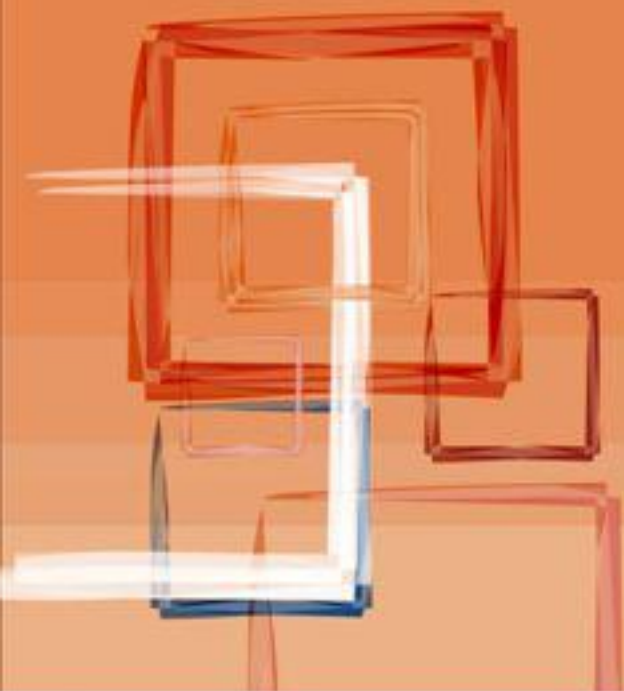


# ITIL® 2011 Service Lifecycle: Continual Service Improvement



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**ITIL® 2011 Intermediate  
Student Guide**

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## Setting the stage

**Introductions**

**The Expectations**

**Ground rules**

**Break Timings**

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### ***Reader's Note***

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## Course Structure

### ➤ Course Duration

- 3 Days

### ➤ Examination Format

- Multiple Choice
- Scenario-based
- 8 Questions
- Graded scoring marking method
- Pass Score: 28/40 or 70%
- Online or paper based exam through an ATO
- Max 90 minutes Duration for all candidates
- Closed Book

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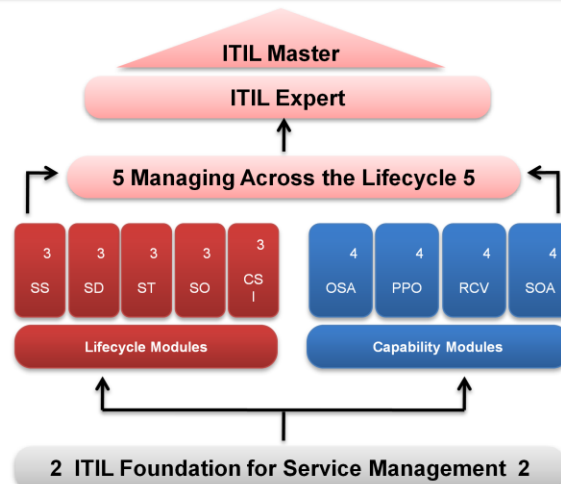
### **Reader's Note**

## Certification Schemes

**ICTIM** = ICT Infrastructure Management  
**CPDE** = Certified Design Process Engineer  
**SDI** = BCS Service Desk and Incident Management  
**SLMS** = BCS Service Level Management Specialist  
**SCBRM** = BCS Specialist Certificate in Business Relationship Management  
**SCPM** = BCS Specialist Certificate in Problem Management  
**SCSM** = BCS Specialist Certificate in Supplier Management  
**CMS** = BCS Change Management Specialist

**NOTE:**

✧ Candidates must achieve a minimum of 17 credits to be eligible for the Managing Across the Lifecycle course and examination;  
 ✧ When using complementary qualifications credits - a maximum of 6 credits can be used in the ITIL core scheme



ICTIM 3.5	SCBRM 1.5	CPDE 1.5	ISO/IEC20000 EXIN/TUV 1.0	SDI 1.5	SLMS 1.5	CMDB 1.5	CHANGE ANALYST 1.5	SCPM 1.5	SCSM 1.5	CMS 1.5	SERVICE CATALOUGE 1.5
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**Service Lifecycle Modules** The Service Lifecycle series is focused on each stage of the Lifecycle and syllabuses are matched to each of the five core practice areas. A certificate exam is given for each module.

**The Lifecycle modules are:** • Service Strategy - • Service Design - • Service Transition - • Service Operation • Continual Service Improvement

Each module of the Lifecycle series covers an introduction to the Service Lifecycle, the principles, processes, functions and activities within that stage of the ITIL Service Management

Lifecycle, along with technology and implementation

### Service Capability modules

The Service Capability series is focused on role based clusters in a modular set, each with a certification. Each cluster contains groupings of processes and roles from within ITIL IT

Service Management, intended to offer candidates a balanced knowledge of ITIL practices which have direct interaction and dependencies in their daily use.

The Capability modules are: OSA – PPO – RCV - SOA





## Purpose

- To align IT services with changing business needs by identifying and implementing improvements to IT services that support business processes
- To Support all life cycle stages
- To improve Service Effectiveness, Process Effectiveness & Cost Effectiveness

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### **Reader's Note**

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## Objectives

- Review, analyse, prioritize and make recommendations on improvement opportunities in each lifecycle stage
- Review and analyse service level achievement
- Identify and implement specific activities to improve IT service quality and improve the efficiency and effectiveness of the enabling processes
- Improve cost effectiveness of delivering IT services without sacrificing customer satisfaction
- Ensure applicable quality management methods are used
- Ensure that processes have clearly defined objectives and measurements that lead to actionable improvements
- Understand what to measure, why it is being measured and what the successful outcome should be

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### Reader's Note

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## Scope

- The overall health of ITSM as a discipline
- The continual alignment of the service portfolio with the current and future business needs
- The maturity and capability of the organization, management, processes and people utilized by the services
- Continual improvement of all aspects of the IT service and the service assets that support them

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To implement CSI successfully it is important to understand the different activities that need to be applied. The following activities support CSI

- Reviewing management information and trends to ensure that services are meeting agreed service levels
- Reviewing management information and trends to ensure that the output of the enabling processes are achieving the desired results
- Periodically conducting maturity assessments against the process activities and associated roles to demonstrate areas of improvement or, conversely, areas of concern
- Periodically conducting internal audits verifying employee and process compliance
- Reviewing existing deliverables for appropriateness
- Periodically proposing recommendations for improvement opportunities
- Periodically conducting customer satisfaction surveys
- Reviewing business trends and changed priorities, and keeping abreast of business projections
- Conducting external and internal service reviews to identify CSI opportunities
- Measuring and identifying the value created by CSI improvements.

