety of tools are available to support effective service transition. The following ITIL definitions are key to this discussion: configuration item (CI), configuration management database (CMDB), configuration management system (CMS), and service knowledge management system (SKMS).

ITIL recommends using a software CMS to track the characteristics and history of each CI. The CMS can be fully automated, which may require integrating multiple tools. The CMS prevents changes from being implemented without the proper authorization.

Most likely, you are trying to enable business growth (or at least not get in the way of it), and actionable information is the key to that growth. The core function of the CMS is to provide actionable data.

Figure 1 describes a sample SKMS. The CMS is a component of the SKMS. Note that this figure incorporates the DIKW methodology, which was discussed in Chapter 4 of this booklet.

A CMS may include various IT management tool and databases, such as an asset database, a change management system, or a CMDB. It's up to you to decide what type of configuration you want for your CMS.

To look at the CMS in more everyday terms, think about the options available when you purchase a car. In most cases, you choose a standard model and then select add-on options or packages, such as leather seats, a sports rack, or a navigation system.

The process is similar when implementing a CMS. You get the standard model and add other components according to your own requirements. Taking the analogy a bit further, the CMDB is to the CMS as the engine is to your car. The CMDB is the core database that powers the complete CMS system.



Figure 1. Sample Service Knowledge Management System (SKMS)

To understand the full value of a CMS, first consider the role and importance of a CMDB. A CMDB is a repository of information relating to all components associated across the IT environment.

IT management solution providers offer commercial CMDBs to hold configuration data. They also make that information accessible to the management applications that need it, whether the application is a data provider or a data consumer. The CMDB provides a single point of reference, making it the definitive reference mechanism for all IT decisions. It provides business-aware visibility into the dependencies among business processes, users, applications, and underlying IT infrastructure.

The leading CMDB solutions are built to support a federated CMDB approach, which means that not all configuration data must live in a single physical database. The concept of federation relies on the premise that the CMDB should contain only needed data, while still being able to do its job. Other data sources and systems can be related to or federated to the CMDB without putting all the information within the CMDB itself.

## *The CMDB provides a single point of reference, making it the definitive reference mechanism for all IT decisions.*

With federation, core data is stored in the CMDB, just as information about a person or a business can be stored in a telephone directory. All detailed and related CI data are federated, which means that a centralized database links to other, more detailed data stores. This linkage provides a CMDB with access to the entire library content (the CIs).

The core function of the SKMS is to help IT organizations solve problems or make decisions from the collaborative business perspective. By ensuring all IT management applications have access to cataloged IT configuration data, the SKMS can provide you with the insight necessary improve business decision-making. ITSM solutions, when deployed effectively, guide IT actions and decisions according to their impact on business services. They should provide out-of-the-box support for best-practice IT processes, automated technology management, and a shared view of how IT supports business priorities.

### **ELIMINATING MANUAL EFFORT THROUGH AUTO-DISCOVERY**

Although the ITIL Service Transition publication does not provide details on discovery, here are some things to think about.

Discovery solutions can enrich the CMDB by automatically discovering people, business processes, applications, and IT infrastructure data. This provides an up-to-date picture of the IT environment, including the people who depend on it and the business processes that comprise your critical business services.

An effective discovery solution will have out-of-the-box integrations to populate and maintain the CMDB. It should have the capability to discover dependencies in three main areas:

**People discovery:** Auto discovers end users and customers. Establishes dependencies from people to business processes, applications, and IT infrastructure.

**Business process discovery:** Auto discovers business processes and services. Establishes a link from processes to people, applications, and IT infrastructure.

**Application and infrastructure discovery:** Auto discovers the applications and IT infrastructure, and identifies resources for deeper collection of configuration information and application dependencies while building relationships between IT infrastructure resources. Establishes the link from IT to people and business processes.

## **PRIORITIZING IT EVENTS BASED ON THEIR BUSINESS IMPACT**

IT managers need real-time, business-aware information about IT services and infrastructure. Service impact management solutions leverage existing management tools and process events against service models that relate IT and the business.

