Best Practice Insights

Focus On: ITIL® Continual Service Improvement

For ITIL 2011

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# Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4</strong></td>
<td>FOREWORD</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>CHAPTER 1: INTRODUCTION</td>
</tr>
<tr>
<td><strong>7</strong></td>
<td>CHAPTER 2: SERVICE MANAGEMENT AS A PRACTICE</td>
</tr>
<tr>
<td><strong>10</strong></td>
<td>CHAPTER 3: SERVICE OPERATION PRINCIPLES</td>
</tr>
<tr>
<td><strong>15</strong></td>
<td>CHAPTER 4: SERVICE OPERATION PROCESSES</td>
</tr>
<tr>
<td><strong>17</strong></td>
<td>CHAPTER 5: COMMON SERVICE OPERATION ACTIVITIES</td>
</tr>
<tr>
<td><strong>28</strong></td>
<td>CHAPTER 6: ORGANIZING FOR SERVICE OPERATION</td>
</tr>
<tr>
<td><strong>30</strong></td>
<td>CHAPTER 7: TECHNOLOGY CONSIDERATIONS</td>
</tr>
<tr>
<td><strong>38</strong></td>
<td>CHAPTER 8: IMPLEMENTATION OF SERVICE OPERATION</td>
</tr>
<tr>
<td><strong>40</strong></td>
<td>CHAPTER 9: CHALLENGES, RISKS, AND CRITICAL SUCCESS FACTORS</td>
</tr>
<tr>
<td><strong>41</strong></td>
<td>CONCLUSION</td>
</tr>
</tbody>
</table>
As businesses depend more on IT services, it is vital that IT organizations continually evaluate and improve their IT services and the IT service management processes that enable those IT services. A formal, proactive continual service improvement (CSI) practice is required to meet and achieve service level agreements.

To implement CSI, organizations need to instill the right attitude and drive the right behaviors until they become second nature. IT providers must embed a culture of measurement that continually tests the value, quality, performance, and compliance of the services within their portfolio and implements improvement initiatives that enable the desired business outcomes.

By definition, alignment requires bringing together two separate entities, often with disparate goals and objectives. However, in today's complex IT environment, it is becoming more difficult to determine the difference between an IT service and a business service.

As the lines blur, alignment is no longer enough; IT must become an integral part of the business. Rather than having two separate organizations with disconnected goals and objectives, there must be a single, integrated business operation that functions with appropriate technology.
CHAPTER 1: INTRODUCTION

Many people have a personal continual improvement plan (although they may not call it that). For example, perhaps they decide they want to become more physically fit. First, they must define what “more physically fit” means to them. Then they measure their current fitness level and set goals for where they want to be. They may then decide to start walking half a mile every morning. Once they accomplish that for two weeks, they might increase the distance to one mile. After a month of walking one mile, they might increase the distance to a mile and a half, and so on. They measure their progress at regular intervals to determine where they are in relation to their goals. Once they meet their physical fitness goals, they select something else in their lives that they want to improve, and the improvement process begins again.

CSI for IT is just that: finding an IT area that is important to the business and looking for ways to improve it.

ITIL defines CSI as “[a] stage in the lifecycle of a service.¹ CSI ensures that you align services with changing business needs by identifying and implementing improvements to IT services that support business processes. You continually measure the performance of the IT service provider and then make improvements to processes, services, and infrastructure to increase efficiency and effectiveness.

CSI is a guiding factor and key focus in the new ITIL Practitioner program, launched in February 2016.

THE SERVICE MANAGEMENT LIFECYCLE

Figure 1 illustrates the service lifecycle approach, which includes four key stages:

1. Service strategy is about designing, developing, and implementing service management as both an organizational capability and a strategic asset.
2. Service design focuses on ensuring IT services offered fulfill the objectives of the business and the customer.
3. Service transition centers on risk management, knowledge management, change management, service asset and configuration management, and related areas. Service transition creates a smooth ride from strategy, design, and development to operation.
4. Service operation strives to manage operational priorities, such as availability of IT services.

Improving the user experience and the quality of existing IT services is at the heart of the value delivered by CSI. While the other four stages are best performed with agility, CSI is most effective when you embed it in each of these lifecycle stages.

Why Read ITIL Continual Service Improvement?

Continual Service Improvement is the fifth publication in the ITIL series, but don’t take this to mean that this is the last stage of the ITIL lifecycle. Rather, it should be an integral part of every stage. If you have areas needing improvement, you can follow the CSI process, enjoy some quick wins, and demonstrate to the business that it can trust IT. This will open doors and enable you to start working with the business on further strategic initiatives, which, of course, is the service strategy component of the ITIL lifecycle.

¹ ITIL® Glossary and Abbreviations: English (London: The Cabinet Office, 2011)
SUMMARY

Implement a CSI program so that you can take optimal advantage of your IT capabilities and resources. Find ways to make IT even more efficient, beneficial, and cost-effective so that it can continue to drive business value. CSI will also help you demonstrate value with metrics. By implementing a CSI program, you can develop baselines and maturity assessments.
CHAPTER 2: SERVICE MANAGEMENT AS A PRACTICE

Information in Chapter 2 is also discussed in the other ITIL books published by TSO. ITIL discusses not only how IT must align itself with business objectives, but also how IT must integrate with the business to provide the services the business needs.

There are three key types of service providers:

- Internal providers within a business unit
- Shared services that support more than one business unit
- External service providers

STAKEHOLDERS

You should consider everyone in an organization a stakeholder for service management. Service is everyone’s responsibility. No matter what role they play or how they play it to deliver and support services for their customers.

You should also consider external stakeholders: customers, users, and suppliers. These stakeholders, along with the organizational stakeholders, are examples of the agency principle. This is a concept associated with the customer and supplier model. It means that customers hire suppliers to meet certain outcomes that the customers do not want to perform themselves.

UTILITY OF SERVICE

Customers want to achieve business outcomes by having services that fit their purpose. Utility is “the functionality offered by a product or service to meet a particular need. We can summarize utility as ‘what the service does’. We can use it to determine whether a service is able to meet its required outcomes, or is ‘fit for purpose’. The business value of an IT service is created by the combination of utility and warranty.”²

The utility of a service needs to support the customer performance or remove a constraint. Customers can become frustrated with a service that fits their purpose but lacks sufficient warranty for their use.

WARRANTY OF SERVICE

While utility is what a service does, warranty focuses on how you deliver the service. You can use warranty of service to communicate service delivery information to customers, specifically commitments to availability, capacity, continuity, and security of the use of services. These are key process areas in service design.

- Availability: Customer uses the service according to the terms and conditions upon which you have mutually agreed.
- Capacity: Customer uses the service at a specified level of business activity or specified quality level.
- Continuity: Customer uses the service even in the case of a major failure or other unexpected event.
- Security: Customer uses the service free of specific risks.

² Ibid. See utility.
SERVICE LIFECYCLE

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

Remember, CSI should be a dynamic aspect of the lifecycle stages. If you don't make adjustments when a problem first occurs, the costs of future corrections escalate. This is due to problems compounding as a project moves further along the lifecycle toward the operation phase. You can use a CSI register to log improvement opportunities from each stage of the service lifecycle. This can be a database or a document to record and manage improvement opportunities throughout the lifecycle.

The ITIL Continual Service Improvement publication describes the service portfolio as the “spine” that forms the framework of the service lifecycle. Refer to the ITIL publications for service inputs and outputs in each of the lifecycle stages.

Figure 2. CSI supports the entire lifecycle. © Crown copyright 2011. Reproduced under license from the Cabinet Office.

Figure 2 shows how CSI supports the entire lifecycle and can be embedded effectively into each stage.
LOOK AT THE BIG PICTURE
Regardless of whether IT services are provided internally or externally by service providers, the IT organization is ultimately responsible for bringing together the relationships, knowledge, and methods necessary to deliver these services in the service operation stage of the IT service management lifecycle.

The ITIL framework for IT service management enables you to improve from a balanced perspective, focusing on the four Ps of process integration across the service lifecycle: process, products, people, and partners.

SUMMARY
The ITIL framework enables you to improve from a balanced perspective, focusing on the four Ps of process integration across the service lifecycle: process, products, people, and partners. By implementing CSI, you will be on the lookout for redundancies, errors, poor use of resources, and ways to scale the use of IT as your organization grows, including expanding or using a partner network. You’ll also ensure that business-critical services are stable, reliable, and secure. What’s not to like about CSI?
CHAPTER 3: CONTINUAL SERVICE IMPROVEMENT PRINCIPLES

CSI is primarily concerned with making sure you achieve maximum or higher-performing efficiency and effectiveness in all services you deliver throughout the service lifecycle, while keeping costs in line. With this goal in mind, this chapter outlines the important principles of CSI.