These activities do not happen automatically. They must be owned by individuals within the service provider organization who are empowered to make things happen. They must also be planned and scheduled on an ongoing basis



## Business Value

*Adopting and implementing standard and consistent approaches for CSI will*

- Lead to a gradual and continual improvement in service quality, where justified
- Ensure that IT services remain continuously aligned to business requirements
- Result in gradual improvements in cost effectiveness through a reduction in costs and/or the capability to handle more work at the same cost
- Use monitoring and reporting to identify opportunities for improvement in all lifecycle stages and in all processes
- Identify opportunities for improvements in organizational structures, resourcing capabilities, partners, technology, staff skills and training, and communications

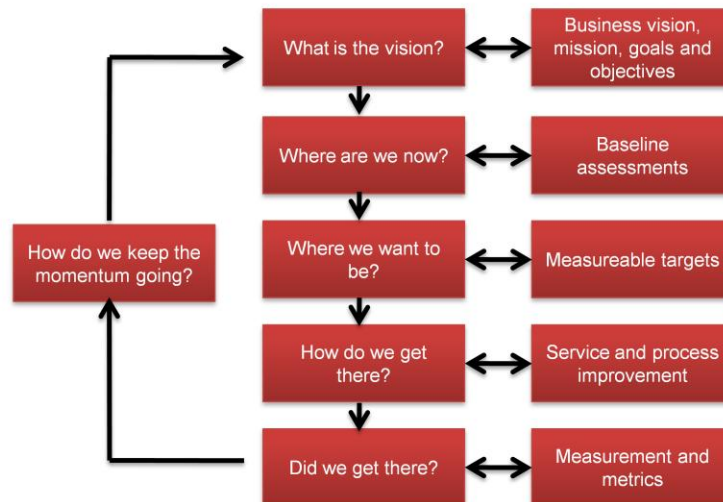
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### Reader's Note

## Approach TO CSI



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- Embrace the vision by understanding the high-level business objectives. The vision should align the business and IT strategies.
- Assess the current situation to obtain an accurate, unbiased snapshot of where the organization is right now. This baseline assessment is an analysis of the current position in terms of the business, organization, people, process and technology.
- Understand and agree on the priorities for improvement based on a deeper development of the principles defined in the vision. The full vision may be years away but this step provides specific goals and a manageable timeframe.
- Detail the CSI plan to achieve higher quality service provision by implementing or improving ITSM processes.
- Verify that measurements and metrics are in place and that the milestones were achieved, process compliance is high, and business objectives and priorities were met by the level of service.
- Finally, the approach should ensure that the momentum for quality improvement is maintained by assuring that changes become embedded in the organization.



## Business Questions for CSI

What is the vision?

- The question should be asked by the IT service provider to understand what the ultimate and long term aims are

Where are we now?

- This is a question every business should start out asking as this creates a baseline of data for services currently being delivered.

Where do we want to be?

- This is often expressed as business requirements.

How do we get there?

- What improvement initiatives are required in the short, medium and long term? These initiatives should be logged in the CSI register

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### Reader's Note

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## Business Questions for CSI

Did we get there?

- This is documented through monitoring, reporting and reviewing of service level achievements and actual performance against targets identified by the business requirements

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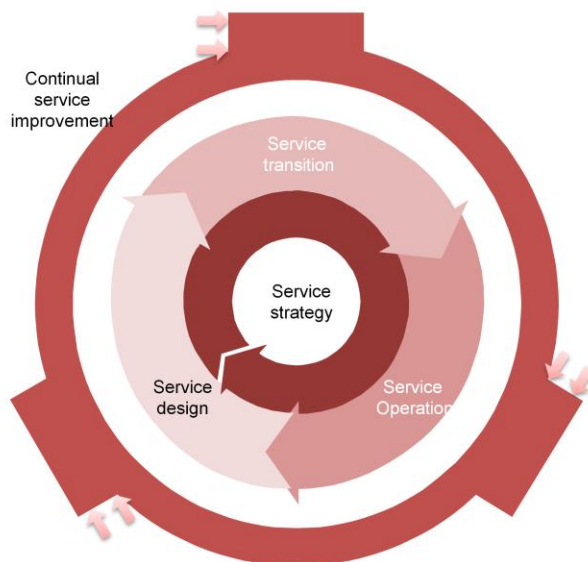
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## CSI Context



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## CSI Context

- Provides guidance on creating and maintaining value for customers through better strategy, design, transition and operation of services
- Combines principles, practices and methods from quality management, change management and capability improvement

ITIL Continual Service Improvement describes best practice for achieving incremental and large-scale improvements in service quality, operational efficiency and business continuity, and for ensuring that the service portfolio continues to be aligned to business needs. Guidance is provided for linking improvement efforts and outcomes with service strategy, design, transition and operation. A closed loop feedback system, based on the Plan-Do-Check-Act (PDCA) cycle, is established. Feedback from any stage of the service lifecycle can be used to identify improvement opportunities for any other stage of the lifecycle.