Common reporting and web portal technologies deliver role-based dashboards and IT service impact reports.

IT managers must understand how the IT infrastructure relates to the business services that IT provides by using real-time, business-aware information about IT services and infrastructure. An effective solution will leverage existing management tools and process events against service models that relate IT and the business. The solution should integrate with your CMDB and provide reporting and dashboard capabilities.

Look for a solution that has the following features:

- Shows real-time impact of IT problems on IT and business services through real-time service views, dashboards, and reports
- Promotes organizational knowledge of IT's value to the business and the importance of services to business operations
- Creates and maintains models through the CMDB, a repository for discovery, change, asset, and configuration data
- Extends the value of existing IT tool investments through the CMDB by leveraging events from existing management tools

## **REDUCING COSTS THROUGH RELEASE AND DEPLOYMENT TECHNOLOGY**

Managers responsible for release and deployment must do the following:

- Provide IT efficiency
- Improve service quality
- Offer a secure and compliant environment
- Provide comprehensive scenario planning
- Prepare stakeholders for change with training

Release and deployment technology reduces both desktop administration and server configuration costs, and improves risk management and employee productivity. Look for a policy-based solution that automates software discovery, packaging, provisioning, configuration, patching, and repair. A comprehensive release and deployment solution enables less dependency on multiple software distribution tools.

Figure 2 illustrates and describes one example how release and deployment technologies provision a new service. Release and deployment technology is often referred to as service automation or service provisioning.

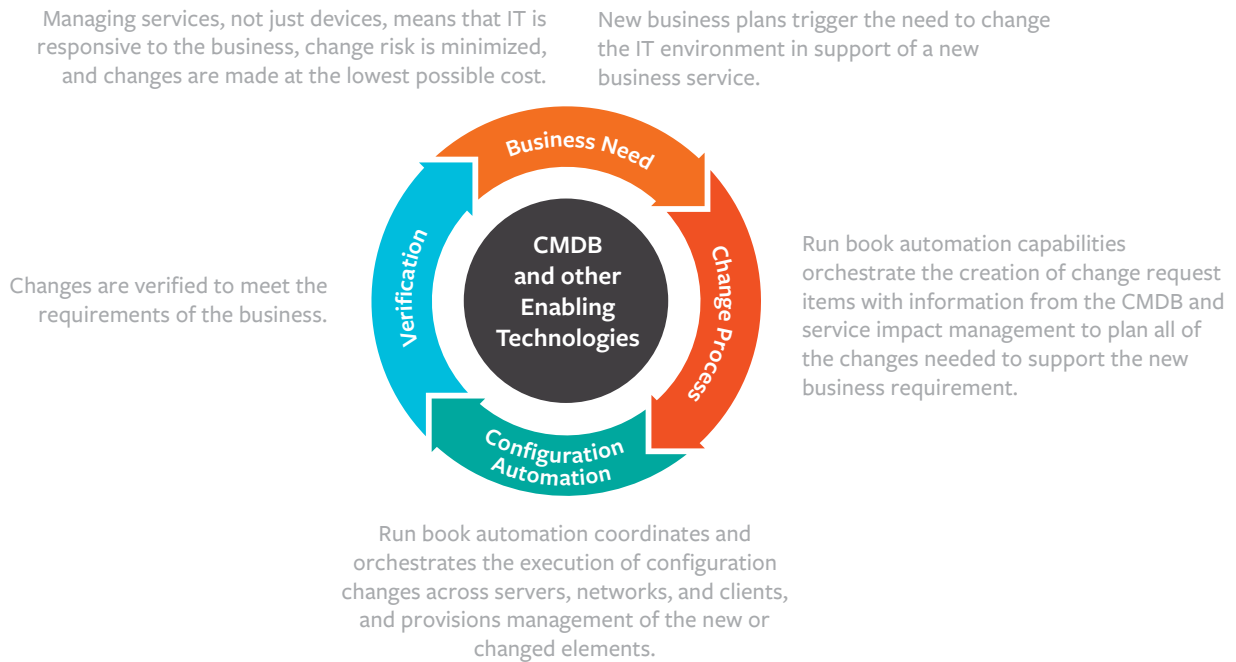


Figure 2. Provisioning a New Service

## SUMMARY

Change, configuration, incident, and problem management systems must support service transition. Whatever tools you select, they should be part of an integrated suite.