ESSENTIALS OF CSI

The purpose of CSI is to ensure that you align services with changing business needs by identifying and implementing improvements to IT services that support business processes.³

CSI is an iterative process, adding more value with each iteration. This goal of CSI is to improve quality at each stage of service management, while maintaining customer and user satisfaction. The scope of CSI covers six primary topics:

- Continual service improvement principles
- Continual service improvement processes
- Methods and techniques
- Organizing for improvement
- Technology considerations
- Implementing continual service improvement and critical success factors

CONTINUAL SERVICE IMPROVEMENT APPROACH

Service improvement needs to be aligned with the business vision, mission, goals, and objectives. The continual service improvement approach helps engage the business perspective for IT decisions, as all IT projects for improvement should have business relevance. Figure 3 shows the continual service improvement approach that you could use to determine the value of your CSI initiative and understand if business targets are obtained.

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³ Ibid: See continual service improvement.
With CSI, improvement should be a constant goal so that IT is always maximizing its value to the business.

**THE BUSINESS VALUE OF CSI**

The following terms are important to understanding CSI:

- **A benefit** is a gain that comes as a result of improvements made. Benefits may or may not be expressed as financial results.
- **An improvement** is an outcome that shows measurable changes as compared to a previously measured state. This can be an increase (e.g., first-call resolution rate) or a decrease (e.g., in number of calls to the service desk).
- **Intangible benefits** are also called “soft benefits” because they can’t easily be viewed in terms of their financial impact. While they aren’t much help in making a financial justification, they can tell a persuasive story that may influence the business.
- **Return on investment (ROI)** is “[a] measurement of the expected benefit of an investment. In the simplest sense, it is the net profit of an investment divided by the net worth of the assets invested.”
- **Return on value (ROV)** is a measure of expected benefit that builds on the strict financial justification of ROI while considering nonfinancial factors, including competitive, functional, process, relationship, and strategic.
- **Value on investment (VOI)** is “[a] measurement of the expected benefit of an investment. Value on investment considers both financial and intangible benefits.”

Measurement is critical to CSI. It helps validate decisions, set the direction for activities to meet objectives, justify whether a course of action is required, and identify a point of intervention if changes and corrective actions are needed.

**WHY SHOULD YOU CARE ABOUT SOFT BENEFITS?**

Soft benefits are just as important as financial benefits. For example, consider a project to improve an order management application. A decrease in the lag time from when an order is placed to when it is shipped will not only allow you to invoice quicker, but will also likely result in increased customer satisfaction. Customers who appreciate this benefit might increase their orders, which could result in more revenue for your company. Similarly, a project to increase the accuracy of orders shipped will avoid costly returns and reshipments. This will also increase customer satisfaction and, as a result, customer retention figures.

Soft benefits may have a positive impact on your IT organization as well. As part of your CSI efforts, you’ll likely seek input from all IT employees. This empowers the workforce, especially if you take action based on the input collected. The better service IT can provide to its customers, the more pleasant IT will become as a place to work and the more valued people will feel. This can lead to a decrease in employee turnover, resulting in a reduction in new employee training and an increase in productivity.

**MAKING THE CASE FOR CSI**

If you can identify and articulate the benefits of CSI, you will be better able to justify the service improvement process to your IT organization and to the business customer. Be sure to describe the cost savings and/or revenue you will generate from your CSI efforts.

Open communication between the CSI team and the business customer is critical. By making sure you have a clear picture of where things are and where the customer wants them to be, you will be better able to make a business case for how you plan to get there. You’ll also be able to better justify the costs and predict the benefits of achieving that goal.

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4 Ibid. See return on investment.
5 Ibid. See value on investment.
HOW DOES CSI BENEFIT THE BUSINESS?

A large insurance company provides an excellent example of how CSI can benefit your business and your company’s bottom line. The company’s IT organization has been in the process of adopting ITIL for several years and is continually looking for areas it can improve. One year, their focus was on improving problem management and knowledge management. The goal was to improve the first-call resolution rate from 65 to 85 percent (the ITIL benchmark for best-practice organizations).

Here are some key numbers:

- The first line of the service desk received 2.5 million calls per year.
- At $18 per call, the company was spending $45 million per year just for the first level of support. And it doesn’t stop there.
- 35 percent (875,000 calls) were escalated to the second level of support, where costs more than doubled to $37 per call.
- Second-level support was costing the company more than $32 million per year.
- If a call was escalated to the third level of support (and 50 percent, or 437,500, of second-level calls were) the cost rose to $60 per call. This totaled more than $26 million per year.
- Increasing the first-call resolution rate by 20 percent would save the company $33.5M annually.

The savings were calculated as follows:

- Number of additional calls resolved at first level: 20% of 2,500,000 = 500,000
- Dollars saved by not escalating calls to the second level: 500,000 x $37/call = $18,500,000
- Dollars saved by reducing the number of calls escalated to the third level:
  - 500,000 x 50% = 250,000 calls
  - 250,000 x $60/call = $15,000,000
- Total potential savings annually: $18,500,000 + 15,000,000 = $33,500,000

Were they successful? Find out later in the chapter.

KNOWING THE COSTS HELPS YOU CALCULATE ROI

You’ll need to understand how much a CSI program actually costs to calculate the ROI. By quantifying the benefits of CSI, you can gain buy-in more easily from the business and from upper management for future CSI efforts.

As business drivers and technology change rapidly, calculating benefits should be an ongoing process. Ways to measure ROI, VOI, and other benefits of CSI include periodically assessing the benefits of specific improvement efforts and estimating the effect of proposed organizational changes.

CSI REGISTER

You should record all improvement opportunities and categorize them into initiatives. As you identify initiatives or possibilities for improvements, you should categorize them as follows:

Term = Short/medium/long

 Undertaking = Small/medium/large
Each improvement should follow the CSI approach, starting with understanding the initiative’s business value. The ITIL Continuous Service Improvement publication gives an example of a CSI register.

**SERVICE LEVEL MANAGEMENT: A KEY FACTOR IN THE CHANGING ROLE OF IT**

Service level management (SLM) is critical to the success of your CSI efforts. ITIL defines SLM as “[t]he process responsible for negotiating achievable service level agreements and ensuring that these are met. It is responsible for ensuring that all IT service management processes, operational level agreements, and underpinning contracts are appropriate for the agreed service level targets. Service level management monitors and reports on service levels, holds regular service reviews with customers, and identifies required improvements.”⁶

Today more than ever, IT is an integral part of the business and a key enabler of all critical business processes. The measure of an IT team’s success has also changed. The current definition of IT success is intricately linked to performance and is gauged by the service level that IT provides to the business. For example, a high rate of server availability is meaningless if the critical business application it supports is not available.

This chapter reviews the principle of CSI ownership. For an implementation to be successful, you must ensure that a CSI manager is accountable for adopting the best practices and sustaining them throughout the organization. Ownership also includes ensuring there are sufficient resources to support the CSI activities, such as monitoring, analyzing, and evaluating them.

SLM is discussed in detail in the *ITIL Service Design* book.

**CONTROLLING QUALITY AND CONSOLIDATING IMPROVEMENT**

The Deming Cycle for quality improvement has great applicability to CSI. It consists of four key phases, “Plan-Do-Check-Act,” with the goal of improving quality as a process matures over time. When implementing a new or revised process, you’ll need to perform all four steps as follows:

- **Plan**
  - 1. Identify the strategy for improvement
  - 2. Define what you will measure

- **Do**
  - 3. Gather the data
  - 4. Process the data

- **Check**
  - 5. Analyze the information and data
  - 6. Present and use the information

- **Act**
  - 7. Implement improvement

The Deming Cycle illustrates that it’s important not only to follow the four essential steps, but also to consolidate the improvement into the organization to ensure that the change becomes permanent.

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⁶ Ibid. See “service level management.”

Sometimes, thinking small may be the best way to achieve large improvements. By using the Deming Cycle to move through a series of small, planned improvements, you can make large improvements and adapt to change over time. This iterative approach to a series of smaller improvements avoids the infrastructure stresses of a “big-bang” approach.

THE DEMING CYCLE IN THE REAL WORLD

Let’s return to the insurance company example on page 12. Since the company's IT organization has been using ITIL for several years, they now have clear metrics for costs per call for first, second, and third levels of support. They also have metrics on how many total calls are received at the first level of support and how many are escalated to the second and third levels. Now they can compare these metrics to industry benchmarks and analyze where they can make improvements. Improvements might be in incident management, problem management, or service level agreements (SLAs). They might decide to try to reduce the cost per call, increase the first-call resolution rate, or reduce the number of incidents. The IT organization might make some changes, then measure again to see where they are in relation to the goal, and so on. This is a continual plan-do-check-act process.