Other topics in ITIL Continual Service Improvement include service measurement, demonstrating value with metrics, developing baselines and maturity assessments

## Inputs - Outputs

### Inputs

#### **Service Strategy to CSI**

- Vision and mission
- Service portfolio
- Policies
- Strategies and strategic plans
- Priorities
- Financial information and budgets
- Patterns of business activity
- Achievements against metrics, KPIs and CSFs
- Improvement opportunities logged in the CSI register

### Outputs

#### **CSI to Service Strategy**

- Results of customer and user satisfaction surveys
- Input to business cases and the service portfolio
- Feedback on strategies and policies
- Financial information regarding improvement initiatives for input to budgets
- Data required for metrics, KPIs and CSFs
- Service reports
- Requests for change (RFCs) for implementing improvements



### **Reader's Note**

## Inputs - Outputs

### Inputs

#### **Service Design to CSI**

- Service catalogue
- Service design packages including details of utility and warranty
- Knowledge and information in the SKMS
- Achievements against metrics, KPIs and CSFs
- Design of services, measurements, processes, infrastructure and systems
- Design for the seven-step improvement process and procedures
- Improvement opportunities logged in the CSI register

### Outputs

#### **CSI to Service Design**

- Results of customer and user satisfaction surveys
- Input to design requirements
- Data required for metrics, KPIs and CSFs
- Service reports
- Feedback on service design packages
- RFCs for implementing improvements



### **Reader's Note**

## Inputs - Outputs

### Inputs

#### **Service Transition to CSI**

- Test reports
- Change evaluation reports
- Knowledge and information in the SKMS
- Achievements against metrics, KPIs and CSFs
- Improvement opportunities logged in the CSI register

### Outputs

#### **CSI to Service Transition**

- Results of customer and user satisfaction surveys
- Input to testing requirements
- Data required for metrics, KPIs and CSFs
- Input to change evaluation and change advisory board meetings
- Service reports
- RFCs for implementing improvements



### **Reader's Note**

## Inputs - Outputs

### Inputs

#### **Service Operation to CSI**

- Operational performance data and service records
- Proposed problem resolutions and proactive measures
- Knowledge and information in the SKMS
- Achievements against metrics, KPIs and CSFs
- Improvement opportunities logged in the CSI register

### Outputs

#### **CSI to Service Operation**

- Results of customer and user satisfaction surveys
- Service reports and dashboards
- Data required for metrics, KPIs and CSFs
- RFCs for implementing improvements



### **Reader's Note**





## CSI & Organizational Change

- Every Improvement program brings a Change in to the Organization
- Many changes failed to achieve the desired results
- Every change involves people and the way they work
- People Resist and generally do not like the change
  
- By sharing the benefits and involving people gain the support
- Ensure people break-out of old working practices

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### **Reader's Note**

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## CSI Ownership

- Ownership is fundamental to any improvement strategy
- Accountable role for ensuring the best practice is adopted and sustained throughout the organization
- Chief advocate and owns all CSI issues
- Accountable for the success of CSI in the organization
- Ensures there are adequate resources (including people and technology) to support and enable CSI
- Responsible for ongoing CSI activities such as monitoring, analysing, evaluating trends and reporting as well as project-based service improvement activities

The CSI manager owns the above activities

Specific service improvements are the responsibility of the appropriate service owner working within the CSI framework



### Reader's Note

## CSI Register

- CSI register is created to record all the improvement opportunities and should be categorized by
  - Size (Small, Medium or Large)
  - Achievement (Quick, Medium Term or Long term)
  - Benefits by Implementation of Improvements
  - Automated raising of LOW-priorities over time may be a useful
- Should have important information and is part of SKMS
- Offers structure and visibility to CSI ensuring that all initiatives are
  - Captured
  - Recorded
  - Benefits realized



### Reader's Note

## CSI Register

- Provides a coordinated, consistent view of the potentially numerous improvement activities
- CSI manager is accountability and responsibility for the production and maintenance of the CSI register

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### **Reader's Note**

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## CSI - SLM

- Business demands that IT be driven by service requirements and outcomes
- IT must consistently strive to be included in every conceivable channel of communication and level of decision-making all the way to the Boardroom
- Hence SLM is no longer an OPTIONAL

SLM involves a number of steps:

- Involving the business and determining its SLRs
- Identifying internal relationships in IT organizations codifying them with OLAs
- Identifying existing contractual relationships with external vendors
- Using the service catalogue as the baseline to negotiate service level agreements (SLAs) with the business
- Reviewing service achievement and identifying where improvements are required, feeding them into CSI



### Reader's Note

## CSI – Knowledge Management

- Data should be captured to enable knowledge gain and an understanding of what is actually happening, thus enabling wisdom
- Data-to-Information-to-Knowledge-to-Wisdom (DIKW) structure
- Wisdom will lead to better decisions around improvement.