*Whatever tools you select, they should be part of an integrated suite.*

### Change Management

Think of change management in terms of risk management. Think of the SKMS, CMS, and CMDB in terms of decision support and as the central nervous system of an IT organization. The areas the SKMS, CMS, and CMDB touch also go well beyond IT and into the business. They extend to all the stakeholders in most projects and programs.

### Configuration Management

An SKMS, CMS, and CMDB can embody knowledge that allows you, at the top level, to identify a service that may need to prove compliance with regulations such as Sarbanes-Oxley. Your SKMS, CMS, and CMDB can help you trace the entire lineage of the supporting infrastructure, assets, and other pieces, so that you can build an adequate system of controls around them. The business should have input to identify the services, but IT should be the one to connect and maintain the services inside the system.

## Incident Management

When the service desk receives a call about an outage, the first thing the agent will probably do is look at the changes planned and implemented in the past 24 hours. Most incidents occur after a change has been implemented. If you allow service agents to access the change information from the service desk, you can gain a tremendous benefit by pinpointing the most likely cause of the incident. You can use the SKMS, CMS, and CMDB to see information about the pieces in the infrastructure that changed and then use that information to quickly pinpoint the likely cause. This approach should reduce outage time, simply because you're much more effective at isolating the actual cause. You can then bring the system back up faster.

## Problem Management

Data from incident and problem management can help you prioritize changes in the change management process. Suppose you've identified the root cause of a problem, then someone proposes a change to remove that root cause from the infrastructure. As you are evaluating the change and trying to prioritize it, consider the following questions:

- Is this something you have to do now, or can it wait?
- How essential is it?
- Is that root cause actually causing outages, or is it simply annoying to users?
- What is this about, what service is affected, and how business critical is that service?

You should also be able to look at the problem and all the related incidents. This perspective gives you an idea of the frequency with which this root cause is actually causing incidents.

Find out which patterns of business activity generate the most value; instrument that; adopt a business-led approach; put your SKMS, CMS, and CMDB in place; and then start to reap the benefits of service continuity and stable operations. That is the key. Get the big benefits, and you'll soon win the stakeholders over to this better way of managing IT.

# CHAPTER 8: IMPLEMENTING SERVICE TRANSITION

Since most companies are not starting from scratch, this chapter addresses service transition implementation from a process or service improvement angle. This will require an honest assessment of your current organizational capabilities. You probably have some, or even several, of these capabilities in one fashion or another. The challenge will be figuring out what business benefits you can deliver by managing discrete activities as a lifecycle. The ITIL Continual Service Improvement publication provides considerable guidance for this type of process.

The stages of service transition adoption will parallel other organizational improvement efforts. There is a strategy element, followed by a design phase, service introduction, and then organizational adoption. Sounds a lot like the ITIL lifecycle, doesn't it?

## Introducing and Justifying Service Transition

Many IT organizations have difficulty estimating how much time they spend to transition a service into production and then to keep the service up and running. One reason for this is that large services are often developed and run as a project from external consultants. Then it's the job of the transition team to roll that service into operation.

Often, the time it takes to transition a service into production is actually tracked as part of a project. Keeping the service up and running is almost never addressed. If an IT organization already has that visibility, the discussion with the business is much easier.

## Being proactive means identifying weaknesses in your infrastructure before they cause service outages.

In chaotic environments, customers often tell IT that speed is the most important thing. Yet IT has few resources, little budget, and a small staff.