SUMMARY

Begin with the end in mind. Decide which frameworks, models, standards, or systems you would like to implement. For some companies, it makes sense to begin with just one area. Work on it until the team has mastered it. Then add another area and master that one. The goal is not to try to implement every framework, model, standard, and system, but to strive to continually improve all that you do at every stage of the service lifecycle.

Now is the time to start your CSI program. You don't need to define all the metrics, assemble all the measurement tools, and have all personnel in place before getting started. The important thing is to make progress, even if it’s small. Then you’ll be able to take greater strides in evaluating progress and suggesting changes that will make each stage of the lifecycle run more smoothly and produce the best possible results for your business customer. Use the CSI register from each stage of the lifecycle to identify improvement opportunities. Be sure, above all, to involve your business counterparts in articulating their goals and objectives. If you don’t know what the target is, you won’t know when you’ve hit it or by how much you’ve missed. Bottom line: Without a target, you can’t demonstrate success.
CHAPTER 4: CONTINUAL SERVICE IMPROVEMENT PROCESSES

The following ITIL definitions are important to this discussion:

- **Key performance indicator (KPI):** “[a] metric that is used to help manage an IT service, process, plan, project or other activity. Key performance indicators are used to measure the achievement of critical success factors. Many metrics may be measured, but only the most important of these are defined as key performance indicators and used to actively manage and report on the process, IT service or activity. They should be selected to ensure that efficiency, effectiveness and cost effectiveness are all managed.”

- **Critical success factor (CSF):** “something that must happen if an IT service, plan, project, or other activity is to succeed. Key performance indicators are used to measure the achievement of each critical success factor. For example, a critical success factor of ‘protect IT services when making changes’ could be measured by key performance indicators such as ‘percentage reduction of unsuccessful changes,’ ‘percentage reduction in changes causing incidents,’ etc.”

**HOW DOES DIKW FIT WITH CSI?**

The Data-Information-Knowledge-Wisdom (DIKW) methodology is key to the success of any CSI effort. Using the DIKW model, your organization can move from gathering isolated bits of data to drawing conclusions that yield information, to combining information with experience to gain knowledge, to developing wisdom. Understanding the DIKW model is key to the development and interrelationships of your service knowledge management system (SKMS), configuration management system (CMS), and configuration management database (CMDB).

**DIKW AND THE PEOPLE FACTOR**

In the DIKW model, wisdom is not attainable without people. The insurance company discussed in the previous examples recognizes that people are one of the key factors in successfully adopting ITIL. As a result, it has a continuous awareness program that constantly highlights the importance of ITIL. They run business simulations and encourage people to take the continually offered ITIL classes. They are always looking for ways to improve in accordance with the CSI methodology, collecting metrics on people, processes, and technology to ensure that improvements are being realized.

**SEVERAL IT PROCESSES CONTRIBUTE TO CSI**

Several IT processes are essential to CSI success. Figure 4 summarizes what processes contribute to the various stages of CSI. For a detailed discussion of how these processes contribute to CSI, see the *ITIL Continual Service Improvement* book.

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8 ITIL® Glossary and Abbreviations. See “key performance indicator.”
9 Ibid. See “critical success factor.”
Summary

Focus CSI efforts on the things that matter the most to the business and its customers, and expect these requirements to evolve over time. The only constant in both life and business is change. Therefore, you need to prepare for both the known and unknown changes that occur in IT environments. CSI is the mechanism to control and limit the surprises—enabling a stable, reliable, and effective service to the business and its customers. By focusing on the CSI approach, you will be poised for success.

<table>
<thead>
<tr>
<th>IT Processes and CSI</th>
<th>Data Collection and Monitoring</th>
<th>Data Measurement</th>
<th>Data Analysis</th>
<th>Data Sharing</th>
<th>Taking Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Level Management</td>
<td>☑</td>
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<td>Event Management, Incident Management, and Service Desk</td>
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Figure 4. IT processes and CSI
CHAPTER 5: CONTINUAL SERVICE IMPROVEMENT METHODS AND TECHNIQUES

USING ASSESSMENTS TO OBTAIN MEASUREMENT RESULTS

Assessments are the basic mechanism for measuring improvements in IT process capability. Three typical levels of scope are:

1. Process or technology only
2. People, process, and technology
3. People, process, technology, and broader business issues. These can include the culture of acceptance and the capability to improve processes over time

The first step in structuring an assessment is choosing or defining a maturity model and maturity attributes to be measured at each level. When assessments are reported, they should be reported with a specific reference to the maturity model used. The sponsoring organization or a third party can conduct the assessments, which should be reported using levels in the maturity model.

The maturity of processes is distinct from the value of those processes to the organization. If a process is immature but important to the organization, the organization may be in a vulnerable position. If a process is mature but not important to the organization, the organization may be over-investing in that process.

You should conduct assessments at the following key stages of the improvement cycle:

- Change evaluation
- Project initiation
- Midstream
- After the process is in place

Assessments are effective at answering the question, “Where are we now?” They are also an important part of identifying gaps between the current status of measured services and where the organization wants them to be. Additionally, if you use a common maturity framework, you can assess them against industry benchmarks.

SAMPLE GAP ANALYSIS

Assume, for example, that an insurance company wanted to improve the first-call resolution rate from 65 to 85 percent. But after a year, measurement showed that the service desk was still struggling with the rate of 65 percent. Management was concerned that something was wrong with the data. Why were the improvement efforts not successful?

Through careful incident analysis, IT management discovered that unauthorized changes were causing a great deal of downtime, resulting in numerous calls to the service desk. They decided to focus on the change management process, with the goal to reduce unscheduled interruptions caused by unmanaged and unplanned changes.

This effort reduced the total number of incidents logged with the service desk, since the number of unscheduled outages declined. The effort also resulted in the added benefit of reducing the average time of first-call resolution, and thus the cost from $18 to $15 per call. Service desk technicians had been spending a great deal of time identifying the causes of outages, which were often unscheduled changes. Reducing the number of unscheduled changes reduced the average time spent per call. The overall impact on the bottom line is significant.
BENCHMARKING FOR BEST PRACTICE

How will you know when you've achieved your goals unless you have a yardstick by which to measure your progress? Benchmarking entails measuring or evaluating your IT processes as compared to established best practices—either internal or industry-wide.

Some of the areas to benchmark may include how your IT spending compares to similar organizations. You can base this on a percentage of revenue or how IT spending compares for similar functions in the organization. It may also help you identify the value of a long-term sourcing contract and the most appropriate sourcing option. You may also want to explore comparing the cost and performance for internal service providers.

USE BENCHMARKING TO OBTAIN MEASUREMENT RESULTS

Benchmarking differs from assessments in that it compares particular processes to other similar processes. It can consist of straightforward comparisons between similar processes within the same organization, or extend to an industry-wide search for best practices. Benchmarking, like assessments, can help you identify the gaps between the organization’s current level of effectiveness and the level of effectiveness IT wants to meet.

As with assessments, it is essential that benchmarking efforts focus on the goal of making improvements. You should never treat measurement results as an end in themselves. The focus should be on improving the quality of IT services, in particular those services that have the biggest impact on the business. Be sure to involve the customer, service broker, user or consumer of the services, and the internal service provider in benchmarking, in addition to external parties.

The insurance company in our example hired a best-practices company to evaluate specific IT areas and processes. The best-practices company provided industry benchmarks as a basis for comparison and to show what IT should be striving to achieve. External consulting organizations can provide a bipartisan view, one not influenced by internal politics.

WHAT’S IMPORTANT TO THE BUSINESS?

Everything IT does should support a business need. As such, IT should strive to be a key enabler of business activities and have a solid understanding of each service level requirement.

A service level requirement (SLR) is defined by ITIL as, “[a] customer requirement for an aspect of an IT service. Service level requirements are based on business objectives and used to negotiate agreed service level targets.”¹⁰

The ITIL Continual Service Improvement publication discusses three categories of goals and metrics, including:

- Financial
- Learning and growth
- Organizational metrics (also called process effectiveness metrics).

Focus any measurements on the results of IT services, not on the effort expended to achieve those results.

IT’S A MATTER OF METRICS

A metric is defined by ITIL as, “something that is measured and reported to help manage a process, IT service, or activity. See also key performance indicator.”¹¹

Metrics are used to quantitatively assess processes, generally in subject-specific areas.