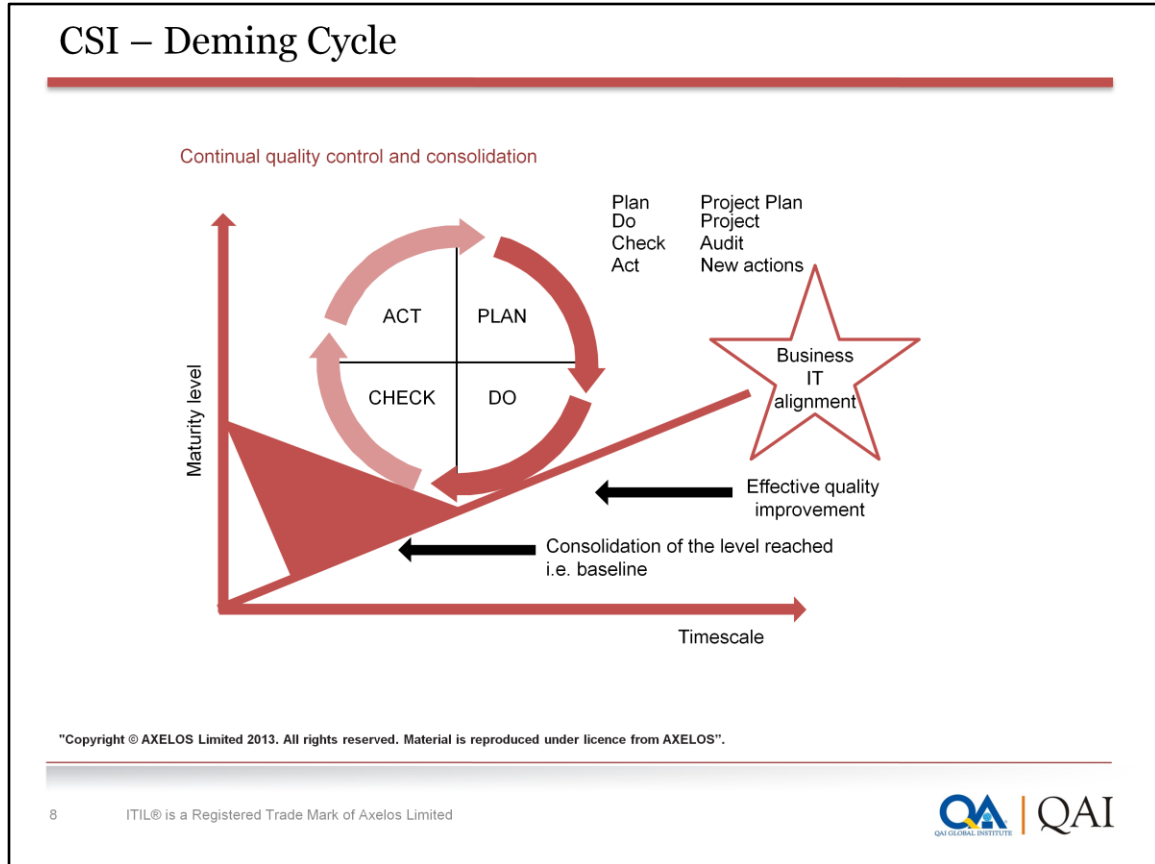
**“Those who cannot remember the past are condemned to repeat it.” - George Santayana**

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### Reader's Note



W. Edwards Deming is best known for his management philosophy leading to higher quality, increased productivity, and a more competitive position. As part of this philosophy he formulated 14 points of attention for managers. Some of them are more appropriate to service management than others. For quality improvement he proposed the Deming Cycle or Circle. This cycle is particularly applicable in CSI

The PDCA cycle is critical at two points in CSI: implementation of CSI, and for the application of CSI to services and service management processes. At implementation, all four stages of the PDCA cycle are used. With ongoing improvement, CSI draws on the check and act stages to monitor, measure, review and implement initiatives.

The seven-step improvement process can be viewed as an example of an implementation of the PDCA cycle, with each of the steps falling within one of the phases of the cycle: Plan, Do, Check, Act.

The cycle is underpinned by a process-led approach to management where defined processes are in place, the activities are measured for compliance to expected values and outputs are audited to validate and improve the process.



## CSI – Service Measurement

Baselines as markers or starting points for later comparison

They are:

- Important beginning point for highlighting improvement
- Used to establish an initial data point to determine if a service or process needs to be improved
- Documented, Recognized and Accepted throughout the organization
- Established at each level:
  - Strategic goals and objectives
  - Tactical process maturity
  - Operational metrics and KPIs



### **Reader's Note**

## CSI – Service Measurement

- If a baseline is not initially established the first measurement efforts will become the baseline
- it is essential to collect data at the outset, even if the integrity of the data is in question
- It is better to have data to question than to have no data at all



### **Reader's Note**

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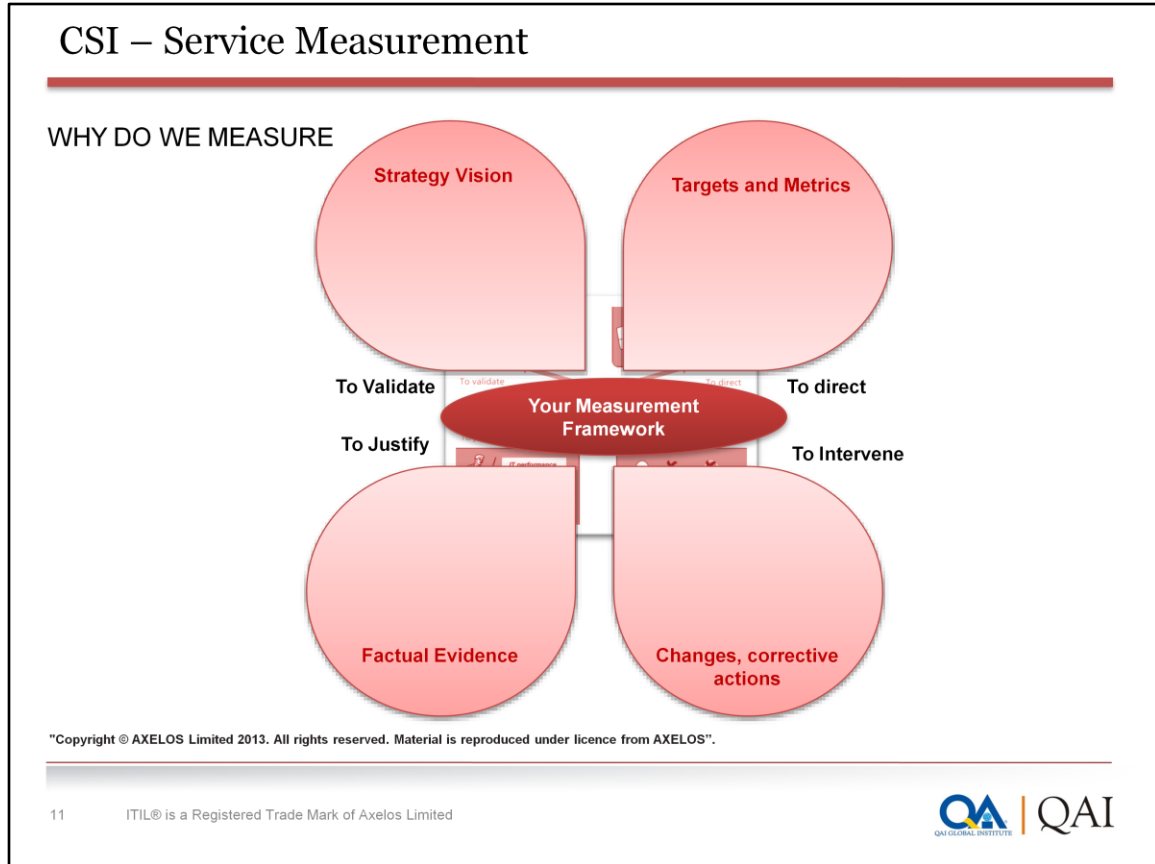
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**To validate** Monitoring and measuring to validate previous decisions

**To direct** Monitoring and measuring to set the direction for activities in order to meet set targets; this is the most prevalent reason for monitoring and measuring

**To justify** Monitoring and measuring to justify, with factual evidence or proof, that a course of action is required

**To intervene** Monitoring and measuring to identify a point of intervention including subsequent changes and corrective actions.