In this scenario IT can consider two approaches: firefighting and fire prevention.

While firefighting, you can adopt some simple processes to reduce chaos. A good, reactive change management process is key to reducing chaos and getting the fire under control. But you can't do that unless you have integrated your operations with incident management and problem management. When you have achieved that integration, you can start the proactive approach of fire prevention.

Being proactive means identifying weaknesses in the infrastructure before they cause service outages. Building effective change management can help prevent unplanned outages. The reality is that 60 to 80 percent of all unplanned outages are caused by unauthorized and poorly conceived changes. Even organizations with minimal budgets can benefit from implementing these processes. A 25 percent reduction in operational costs is an achievable goal and can result in an investment back into the business for growth.

Little by little, you should be able to put out the fires and start preventing them. But if you don't have any capital to do this, it is a much slower and more painful process. If you have capital to help cool the fires, you can start working on prevention. In private enterprises, a chaotic system usually has negative implications for revenue and profit. Justifying investment in change management is easier when you can show a return on investment. In government agencies, the



motivation is not profit but instead to reduce costs and maintain a good reputation. Using the ITIL service lifecycle can help achieve both goals.

## **SUMMARY**

A thorough understanding of the unique needs of your company is the starting point for justifying service transition activities. Give the organization permission to take an honest look at problems and issues that have occurred during the past from the business's perspective. Use these case studies to justify the service transition approach to delivering value, and you will be more likely to create a sense of urgency in the organization and engage business executives in a meaningful conversation about providing funding and cooperation.

# CHAPTER 9: CHALLENGES, CRITICAL SUCCESS FACTORS, AND RISKS

In many lines of business, such as e-business, IT not only supports business operations, it is also a business operation. Services can become complex when you consider suppliers, third-party outsourcing agreements, and any international aspects.

During service transition, most business processes and services are already IT-enabled. Therefore, every IT change has the potential for huge business ramifications. Service transition requires myriad communication points, relationships, and process handoffs that range from end users to suppliers. The service delivered must be in line with real business needs.

You must balance risk against the return to the business. Project timeline slips and cost overruns in earlier lifecycle stages may eat into the time and budget allocated. When that happens, testing may get cut, which increases risk. To prevent this from happening, try to get more budget and time to ensure successful transition into operation.

## RISKS AND RESPONSIBILITIES

The beauty of service transition is that you can calculate the risk of every change before making it. You might follow one process for a change that has high risk and high return, and a different process for a low-risk, low-return change. Risks are not always negative. Risk can be avoided, exploited, or accepted for business value.

## Risk has to be balanced against the return to the business.

A standard change is a low-risk, preapproved change in which most everything can be preprocessed. The high-risk change takes a different path and method. Build a triage process to distinguish between the two types of changes. That is the intention of service transition. After the early decision by the business that an implementation could have a high return but also carry high risk, it is the transition team's job to quantify that back to the business, so they can make the right business decisions.

## SUMMARY

Perform a business impact analysis with every major change. This will help estimate the cost of failure and anticipate the impact to the business. Follow a low-risk, high-yield return as much as possible when performing change management.

### Service Transition and Service Integration and Management (SIAM)

SIAM is a new concept for outsourced services where the end-to-end ownership and coordination of various third-party suppliers is managed by a single entity. Delivered in a number of different models, the basic concept is the same: IT delivery and value chains are managed by a single entity, regardless of the number of suppliers.

To date, this has been primarily driven from the UK and UK government, although the same idea is also referenced in other areas as service integration (SI).

SIAM, a layer of management and control over numerous suppliers, offers four main models:

1. Retained client as SIAM: The retained organization manages all suppliers and coordinates the SIAM function itself.
2. Single supplier: The managed service provider (MSP) provides all the service and the SIAM layer of management.
3. Service guardian: An MSP provides the SIAM layer and one or more delivery functions, as well as managing other suppliers.
4. Separate service integrator: An MSP provides the SIAM layer (no delivery function) and manages all the other suppliers.