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¹⁰ Ibid. See service level requirement.
¹¹ Ibid: See metric.
Supporting CSI activities involves collecting data for three types of metrics:

**Technology metrics**
Measure such things as the availability and performance of various components and applications.

**Process metrics**
Used to assess how well a process is working, in terms of its quality, value, performance, and compliance. This information is used by CSI to plan process improvements.

**Service metrics**
A collective measurement of all the component metrics, which shows the success or failure of a service from one end to the other. Service metrics should measure service performance from the customer's point of view.

Metrics track KPIs and can also track resource use, productivity, and trends, among other things. Critical success factors (CSFs) flow from the objectives to KPIs to metrics to measurements. Start by initially tracking only two to three KPIs per CSF. KPIs can be either quantitative or qualitative.

An example of a quantitative metric is the number of incidents resolved at first contact. Customer satisfaction is a qualitative metric.

**MEASURING AND REPORTING FRAMEWORKS**
Everything IT does should support the business. As such, you should use your CSI process to make sure the services you provide meet the business's needs within the allocated budget. Adopt one or a combination of measuring and reporting frameworks to organize CSI measurement data and to extract and report CSI results.

ITIL discusses the balanced scorecard and strengths-weaknesses-opportunities-threats (SWOT) analysis in detail. The balanced scorecard approach strives to balance four different perspectives:

1. The customer receiving the service
2. The operational excellence of the internal processes themselves
3. The ability of IT service to improve (learn and grow) over time
4. The financial costs associated with providing the services

What does a balanced scorecard look like? Using our insurance company example, a balanced scorecard for the customer self-service online quote generator might look like Figure 5.
A SWOT analysis is a framework to structure and evaluate projects by considering the existing and possible strengths, weaknesses, opportunities, and threats. Typically, strengths and weaknesses are internal considerations, while opportunities and threats are external considerations.

A SWOT analysis is an effective way to generate the inputs and considerations for possible strategies. It can be an effective strategic planning tool. However, a SWOT analysis is a description of conditions, not a strategy itself. SWOT analyses must be carefully aligned with the organization's vision, mission, goals, and objectives to be of value. A SWOT analysis can be conducted at a variety of organizational levels, as well as for a service or process.
SWOT ANALYSIS IN ACTION
In the insurance company example, a SWOT analysis might look like Figure 6.

While a SWOT analysis is a useful tool to identify areas for improvement, in IT, many prefer to talk about “hindrances to success” instead of “threats.” Hindrances to success are typically aligned around six areas: political, economic, social, technical, environmental, and legal. Analyzing any of these areas will almost always help you discover areas that can be improved. Below are examples of each.

**Political:** “Don’t tell me how to do my job,” protecting turf

**Economical:** Requirement to do more with less

**Social:** “It’s not my job,” or “We’ve always done it this way.”

**Technical:** Do you have the tools to do your job? Are they integrated?

**Environmental:** The day shift doesn’t talk to the night shift.

**Legal:** Compliance issues

### A BALANCING ACT
When implementing a new service or product, you need to balance resources, the functionality of the product or service, and the schedule. By using tension metrics, the team is forced to focus on more than one of these three factors. ITIL defines tension metrics as, “[a] set of related metrics in which improvements to one metric have a negative effect on another. Tension metrics are designed to ensure that an appropriate balance is achieved.”¹² Tension metrics help teams share responsibilities across their roles. See Figure 7.

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**Figure 6: Sample SWOT analysis**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Superior technology</td>
<td>• Budget cuts</td>
</tr>
<tr>
<td>• Skilled staff</td>
<td>• Majority of staff satisfied with the status quo and opposed to change</td>
</tr>
<tr>
<td>• Management committed to innovation</td>
<td></td>
</tr>
<tr>
<td>• Market leader in auto insurance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Expand services to cover additional customers or segments (for example, travel insurance or boating insurance)</td>
<td>• Unpredictable events, such as a major hurricane or earthquake</td>
</tr>
<tr>
<td>• Expand services to new regions</td>
<td>• Competitive pressures</td>
</tr>
<tr>
<td>• Enhance remote claims-processing through advances in wireless technologies</td>
<td>• Increased regulatory requirements</td>
</tr>
</tbody>
</table>

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¹² Ibid. See “tension metrics.”
PROVIDE MEANINGFUL REPORTS ON SERVICES
Although IT collects a tremendous amount of data each day, only a small amount of it is important to IT managers. A large part is more appropriate and useful for business managers. Some of the most significant types of data relate to past performance, especially past events that could be a threat to future performance, as well as to IT’s plans to mitigate any potential threats. Be sure to provide the right data in the right format to the right person, without extraneous information.

Another meaningful report is one that tracks the cost of keeping a service up and running (i.e., operations) versus the time spent on improving the alignment of the service to meet business needs (i.e., innovation).

MEASURE IT SERVICES FROM A CUSTOMER PERSPECTIVE
While measuring the performance of individual components and systems is useful, what matters most is the customer’s experience with the service you have provided—including when the service is provided via software as a service (SaaS). This involves moving from measuring simple “on/off” metrics, such as server uptime, to measuring user satisfaction with the business function, such as the accounts payable system.

You may need to measure user satisfaction against levels promised by the formal service level contract with the SaaS provider (as compared to the less formal, internal service level agreement) and based on the elements of that contract that are monitored and measured. Keep in mind, these are not typical IT metrics you are measuring. Instead they show how IT supports end-user results based on how they consume IT resources.

OBTAINING BUSINESS BUY-IN
ROI is a critical piece of information when determining whether to move forward with a new service or process improvement. You’re unlikely to get support from the business for a new service or service improvement unless you can make a clear business case to support it and describe its business value. You’ll need to outline the value on investment (VOI) as well. Remember, even though you are asking the business to make a financial investment in an improved service, you aren’t asking for a handout. In fact, the change you propose may well deliver future cost savings to the business.

EVERYBODY WANTS SOMETHING
Consider the needs and wants of the various stakeholders. For example, the CFO wants to know how long it will take to achieve payback for the investment, as well as the projected ROI. The business executives want to know how much costs will be reduced, how the change will affect the business, what the benefits will be, and how much value they will get on their investment. The IT managers are concerned with translating ITIL benefits into business benefits.

Before making any changes, establish a baseline to help prove the value of the changes you’ll implement. You’ll want to measure before, during, and after you implement a change.
Sometimes taking no action will be detrimental to the business. To make that case to the business, document how failing to make the needed change is likely to have a negative impact on the business and on IT.

With proper data collection and analysis, companies can target customers based on past patterns of sale. Similarly, CSI programs provide structure to collect data and analyze metrics on various service performance factors. This enables you to understand the effects services have on the business and, based on specific knowledge, target improvements that can increase business effectiveness, efficiency, and profits.

You must be sure to define the criteria for success well before you implement any changes. That way, you’ll know when you’ve achieved your goal and will be able to prove it to all stakeholders. Success might include accelerating the time to market, increasing customer retention, and growing market share. IT can contribute to success by increasing agility, managing knowledge, enhancing knowledge, and reducing risk. For example, IT service management success can be enabled with cloud computing, social media, and mobility.

**MEASURE SUCCESS**

Once you have implemented the improvement, you’ll want to measure how much benefit it is providing. Keep in mind factors such as how well the improvement has matched the intended outcomes of the changes, whether you have gained as much value and ROI as predicted, and whether you will need extra improvements.

Be sure to wait a sufficient amount of time after implementation before beginning to measure progress. If you begin your assessment too soon, you may not see all the benefits expected, as some may occur farther along in the process.

**WATCH FOR UNEXPECTED BENEFITS**

A large oil company realized ROI from its service management implementation much quicker than expected (within two months) when they added contracts and contract relationships as configuration items (CIs) to their configuration management database (CMDB). Through this activity, they learned they were paying maintenance costs for systems that were no longer part of the infrastructure. They eliminated these maintenance payments, resulting in substantial cost savings.

Measure the process performance before you implement a change so that you will be able to see how much progress you make as a result of the change.

The project was part of a CSI effort to increase the accuracy and completeness of the CMDB. This was carried out for the purposes of troubleshooting and risk and impact analysis. The cost savings were a nice, unintended benefit.