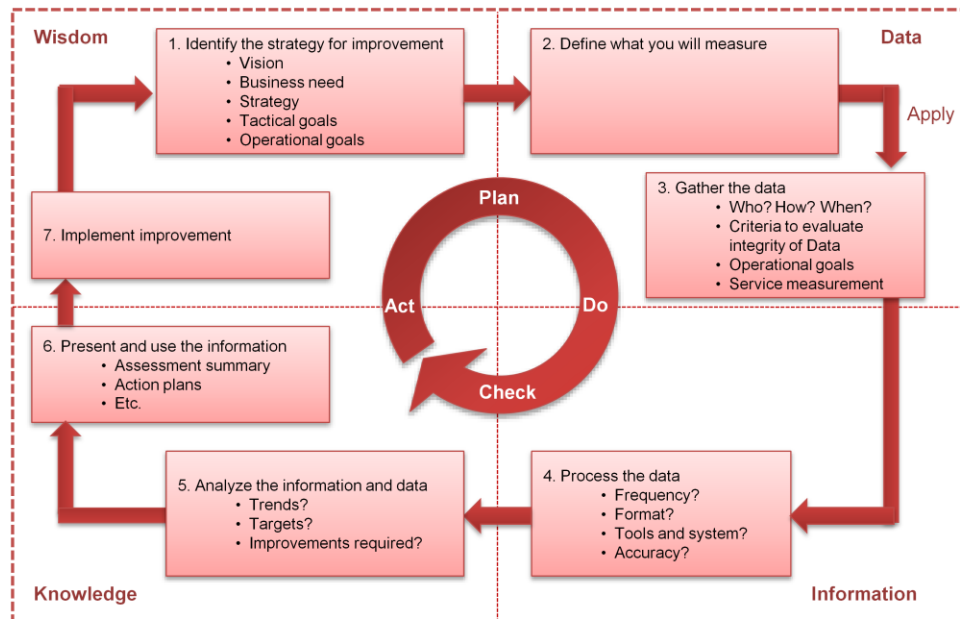
The four basic reasons to monitor and measure lead to three key questions:

1. 'Why are we monitoring and measuring?'
2. 'When do we stop?' and
3. 'Is anyone using the data?'

To answer these questions, it is important to identify which of the above reasons is driving the measurement effort. Too often, we continue to measure long after the need has passed. Every time you produce a report you should ask:

4. 'Do we still need this?'

## CSI – Service Measurement



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**Identify the strategy for improvement** Identify the overall vision, business need, the strategy and the tactical and operational goals.

**Define what you will measure** Service strategy and service design should have identified this information early in the lifecycle. CSI can then start its cycle all over again at 'Where are we now?' and 'Where do we want to be?' This identifies the ideal situation for both the business and IT. CSI can conduct a gap analysis to identify the opportunities for improvement as well as answering the question 'How do we get there?'

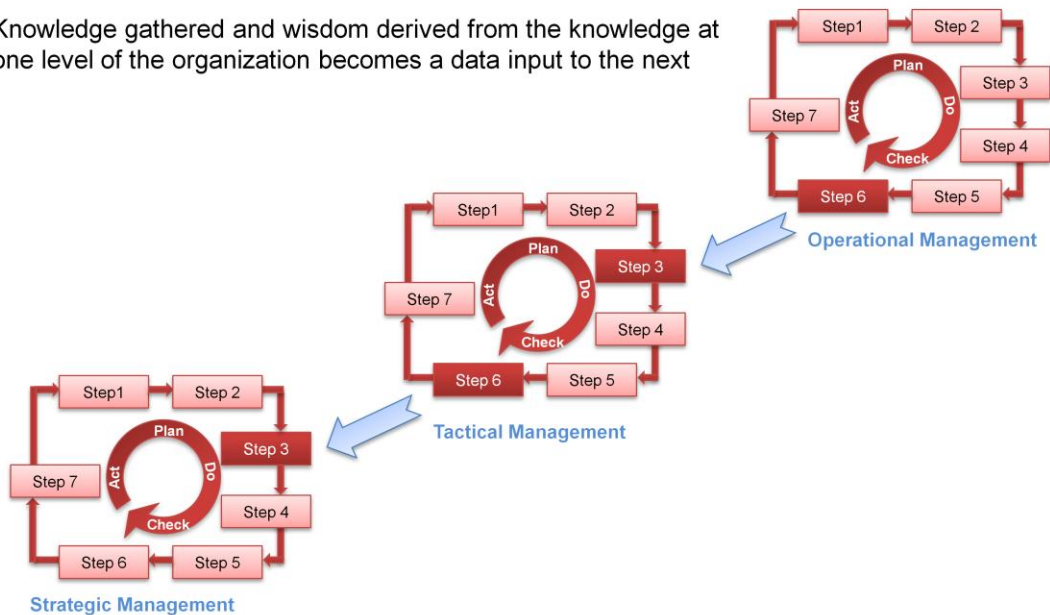
**Gather the data** In order to properly answer the question 'Did we get there?', data must first be gathered (usually through service operations). Data can be gathered from many different sources based on goals and objectives identified. At this point the data is raw and no conclusions are drawn.