Each organization must consider what is the best service model for them in their approach and transition to a more coordinated service-supplier landscape. The real challenge is to identify this and then actually work towards it with clarity and focus, both internally and with suppliers.

As a concept, SIAM brings up some interesting ideas and is forcing the industry to at least embrace and consider it, in practical terms. There are many SIAM consultancies and suppliers plying their trade, making it look like at times like a vendor-driven market. What points does SIAM raise?

- SIAM needs to create value, as opposed to a simple supply chain. This is growing in importance now as:
- SIAM contracts are often awarded separately from service provider contracts.
- Outsourcing contracts are now generally shorter (2-5 years instead of more than 10 years).
- There are an increasing number of outsourcers competing.
- It's important to create a vision to determine strategy and the type of SIAM required for the business needs rather than simply creating SIAM because it is the current buzzword. This is because:
- Many organizations are embarking on SIAM to help them deliver services to their business.
- A clear structure and governance model is required for a successful implementation of SIAM.

For a SIAM implementation, the typical approach is from the bottom in an effort to “keep the lights on,” whereas the purist approach is for SIAM to be designed from the top, e.g., service strategy. With conflicting approaches, the best approach is to commence at both the top and bottom, working towards the middle. This enables a solution to meet immediate requirements, while also providing the building blocks to completely implement the complete SIAM model. Such an approach also helps manage the challenges within SIAM, in particular:

- When applying proprietary SIAM models to a diverse multi-supplier environment.
- Due to the complexity of mapping everything together, there will be a limit to flexibility, end-to-end reporting, tooling integration, and reporting.
- Providing awareness of potential lock-ins with SIAM and service providers.
- For example, if providers own the data and tools, any organization replacing the providers faces starting from scratch. Would there be a desire to absorb such cost?

There is also a need to clearly define services that businesses can understand and relate to, thereby enabling SIAM in managing providers to the organization's requirements. This may be facilitated by using the “Tension Commercial Architecture,” which are contracts drafted in a manner that encourage suppliers to behave in the desired manner with each other and towards the organization.

Boundaries of responsibility and clarity on processes are also key in a successful SIAM implementation. Two causes of SIAM failures were also highlighted:

- Due to a constraint, which retained IT organization must resolve
- Due to an inefficiency, which the supplier must resolve

When embarking on a SIAM roadmap, you should also remember not to exclude other IT functions that may not be in the SIAM scope. Knowing how they and SIAM will interact is key. If you don't define a direct link between these functions and SIAM, there will be a gap in the service provision to the business. It is crucial to understand the services that the organization is consuming and how.

## **FROM LAUNCH PAD TO LIFTOFF**

You can't send a spacecraft to Mars without making some adjustments along the way. Any new or improved IT project may have a few glitches, but a solid service transition process can help mitigate or even prevent their impact. It can keep all the stakeholders informed and engaged, and ensure a safe liftoff as the IT project enters its service operation stage where business value is realized.

# AFTERWORD

Here are some keys to realizing the value of service transition:

- Assess the current change management process, identify gaps, and address the gaps for business value by using ITIL best practices.
- Start with a limited subset of business-critical services. Don't do a big-bang approach by trying to do everything at once; remember, it's best to go slowly and be careful when taking on a challenge.
- Map your service transition into the expectations and desires of the business. Establish metrics, so you know if improvement occurs. Focus on the business outcome from a value standpoint at every step of the way; for example, "I am going to perform X so that I get (insert business desire here)."
- Keep change management simple. Measure only the items that you can control. Focus on volatile services and fragile infrastructure components first.
- Create a strong culture of change management. It must be clear that unauthorized change results in consequences for everyone. Create a solution adoption program that consists of communication, training, and celebrating success.
- Implement a configuration discrepancy system to fulfill change management. This way, you have a baseline for all critical and fragile services and infrastructure so you can fall back in case of a failed rollout.

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