**ASK QUESTIONS FROM A BUSINESS PERSPECTIVE**

Obtain business input when deciding which CSI initiatives to implement. Seek ways to either improve existing services or improve how a service is built or modified. Ask questions similar to the ones listed below:

- **What is our baseline?** Take a measurement of the process performance before implementing a change so that you will be able to see how much progress you make as a result of the change.
- **What is in the CSI register?** IT and the business should collaborate to determine the desired outcome of the change. Outcomes can be quantitative (e.g., percent of guaranteed availability) or qualitative (e.g., service desk personnel who speak courteously to customers). Ask the business to specify both long- and short-term goals and objectives.
• **What are the essentials?** Prioritize all of the items in the CSI register to determine which are the most important to address. Maintain a focus on mission-critical services, even though you may also implement some services that are not mission critical.

• **Can we pay for that?** Another consideration in prioritizing improvement projects is who will pay for them and how much they will cost. In some cases, IT will bear the expense; in others, the business may pick up the cost.

• **What is the likely outcome?** Make sure that IT and the business work together to specify both what they require of an improvement project and what they expect will happen once it is finished.

• **What did we achieve in the end?** Once the service operation team monitors and reports their findings, the CSI team needs to work with the business to determine opportunities for improvement.

**WHAT METRIC SHOULD YOU USE?**

ROI refers to the measurement of cash flows, but the fact is that value takes many forms. VOI is the total measure of expected benefits. Used alone or with ROI, it allows decision makers to account for those benefits that are usually considered intangible, including the higher competency of the IT department, increased business throughput, the value of compliance, improved business agility, and so on. Return on value (ROV) is another measurement that is used to help analyze factors beyond the strict rigor of ROI analysis and includes competitive, functional, process, relationship and strategic values, for example.

Choosing the most appropriate measurement tool depends on your organizational goals and IT roles. For example, are you screening a new project? Measuring internal effectiveness? Evaluating a brand new project? The motivation for doing the project dictates how you will begin the measurement process. Keep in mind that rigorous, established financial metrics might not help you measure innovation. However, the more intangible variables can be difficult to measure. So what should you do? Make sure to address this issue by clearly articulating your goals.

Regardless of the technique employed, every IT manager should become comfortable with the various metrics and be able to articulate value and justify projects. Consider designating an expert within the department who can identify which metric to employ. If all else fails, seek a specialist outside the company. Setting the right metric and creating measurable, actionable value outputs will not only help assess the current state, but also guide the decision-making process and help you avoid costly, painful mistakes. It will also help you prove success after the improvement has been implemented and monitor for unintended consequences.

**THE IMPORTANCE OF AVAILABILITY AND CAPACITY MANAGEMENT**

The outputs of other service management processes are among the key inputs to CSI processes. For example, availability management provides data about the effect of infrastructure deficiencies, as well as process or procedural deficiencies, on business services.

Availability management data helps CSI pinpoint failures. Find the weak links or the single point of failure, and make the needed corrections to improve availability so that you can meet your SLAs.

Capacity management focuses on ensuring IT responds to the ever-changing needs of the business and related changes in processing capacity required. Capacity management also provides value to IT support by supplying information about the organization’s use of technical skills and competencies as they relate to capacity.

The ROI from CSI focused on capacity management can be significant. A leading auto manufacturer reduced costs by $500 million by eliminating excess servers and server capacity. The cost of managing a server is three times its purchase price. The right capacity, including virtualized servers, at the right time is huge. With today’s economic climate, this is an area where many companies can realize a significant ROI.
CSI AND ITSM-RELATED GUIDANCE

The ITIL Continual Service Improvement publication discusses related guidance (e.g., various frameworks, models, standards, and systems). Tables 8 through 12 summarize some of the main points in the chapters. See the CSI publication for more details.

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Name</th>
<th>Author or Owner</th>
<th>Use/Purpose</th>
<th>Certification Available?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITIL®</td>
<td>Information Technology Infrastructure Library</td>
<td>Office of Government Commerce (UK)</td>
<td>Principles of IT service management via the lifecycle approach; maximizes how people, process, and technology operate together</td>
<td>YES</td>
</tr>
<tr>
<td>COBIT®</td>
<td>Control Objectives for Information and Related Technology</td>
<td>IT Governance Institute</td>
<td>Originally for audits of IT and Sarbanes-Oxley compliance; has evolved into an overall IT management framework</td>
<td>Yes</td>
</tr>
<tr>
<td>PMBOK</td>
<td>Project Management Body of Knowledge</td>
<td>Project Management Institute (PMI)</td>
<td>A compendium of the evolving body of knowledge about the project management profession</td>
<td>Yes</td>
</tr>
<tr>
<td>Prince2</td>
<td>Project IN Controlled Environments, v2</td>
<td>Office of Government Commerce (UK)</td>
<td>A written record of logical, organized steps for managing projects</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Figure 8: IT frameworks

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Name</th>
<th>Author or Owner</th>
<th>Use/Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMMI</td>
<td>Capability Maturity Model Integrated</td>
<td>Carnegie Mellon University’s Software Engineering Institute (SEI)</td>
<td>The model used most often to measure process maturity</td>
</tr>
</tbody>
</table>

Figure 9: IT model

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Governing Body</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMMI</td>
<td>International Standards Organization</td>
<td>Creates the standards and code of practice for IT service management; provides company certifications</td>
</tr>
<tr>
<td>ISO/IEC</td>
<td>International Standards Organization/ International Electrotechnical Commission</td>
<td>Creates the standards and code of practice for IT service management worldwide</td>
</tr>
</tbody>
</table>

Figure 10: IT standards
<table>
<thead>
<tr>
<th>Standard</th>
<th>Most Recent Version</th>
<th>Purpose</th>
<th>Certification Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO/IEC 20000</td>
<td>2005</td>
<td>Helps organizations gain control and efficiency by integrating and managing linked activities using ITIL service management as a basis</td>
<td>ISO Auditor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IT service accreditation against the standard</td>
</tr>
<tr>
<td>ISO/IEC 27001</td>
<td>2005</td>
<td>Helps organizations identify appropriate security controls and use an information security management system to mitigate business risks</td>
<td></td>
</tr>
<tr>
<td>ISO/IEC 17799</td>
<td>2005</td>
<td>Helps organizations develop security standards and identify security management practices in response to a risk assessment</td>
<td></td>
</tr>
<tr>
<td>ISO/IEC 15504</td>
<td>2006</td>
<td>Gives organizations a means to assess process capability; also known as Software Process Improvement and Capability determination (SPICE)</td>
<td></td>
</tr>
<tr>
<td>ISO/IEC 19770</td>
<td>2006</td>
<td>Provides a means by which an organization can prove it is performing software asset management (SAM) at a level adequate to meet corporate governance requirements as well as effective overall ITSM</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: The term “ISO XXXXX Certified” is given to any organization that successfully passes an ISO/IEC audit.

Figure 11: ISO/IEC Standards applicable to ITSM

<table>
<thead>
<tr>
<th>Name</th>
<th>Definition</th>
<th>Purpose</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six Sigma</td>
<td>A quantitative description of how a process is performing</td>
<td>Process methodology to improve products or processes by reducing the number of errors or defects to less than 99.999666 percent (less than or equal to 3.4 per million possible defects)</td>
<td>Six Sigma Green Belt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Six Sigma Black Belt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Six Sigma Master Black Belt</td>
</tr>
<tr>
<td>Six Sigma DMAIC</td>
<td>Define, Measure, Analyze, Improve, Control</td>
<td>To incrementally improve existing products or processes (Note: The ITIL CSI process is similar to Six Sigma DMAIC.)</td>
<td>Six Sigma Black Belt</td>
</tr>
<tr>
<td>Six Sigma DMADV</td>
<td>Define, Measure, Analyze, Design, Verify</td>
<td>To achieve Six Sigma quality with new products or processes</td>
<td></td>
</tr>
<tr>
<td>Lean Manufacturing</td>
<td>A customer-focused quality system</td>
<td>To pursue a CSI process that focuses on the value to the end user (customer)</td>
<td>Lean Six Sigma</td>
</tr>
<tr>
<td>(a.k.a. Lean Production)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 12: IT systems
SUMMARY

Some of the methods and techniques that drive CSI include:

- Using assessments to obtain measurement results
- Developing a sample gap analysis
- Benchmarking
- Using a balanced scorecard
- Conducting a SWOT analysis

It's important to use reporting frameworks to help guide the direction of CSI projects. Reporting frameworks also help manage them and use output from other service management processes as input for CSI.

Begin by focusing on the goals you want to achieve. Note the gaps in capabilities and resources. Do these gaps relate to the business issues needing to be solved? Then add objects that focus on the business issue using the foundation as the service blueprint. If you cannot add capabilities internally in the organization to address the gaps, use a third-party supplier. Don't try to do everything initially. Instead, focus and prioritize efforts based on business need and strive to continually improve all that you do at every stage of the service lifecycle.