**Process the data** Here the data is processed in alignment with the critical success factors (CSFs) and KPIs specified. This means that timeframes are coordinated, unaligned data is rationalized and made consistent, and gaps in the data are identified. The simple goal of this step is to process data from multiple disparate sources to give it context that can be compared. Once we have rationalized the data we can begin analysis.



## CSI – Service Measurement

Knowledge gathered and wisdom derived from the knowledge at one level of the organization becomes a data input to the next



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Data is quantitative. Data is defined as numbers, characters, images or other outputs from devices to convert physical quantities into symbols, in a very broad sense. Essentially it can be defined as a collection of facts, whereas information is the result of processing and organizing data in a way that adds to the knowledge of the person receiving it. Raw data is a relative term; data processing commonly occurs by stages, and the 'processed data' from one stage may be considered the 'raw data' of the next. For example, the service desk and incident management may collect data on an average of 12,000 incidents per month. Data can also be qualitative such as comments in a customer satisfaction survey.

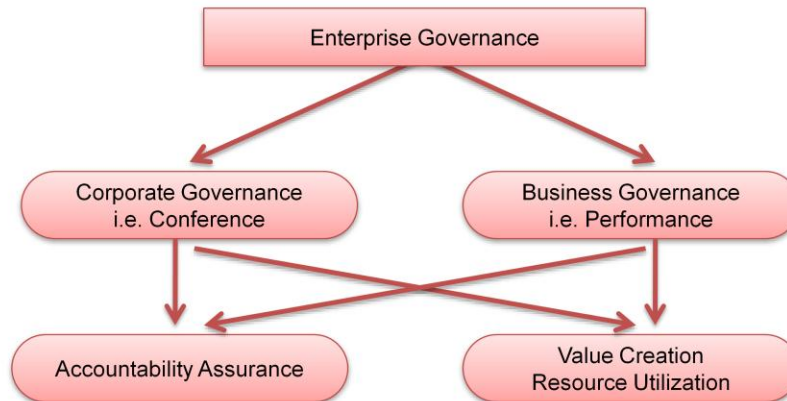
Data can be defined as a collection of facts in context from which conclusions may be drawn. Information is the result of processing and organizing data in a way that adds to the knowledge of the person receiving it.

By processing data into information it is possible to know the breakdown of which customers are using the service desk and the specific issues that are incidents or service requests. For example, further processing of the data into information may show that 32% of all contacts to the service desk are 'How to' questions, and that 18% of all contacts are service incidents with the organization's email system.

Knowledge can be defined as information combined with experience, context, interpretation and reflection. For example, based on the data and information, and an understanding of who uses the service, and their reasons for using the service, the impact to the business can be determined.

Wisdom is defined as the ability to make correct judgments and decisions. It consists of making the best use of available knowledge. For example, knowledge about the customer impact of incidents can lead to identifying improvement opportunities such as training programmes or initiating a service improvement plan (SIP) for improving the email service

## CSI – IT Governance



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IT is a service business. Existing internal IT organizations must transform themselves into effective and efficient IT service providers or they will cease to be relevant to the business and, soon after, cease to exist. This continual and unceasing drive toward greater business value with greater internal efficiency is at the heart of CSI

IT governance touches nearly every area detailed in Figure 3.6. On the one hand, IT organizations must now comply with new rules and legislation and continually demonstrate their compliance through successful independent audits by external organizations. On the other hand, IT organizations are increasingly being called on to do more with less and create additional value while maximizing the use of existing resources

## CSI – Network Effect

- Quality management system ISO 9000
- Total Quality Management (TQM)
- Risk management
- Control Objectives for Information and related Technology (COBIT)
- ISO/IEC 20000 and other ISO standards for IT
- ISO 14001 – Environmental management standard
- Program and project management including PRINCE2
- Skills Framework for the Information Age (SFIA)
- Capability Maturity Model Integration (CMMI)
- ISO/IEC 27001 – Information security management system

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### Reader's Note





## Seven Step Improvement

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## Purpose & Objectives

To define and manage the steps needed to identify, define, gather, process, analyse, present and implement improvements

### Objectives:

- Identify opportunities for improving services, processes, tools etc
- Reduce the cost of providing services and ensuring that IT services enable the required business outcomes to be achieved
- Identify what needs to be measured, analysed and reported to establish improvement opportunities
- Continually review service achievements to ensure they remain matched to business requirements;
- continually align and re-align service provision with outcome requirements.
- Understand what to measure, why it is being measured and carefully define the successful outcome



### Reader's Note

## Scope

Analysis of the performance and capabilities of the below elements throughout the lifecycle

- Services
- Processes
- Partners
- Technology

It includes the continual alignment of the portfolio of IT services with the current and future business needs as well as the maturity of the enabling IT processes for each service. It also includes making best use of the technology that the organization has and looks to exploit new technology as it becomes available where there is a business case for doing so. Also within the scope are the organizational structure, the capabilities of the personnel, and asking whether people are working in appropriate functions and roles, and if they have the required skills.

## Value to Business

- By monitoring and analysing the delivery of services it will ensure the current and future business outcome requirements can be met
- Enables continual assessment of the current situation against business needs and identifies opportunities to improve service provision for customers

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### Reader's Note

## Policies

Policy is set of rules : Many policies of 7 Step improvement are found in many other processes like SLM

- Monitoring requirements must be defined and implemented
- Data must be gathered and analysed and its integrity checked on a consistent basis
- Trend reporting must be provided on a consistent basis
- Service level achievement reports must be provided on a consistent basis
- Internal and external service reviews must be completed on a consistent basis
- Services must have either clearly defined service levels or service targets that can be used to determine if there are gaps
- Service management processes must have critical success factors (CSFs) and key performance indicators (KPIs) to determine if there are gaps between the expected outcome and the real outcome

The seven-step improvement process puts a structure in place to enable continual assessment of the current situation against business needs and looks for opportunities to improve service provision, thus enabling the overall business to be more successful

On a regular basis means that the activity is not done ad hoc but on scheduled dates such as monthly or quarterly. Most organizations review service achievement and service management process results on a monthly basis.