It may make sense to implement more than one standard at the same time. For example, ITIL and COBIT together will help achieve the business goals and objectives of improved service management and adherence to internal and external compliance standards.

Be sure to focus on asking questions from a business perspective. This includes understanding your baseline, knowing what's in the CSI register, determining who will pay for the project, and focusing on the desired outcome.
CHAPTER 6: ORGANIZING FOR CONTINUAL SERVICE IMPROVEMENT

This chapter of the ITIL Continual Service Improvement publication focuses on the roles and responsibilities required to successfully carry out CSI efforts. The key to success in CSI activities is to assign the right people to the right roles and make sure everyone involved understands who is supposed to do what.

WHO OWNS CSI?

Be sure to have an owner for your CSI activities. If there’s no owner, there’s no responsibility. The CSI owner/manager will review suggested improvement opportunities and prioritize them before making recommendations to senior management. Make sure the data gathered isn’t wasted; give it to the CSI owner for collection and analysis. Also make sure to complete the RACI (Responsible- Accountable-Consulted-Informed) model related to the CSI activities. (This model is described on the following page.)

Service level management helps determine the levels of IT service the business requires, whether those levels of service are being provided, and any reasons why the appropriate service levels are not being met.

SERVICE LEVEL MANAGEMENT

SLM goes beyond a simple SLA. SLM helps determine the levels of IT service the business requires, whether those levels of service are being provided, and any reasons why the appropriate service levels are not being met.

Through continual discussions with the business and IT, SLM improves service quality. SLM can trigger a service improvement plan (SIP). An SIP results when SLM and CSI identify areas needing improvement. Problem management and availability management may also be involved in initiating an SIP.

If you plan to outsource service delivery, be sure to establish a protocol for improvement with the third party so that SIP activities are budgeted for early in the process. Otherwise, the third party may have little or no motivation to make the needed changes.

THE RACI AUTHORITY MATRIX

To effectively meet the business needs with the CSI initiative, you’ll need to manage processes and services that run across typical organizational divisions. This approach is essential to effectiveness but can also lead to confusion about roles among those involved. An authority matrix can help clarify roles and responsibilities, as well as reveal any gaps in responsibilities.

The ITIL publications refer to one particular authority matrix: the RACI model. Using the RACI model, you can summarize the roles involved in a CSI effort as follows:

- **R** = who is **Responsible** for getting the job done
- **A** = the one person who is **Accountable** for each task
- **C** = who is **Consulted** for their input and knowledge
- **I** = who needs to be **Informed** about process implementation and quality
TRANSFORM YOUR ORGANIZATION WITH CSI

Start by establishing a CSI owner who is accountable for the CSI program. This ensures someone has a vested interest in the long-term success of the CSI efforts.

As you begin to implement CSI, keep in mind that focusing on improving a single process isn’t always enough. Most processes are both affected by and often embedded into other parts of the organization. The focus should be on improving a business outcome with the organizational capabilities and resources, including the people, processes, suppliers, and technology.

Service improvement typically results in organizational change, and change is often the greatest challenge. It is human nature for people to resist forced changes. To increase the probability of achieving the results you desire, consider using an organizational change approach, such as the Eight Steps to Transforming Your Organization by John P. Kotter of Harvard Business School.¹³ This approach is discussed in more detail in Chapter 8.

SUMMARY

It is essential that every individual involved in a CSI effort understand his or her role and responsibilities, as well as those of the others involved in the CSI effort. An authority matrix can be used to help clarify who is involved in the CSI effort and in what way.

CHAPTER 7: TECHNOLOGY CONSIDERATIONS

This chapter reviews the technology requirements that support CSI. It emphasizes how activities for ongoing improvements depend on using software that monitors and reports on services and processes. These solutions can enable IT organizations to be more proactive by monitoring, identifying issues and trends, and analyzing key components of IT services. IT service management tools have evolved from point solutions into integrated solutions that can help manage IT based on business objectives. Many product suites are now available as SaaS.

The following areas are addressed as technology considerations for CSI:

- Tools to support CSI activities
- IT service management suites
- Systems and network management
- Event management
- Automated incident/problem resolution
- Knowledge management
- Requesting services (service catalog and workflow)
- Performance management
- Application and service performance monitoring
- Statistical analysis tools
- Software control/software configuration management
- Software test management
- Information security management
- Project and portfolio management
- Financial management for IT services
- Business intelligence reporting

TOOLS TO SUPPORT CSI ACTIVITIES

This chapter discusses technology, including service management solutions for monitoring, controlling systems and infrastructure components, and managing workflows. The solutions chosen should support core IT service management processes and governance, and, where possible, these should be integrated.

When following effective CSI principles, you can deliver more value to the business by managing IT from a business perspective, known as business service management (BSM). ITIL defines business service management as “The management of the business services delivered to business customers...”\(^\text{14}\)

IT SERVICE MANAGEMENT SUITES

Enterprises are dynamic. ITSM needs are likely to change over time, driven by shifts in the business environment, growth of the IT infrastructure, business expansion, and advancements based on ITSM maturity level. The service desk solution you choose should be flexible enough to adapt to your implementation to meet evolving business needs. For example, you may want to move from an on-premise solution to an SaaS offering, or vice versa. Or you may want to add new process capabilities over time, such as implementing a change management solution or service catalog to complement the help desk

\(^{14}\) ITIL\(^\text{\textsuperscript{3}}\) Glossary and Abbreviations. See business service management
solution. To improve communication and collaboration, you may also want to add integration with social media at some future point, or perhaps make provisions within the system for users bringing their own devices to the workplace.

**KEY TECHNOLOGY TO SUPPORT IT SERVICE MANAGEMENT SUITES**

Select an IT service management suite that is compatible with ITIL processes and integrated with a CMDB. Let’s look at an example of how taking an integrated approach can effectively support CSI:

The CMDB shows the current infrastructure: all CIs and their relationships with each other. Incident management measures what is going wrong in the infrastructure. Problem management, leveraging configuration data from the CMDB, analyzes what went wrong and proposes changes to make sure the issue doesn’t occur again. Next, change management implements the proposed changes to remove the root cause of the incident.

To ensure effective CSI, the architecture must provide discovery and reconciliation capabilities to capture CIs and their relationships in the CMDB. The CMDB is part of the overall configuration management system (CMS) and service knowledge management system (SKMS). ITIL defines CMS as, “[a] set of tools, data and information that is used to support service asset and configuration management. The CMS is part of an overall service knowledge management system and includes tools for collecting, storing, managing, updating, analyzing and presenting data about all configuration items and their relationships.”¹⁵ The CMS is the foundation that supports the complete IT service lifecycle. A CMS may include various IT management tools 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.

The CMS, used to manage configuration data, will help the IT organization solve its problems from a business perspective. Through the use of a CMS, IT management applications have access to catalogued IT configuration data. By accessing this information, the CMS can provide the IT organization with the data to make well-informed decisions, thereby increasing IT’s value to the business. The SKMS follows the DIKW model and helps transform data from the CMDB and information and knowledge from the CMS to actionable decisions for the end consumer.

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¹⁵ Ibid. see configuration management system.

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FIG 13. Sample of service knowledge management system (SKMS)
One of the key benefits of an integrated ITSM suite is being able to provide a single source of truth for data from all areas of the service lifecycle. This includes incidents that turn into problems and changes that create incidents, for example. The selected technology should include good reporting capabilities and standard interfaces for inputting data into industry-standard reporting packages and dashboards.

Due to a lack of actionable reporting capabilities, organizations often face difficulties making the right operational, financial, and contractual decisions to support service management. Traditional reporting often relies on static reports that provide important information overviews but lack functionality to drill down to a deeper level of analysis.

A mobile device management (MDM) capability is a useful extension of your CMS and SKMS strategy. The inexorable rise in the use of mobile and tablet devices, coupled with the growing trend for “bringing your own device” (BYOD), mandate that organizations take control of a layer of business-critical infrastructure that is most likely undermanaged at present.

Look for a technology solution that provides reporting capabilities that enable point-and-click analysis and reporting across business service configurations, linking incident and problem data from the service desk with configuration and relationship data (from the CMDB). The solution should also link contract, software license, lease, and warranty information. By combining this process data into a consolidated view, you can analyze service desk performance, along with supporting IT configurations and assets, to determine how effectively you are supporting your critical business services.

SYSTEMS AND NETWORK MANAGEMENT

Solutions for systems and network management provide a variety of data to support service management objectives. For example, they generate error messages that feed into incident management and availability management processes. This information can be integrated within the CMS to provide increased visibility into the end-user experience. These tools can also be used to support the release of patches and to push network upgrades.