If a new service is being introduced, it is recommended to monitor, report and review much sooner than after a month. You may want to review the new service daily, as part of early life support, for a period of time, before changing to weekly and finally monthly reviews.

The following are additional CSI policies that an IT service provider should implement:

All improvement initiatives must use the formal change management process

All functional groups within IT have a responsibility for CSI activities. This might be only one person in the group, but the intent here is that CSI is not usually a functional group within an organization but that everyone has a hand in supporting CSI activities

Roles and responsibilities will be documented, communicated and filled within IT.

## Policy Template

Title	Monitoring services, systems and components
Policy statement	IT and the business must agree on what to monitor and collect data for each service. This data should be aligned with the service level agreements (SLAs), operational level agreements (OLAs) and contracts.
Reason for policy	Provides input into CSI activities to identify gaps and improvement opportunities.
Benefits	Ensures agreement on defining what to monitor (work with SLM).
	Defines monitoring requirements for new services and/or existing services to support CSI activities.
	Identifies trends and gaps.
	Supports prioritization of improvement projects.

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### Reader's Note

## Principles

- Services must be checked against competitive service offerings to ensure they continue to add true business value to the client, and the service provider remains competitive
- Services must be reviewed in the light of new technological advances (e.g. cloud ) to ensure they are delivering the most efficient services to the customer.

Many service providers operate in a competitive environment and they need to continually assess their services against market expectations to ensure they remain competitive. Also, new delivery mechanisms (e.g. cloud computing) can introduce service efficiencies and need to be reviewed.



## Basic Concepts

- CSI takes a commitment from everyone in IT
- Works throughout the service lifecycle
- Improving Services & Service Management Processes

### It requires

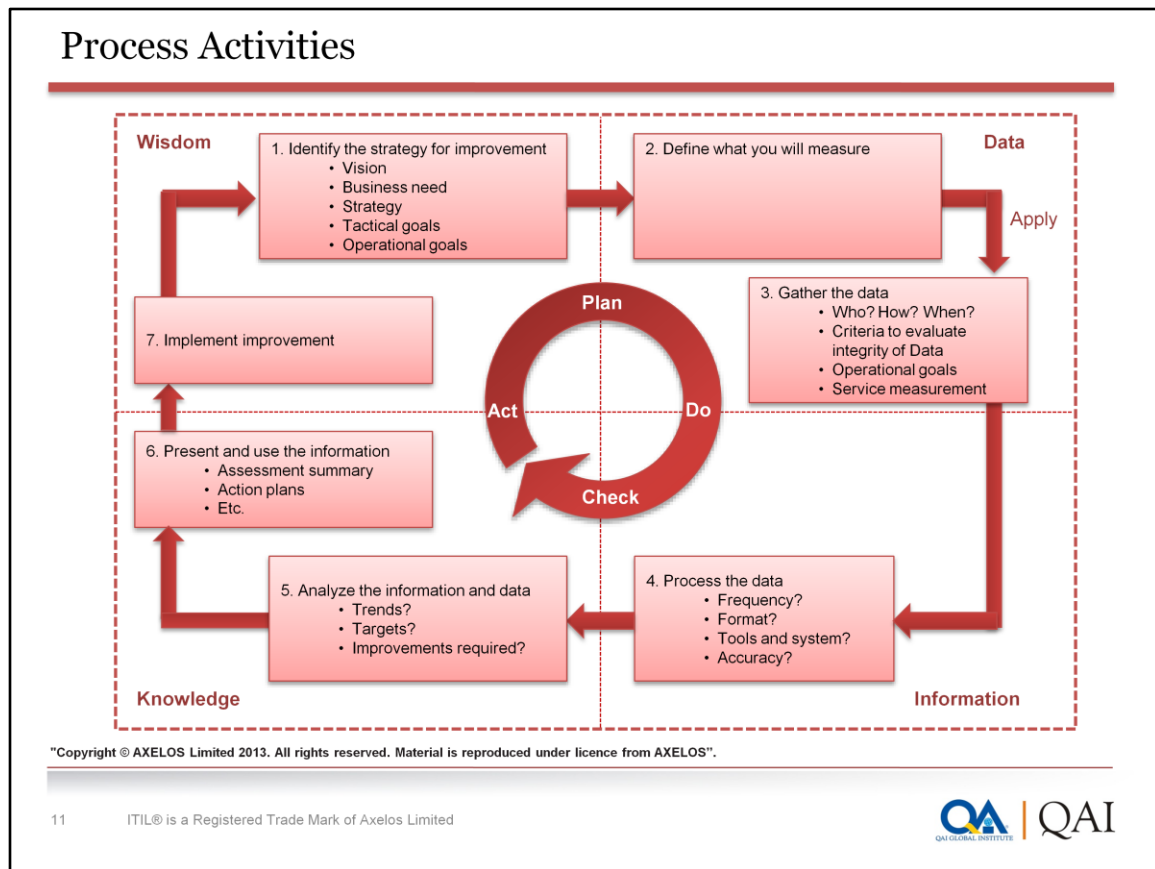
- Ongoing attention
- Well thought plan
- Consistent attention to
  - Monitoring
  - Analyzing
  - Reporting &
  - Improvement

CSI is often viewed as an ad hoc activity within IT services. The activity is only triggered when someone in IT management flags up that there is a problem. This is not the right way to address CSI. Often these reactionary events are not even providing continual improvement, but simply stopping a single failure from occurring again.

## Basic Concepts

- In order to make CSI successful, it requires Appropriate
  - Staffing
  - Tools
- Understand the organizational capability to gather and process the data
- Spend time analysing data

IT services must ensure that proper staffing and tools are identified and implemented to support CSI activities. It is also important to understand the difference between what should be measured and what can be measured. Start small – don't expect to measure everything at once. Understand the organizational capability to gather and process the data. Be sure to spend time analysing data as this is where the real value comes in. Without analysis of the data, there is no real opportunity to truly improve services or service management processes. Think through the strategy and plan for reporting and using the data. Reporting is partly a marketing activity. It is important that IT managers focus on the value added to the organization as well as reporting on issues and achievements. In order for steps 5 to 7 to be carried out correctly, it is imperative that the target audience is considered when packaging the information.