If upgrades are not done properly, they can cause system outages. Even the most thorough change planning process is not enough. It must be accompanied by an efficient way to execute many software changes on a variety of devices with precision, thereby improving first-time deployment success rate, achieving desired deployment objectives, and creating audit trails for regulatory compliance and internal governance policies. Look for a solution that automates the discovery, packaging, provisioning, configuration, patching, and repair of software, including operating systems, purchased and custom applications, content, and predefined software configurations.

AUTOMATED INCIDENT AND PROBLEM RESOLUTION

Automated incident and problem management solutions can help reduce the number of manual, labor-intensive processes related to incident and problem resolution. This technology can identify root cause and resolve issues, which can also prevent service outages. It can also be used to document audit-related information.

Most IT organizations start the CSI process with incident and problem management. You can begin by analyzing all incidents to find out which ones have the biggest impact on the business. Review the incident reports to identify areas experiencing recurrent incidents where you can improve on the services. At the same time, look at the incident management process to discover any problems with SLAs. You can also use the service desk to collect customer satisfaction data, which is another key indicator of areas for improvement.

EVENT MANAGEMENT

Events occur when a tool senses an error condition or that a threshold has been met. Event management solutions that can correlate events and perform impact and root cause analysis to filter out the false messages are particularly useful to CSI.
Event management is an ideal candidate for CSI. Look at the event management reports, coupled with a service impact tool, to determine areas where events occurred that caused the greatest impact on the business. The reports will indicate weak areas in the infrastructure where improvement programs will be beneficial.

Determining which IT events are creating the greatest effect on the business is a common challenge. Many enterprises have acquired a large number of monitoring tools that often do not integrate with one another, so it can be even more challenging to identify which events are related to incidents and whether each is a source or symptom of the problem or changes.

*The technology you choose should integrate with your existing IT investments so that you don’t have to get rid of your existing technology to support new solutions.*

An effective event management solution should allow you to detect IT problems so you can concentrate on resolving issues quickly — before they impact critical IT services. The solution should be able to handle events from a broad set of sources (including mainframes, distributed systems, networks, databases, and applications) and forward the event to incident, problem, or change management.

**KNOWLEDGE MANAGEMENT**

Knowledge management solutions let you learn from experience. This means you don’t have to start from scratch each time you need an answer to a question. You can resolve problems faster by using a solution that offers accurate access to previous cases. The tool should be able to address the symptoms of current incidents or problems based on past knowledge.

Knowledge management uses information from problem management to help determine root cause analysis. Root cause analysis is important in defining the weak link in the infrastructure, or the single point of failure in a chain of events.

Problem management works with availability management and capacity management to eradicate problems and restore services. A proactive problem management team is key to building knowledge items and to CSI overall.

Any delays in resolving IT incidents can cause delays in business processes. This can have a negative effect on the company’s bottom line. Knowledge management solutions must enable both external and internal call centers to perform more efficiently, giving support agents a vast array of the information they need to resolve problems at their fingertips.

An effective solution lets users search across many sources and create their own trouble tickets. It should provide enforceable authoring processes and modifications to ensure knowledge is consistent and up to corporate standards.

It’s also becoming increasingly common for IT to offer support through social collaboration platforms. These exchanges can provide a rich source of knowledge that can be used to address future occurrences of a given problem. A contemporary knowledge management solution will allow you to search social sources in addition to the more traditional structured knowledge repositories.
SERVICE REQUEST AND FULFILLMENT (SERVICE CATALOG AND WORKFLOW)

Service request management (SRM) solutions help define the service catalog, manage requests, and provide workflow to fulfill those requests. SRM solutions enable IT to provide business services cost effectively, helping IT deliver greater business value.

SRM technology is evolving, giving employees one-stop, online shopping for all the services they need. It’s like having a service supermarket at your employees’ fingertips. It’s an efficient, accurate, and very low-cost way of raising requests, making the business benefits significant. The SRM solution should employ standard, repeatable, best-practice processes for handling requests.

SRM also allows you to track all service requests for auditing later — critical for regulatory compliance. A comprehensive SRM solution should enable you to track service request turnaround times against SLAs, another key area for CSI.

PERFORMANCE MANAGEMENT

Performance management solutions collect data related to availability, capacity, and performance. The solutions analyze responsiveness, traffic, workloads, and resource data usage. They also predict performance and generate the data required to report SLAs.

A comprehensive performance management solution is a key tool in the CSI toolkit. Recall that the metrics related to SLAs are a key indicator of customer satisfaction, which in turn is a key indicator of where you should focus your improvement efforts. A good performance management tool can help you find the weak links or bottlenecks in your IT infrastructure. Then you can concentrate your improvement activities on services that are not meeting SLAs and/or have low customer satisfaction numbers.

Managing the availability and performance of business processes is critical to success. Business processes are executed by your personnel and by your business applications. This requires that all the technology components needed to deliver each application must be available and performing well for the processes to execute smoothly.

This is a challenging task because business applications have multiple levels of complexity that make it difficult to identify the root cause of problems. Furthermore, business processes often have cross-application dependencies. As a result, even if one application is performing as intended, a business process may not be executed properly because of a dependency on another failing application.

APPLICATION AND SERVICE PERFORMANCE MONITORING

This section of the ITIL Continual Service Improvement publication focuses on understanding how the user experiences service provisioning. The publication reviews how solutions need to monitor the end-to-end delivery of services and provide metrics, such as availability, server efficiency, and transaction response time. This information enables IT managers to analyze how services are delivered at various points, as well as look for improvements. It provides usage trend data to support availability and capacity management processes and enhances your ability to meet service level agreements.

Business service delivery depends on the completion of end-user transactions. With today’s complex infrastructures and siloed organizations, IT is often unable to provide consistent, end-to-end service availability and performance to the business. When problems occur, determining the origin and cause takes too long and costs too much (in terms of both IT resources and negative business impact).
STATISTICAL ANALYSIS TOOLS

CSI efforts can be greatly enhanced by leveraging statistical analysis solutions for reporting and supporting other processes, such as availability and capacity management. These tools should support analysis of mean time between failures, demand management, workload analysis, and so on. The solutions should be able to group data, model services, and provide predictive models to support growth.

Statistical analysis tools are another important element of the CSI manager’s toolkit. These tools can perform “what-if” analyses if you are planning to add new business services. They also help with business resource planning and workload analysis. These capabilities enable the CSI manager to proactively see the effects on the infrastructure of a new service, solution, or offering.

Most enterprises have significant overcapacity in non-Unix servers. How can having extra “room to grow” be a problem? The reality is that the cost to acquire these systems is trivial compared to the ongoing cost of operations, backup, power, and cooling, for example. Companies now view data center optimization as the preferred method to decrease server sprawl and increase efficiency, scalability, and overall IT effectiveness, while also decreasing operational management costs.

**Be sure that software test management solutions integrate with incident management so that you can conduct tests on incidents that might affect production versions of software.**

Capacity management solutions can address these challenges for both physical and virtual environments by providing high-level, in-depth performance analysis and reporting capabilities to explain where their performance and capacity levels are today. This includes providing comprehensive management of distributed server performance and capacity, including the ability to properly size, consolidate, and understand both current and future capacity requirements through response-time modeling.

SOFTWARE VERSION CONTROL/SOFTWARE CONFIGURATION MANAGEMENT

Solutions should be available to provide version control that supports all of the applications.

SOFTWARE TEST MANAGEMENT

Solutions can be used for release management and deployment testing. Be sure that software test management solutions integrate with incident management so that you can conduct tests on incidents that might affect production versions of software.

Sixty to eighty percent of incidents are caused by failed changes or improperly implemented software applications. A key focus of any CSI effort is to lower change-related incidents. A software testing tool enables you to test and find areas of concern quickly, to determine the root cause, and to eradicate the issue before it affects the business service.

One approach to testing involves automating the problem-resolution process. Analogous to a black box flight recorder on an aircraft, technology can capture a synchronized, real-time log of user actions, system events, performance metrics, configuration data, and code execution flow when a problem occurs. By recording the actual application execution, it can eliminate the need to manually document and reproduce issues before resolving them.
SECURITY MANAGEMENT
It’s important to protect the network, systems, and applications. Solutions should ensure that only those people who are entitled to access the network have access to it.

Access management is defined as the process of granting authorized users the right to use a service, while preventing access to unauthorized users, which can pose a significant risk and vulnerability to the IT environment. The ITIL guidelines stress the importance of integrating technology, processes, and people. Identity management is an important component in ensuring the “people” dimension of the security management challenge is effectively controlled.

Because protecting your IT environment is so important, comprehensive identity management is another important tool for the CSI toolkit. You need to be able to track any activities from unapproved users in the system and then eradicate unauthorized access.

PROJECT AND PORTFOLIO MANAGEMENT
The business of IT can be managed through solutions that provide resource management, portfolio visibility, project management, and so on.

To be successful with project and portfolio management, you must be able to effectively manage the entire lifecycle of every service, from request to retirement. Many IT organizations are already addressing the management of deployed services by using available service management tools and solutions.

FINANCIAL MANAGEMENT
Financial management of IT services is critical to ensuring you have sufficient financial resources to support the IT infrastructure. Many IT organizations track resource and service use to bill for shared IT resources. Solutions collect data from a variety of sources and provide reports that analyze costs. The solutions should interface with the CMS to manage costs for each CI. Financial management tools help IT budget more accurately and evaluate the effectiveness of services.

Asset management solutions play an important role in financial management. They can help you proactively seek and achieve improvements related to lowering the cost of asset ownership and mitigating compliance risk. You can also seek improvements around software license costs by using software usage frequency information to align licensing with actual software usage.

BUSINESS INTELLIGENCE/REPORTING
There should be a common repository of service information and business-related data. Solutions should reduce the administrative costs of managing processes and improve the quality of IT service provisioning.

Dashboards are valuable because they allow you to see the overall IT service performance and availability levels at a glance. Customers and users are interested in a service view of the infrastructure; a technical view is generally not as relevant to them.

Providing proper management visibility into key IT performance indicators can help you run and maintain an effective IT organization that consistently meets the demands and needs of the business. These indicators can also help identify areas for improvement in our CSI efforts.
SUMMARY

To promote CSI, organizations should look at the big picture. Organizations should leverage solutions that support gathering, processing, analyzing, and presenting data. The solutions should be able to monitor each level of the service hierarchy, as well as support reporting activities related to SLAs, operational level agreements (OLAs), and underpinning contracts. Remember, reporting should enable decisions.

Solutions should be able to help IT support increased demand due to the growth of mobile devices and greater service expectations from end users.

While the tools gather data and information, astute CSI managers will reconcile any information obtained from reporting sources against their own personal experience. This will help ensure that the proposed improvements will enable the organization to provide consistently better service. Service impact tools are critical to comprehending how business services will be affected by certain actions. Gaining this understanding will give you greater control over your IT environment while reducing complexity and risk.
CHAPTER 8: IMPLEMENTING CONTINUAL SERVICE IMPROVEMENT

GETTING STARTED
The ITIL Continual Service Improvement publication reviews several steps in preparation for a CSI effort. These include:

- Identifying and filling the key roles
- Identifying and initiating data gathering and data reporting processes to monitor relevant metrics
- Scheduling monthly service review meetings within IT before meetings with the business

Once these precursors are complete, the big question is where to start the CSI effort. ITIL outlines three possible approaches, each with a different starting point but all focused on identifying possible improvement opportunities.

Service Approach
Start by identifying a particular service “pain point” and work with the service owner to identify possible improvement opportunities.

Lifecycle Approach
This approach can be effective to improve services before implementing them into the production environment. Start by examining the effectiveness of the handoffs that occur from one lifecycle stage to the next to identify improvement opportunities.

Functional Group Approach
This approach is useful when a particular function is failing repeatedly. Start by identifying the specific function that is repeatedly failing as the improvement opportunity. This type of CSI effort can work well as a pilot for a broader CSI effort.

Back to our insurance company example: The company had a variety of disparate business units and realized that a single approach would not be effective. So the company used all three approaches, based on what worked best for each business unit. In addition, they created an entire department that just focused on organizational change and the “people factor.” This department developed its own methodology, tailored for the company, to overcome change resistance.

GAIN A STRATEGIC VIEW THROUGH GOVERNANCE
Approach governance with a strategic view. You’ll need to adopt a service management perspective that focuses on providing business services, rather than on the individual technologies and systems. An added benefit is that an organization focused on service management is typically more proactive and is more aligned with the business. To govern is to put a set of rules and standards in place and then to ensure adherence to them.

CONSCIOUSLY ATTEND TO ORGANIZATIONAL CHANGE
For successful CSI, you’ll need to address the “softer aspects” of organizational change. Pay particular attention to this because service-aligned CSI requires the involvement of representatives from different functions working together in new ways. Aspects of organizational change include overcoming resistance to change; gaining commitment from participants; empowering, motivating, and involving participants; and, central to all of this, establishing effective communication.
AN ORGANIZATIONAL TRANSFORMATION

In our insurance company example, many people in the company were content to operate as they had for years. Then, in a short period of time, two major hurricanes hit in areas where the company provided insurance and the company’s profit margins dropped dramatically. This huge decrease in profit margins created an urgent need for change. Management realized that they either had to become more efficient and effective as a company, or they would face major layoffs. They decided to seek areas where they could become more efficient and productive. The aftermath from the hurricanes created the urgent need for this approach to CSI.

You can institutionalize change by hiring people who are service focused to begin with, training both new and existing staff on the core values of ITIL and on maintaining a service focus, and consistently reinforcing behaviors and attitudes that align with CSI goals.

ORGANIZATIONAL CULTURE IS KEY

For CSI to have maximum benefit, the CSI way of doing things needs to become an integral part of the organizational culture. The path toward CSI becoming part of an organization’s culture begins with the behavior of individuals.

Changing employee behavior requires positive role models in the form of senior management who truly embrace CSI and demonstrate their commitment by consistently following CSI-prescribed processes. It also requires continual feedback for employees and reinforcement through alignment with employees’ development goals and compensation.

THE IMPORTANCE OF EFFECTIVE COMMUNICATION

Effective communication is key to the success of your CSI effort; in particular, communicate often when there are changes to the established way of doing things.

As communication works its way down through the strategic level to the tactical level and finally to the operational level, much of the original focus and impact can get lost. To alleviate this, be sure to target clear communication to every level of the organization. Also, remember to keep people informed about why certain actions are taking place, not just what the actions are.

SUMMARY

Pick an approach that will help you reach your first goal, and do not be afraid to start small. Demonstrating success is still the most powerful way to get more resources. Success with CSI requires a different way of thinking and, ultimately, organizational change. The “CSI way” needs to be part of the organizational culture, starting from the top. Communicate continually to employees at all levels about the importance of CSI and about the progress underway.
CHAPTER 9: CHALLENGES, RISKS, AND CRITICAL SUCCESS FACTORS

The *ITIL Continual Service Improvement* publication outlines the key challenges you may face as you set out on your CSI initiative. It also presents critical success factors (CSFs), including a CSI owner and appropriate technology to support CSI. Finally, it summarizes the risks in undertaking a CSI initiative. By their nature, many of these points overlap; for example, not having management commitment is a challenge, while management commitment is a CSF.

Collaborative executive commitment is critical to successful change. If you don’t have the support of upper management, success will be very difficult to achieve. You’ll need executive support when dealing with a particularly difficult change model or if you encounter resistance from others.

**SUMMARY**

Use the lists in Chapter 9 of the *ITIL Continual Service Improvement* publication as a starting point to review your own unique situation and to prepare strategies for addressing the challenges, meeting the CSFs, and alleviating the risks.
CONCLUSION

Don’t wait another day to start a CSI program. Even the best IT organization has room for improvement. There is always opportunity to increase the value that IT provides to the business.

To be successful in your CSI efforts, follow the guidance in this booklet, but be sure to refer to the ITIL Continual Service Improvement book for a more detailed discussion of key points. Select technology that enables the monitoring of performance, identification of issues and trends, and management of IT from a business perspective. Keep an eye on the end-user experience with a service, not just the infrastructure components supporting it, to ensure that the service is operating as expected.

Continual service improvement can transform a business by utilizing new processes and technology, and/or employing those that can evolve from current assets (i.e., capabilities and resources). New technologies, such as cloud computing, are transforming business services. Whether CSI is transformational or evolutionary, the goal is to improve business services to realize value.

Be sure to update these activities regularly as your organization moves forward to meet the demands of new service delivery models and increased end-user expectations. The need for greater agility and lower costs has encouraged more organizations to move services to the cloud. Many organizations are taking an SaaS-first approach to service management. The services you provide will need to meet end-user expectations in an environment where more personal devices are used in the workplace and end users expect them to be managed just like corporate resources.

Find an area that’s important to the business and focus your initial CSI efforts there. The time to start your CSI initiatives is now.
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