**Plan**

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

**Do**

3. Gather the data
4. Process the data

**Check**

5. Analyse the information and data
6. Present and use the information

**Act**

7. Implement improvement.

## Step 1 – Identify the strategy



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### Reader's Note

## Step 1 – Identify the strategy

It is imperative that the overall vision is identified

- What are we trying to achieve for the business as a whole?
- What initiatives does the business have that could be undermined by poor IT service provision?
- How can improvements in IT enable the business vision to be achieved?

Overall strategy should be assessed and analysed to see where we need to focus our measurements

- Strategic Goals
- Tactical Goals
- Operational Goals

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Before any further activity can be started it is imperative that the overall vision is identified. What are we trying to achieve for the business as a whole? The questions we need to ask are: What initiatives does the business have that could be undermined by poor IT service provision? Or, more positively: How can improvements in IT enable the business vision to be achieved? The answers to these questions will come from stepping through the seven-step improvement process.

What are the business and IT strategy and plans for the coming months and years? Why do we want to measure for improvement? The overall strategy should be assessed and analysed to see where we need to focus our measurements, for example. The technical and operational goals as well as the strategic goals need to be identified and assessed. The vision should not be to have state-of-the-art servers and desk-top computers, but to have state-of-the-art services that ensure and enable the overall business to perform as well as possible so it is not in any way constrained by the quality or cost of the IT services

## Step 1 – Identify the strategy – Inputs

- Business plans and strategy
- Service review meetings
- Vision and mission statements
- Corporate, divisional and departmental goals and objectives
- Legislative requirements
- Governance requirements
- Customer satisfaction surveys
- CSI initiatives as logged in the CSI register

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### Reader's Note

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## Step 2 – Define what you will measure

### Scope

- Define what you should measure
- Define what you can actually measure
- Carry out a gap analysis
- Finalize the actual measurement plan

### At

- Services
- Processes
- Technology

### Levels

- This step is iterative during the rest of the activities
- Measure that which matters most

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This step is directly related to the strategic, tactical and operational goals that have been defined for measuring services and service management processes as well as the existing technology and capability to support measuring and CSI activities

Step 2 is iterative during the rest of the activities. Depending on the goals and objectives to support service improvement activities, an organization may have to purchase and install new technology to support the gathering and processing of the data and/or hire staff with the required skills sets.

Effective service measures concentrate on a few vital, meaningful indicators that are economical, quantitative and usable for the desired results. If there are too many measures, organizations may become too intent on measurement and lose focus on improving results. A guiding principle is to measure that which matters most. IT has never lacked in the measuring area. In fact, many IT organizations measure far too many things that have little or no value. There is often no thought or effort given to aligning measures to the business and IT goals and objectives

## Step 2 – Define what you will measure

### Key Issues of ignoring this step

- Too often people start gathering information without asking what should be collected
- IT organization thinks it knows better. When it comes to data, IT believes, incorrectly, that they know the needs of their customers
- Reality is that neither the customer nor the IT organization sits down together to discuss what should be measured or to identify the purpose of the data in the first place
- Tools are very sophisticated and can gather myriads of data points. IT organizations get lulled into a false sense of security in the knowledge

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### Reader's Note



## Step 2 – Define what you will measure

Goals and objectives of the target audience must be identified in order to properly identify what should be measured and what can be Measured

- Mapping the activities or elements of the service or service management processes that need to be measured
- Considering what measurements would indicate that each service and service management activity is being performed consistently to determine the health of the service.

Identify the measurements that can be provided based on existing toolsets, organizational culture and process maturity. Note there may be a gap in what can be measured compared with what should be measured. Quantify the cost and business risk of this gap to validate any expenditures for tools. The actual definition of what you will measure will come from this analysis.

When initially implementing service management processes do not try to measure everything; rather be selective of what measures will help to understand the health of a process. A major mistake many organizations make is trying to do too much in the beginning. Be smart about what you choose to measure

## Step 2 – Define what you will measure

- What do you want to measure?
- What can you actually measure?
- Where do you actually find the information?

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### **Reader's Note**

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## Step 2 – Define what you will measure

- What do you want to measure?
- Identify & Link
  - Corporate vision, mission, goals and objectives
  - IT vision, mission, goals and objectives
  - CSFs, KPIs, metrics and measurements
  - Service level targets
  - Service provider personnel
- Inputs
  - SLRs and targets
  - Service review meeting
  - Service portfolio and the service catalogue
  - Vision and mission statements
  - Corporate, divisional and departmental goals and objectives
  - Legislative requirements
  - Governance requirements

Answer: Talk to the business, the customers and IT management. Use the service catalogue as your starting point as well as the service level requirements (SLRs) of the different customers. This is the place where you start with the end in mind. What you should measure is that which is important to the business.

Compile a list of what you should measure driven by business requirements. Don't try to cover every single eventuality or possible metric in the world. Make it simple. The number of items you should measure can grow rapidly. So too can the number of metrics and measurements

## Step 2 – Define what you will measure

What can you actually measure?

Start by listing the tools you currently have in place. These tools will include service management tools, monitoring tools, reporting tools, investigation tools and others. Compile a list of what each tool can currently measure without any configuration or customization

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### Reader's Note

## Step 2 – Define what you will measure

Where do you actually find the information?

- The information is found within each service, process, procedure and work instruction
- To produce the final definition of what you will measure, perform a gap analysis between the data collected and the data being reported on.
- Report the gap analysis information back to the business, the customers and IT management

some other potential areas for measurement

- Service levels
- Customer satisfaction
- Business impact
- Supplier performance
- Market performance

It is essential that measurements of this kind have ongoing relevance. What was important to know last year may no longer be pertinent this year.

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The following are some other potential areas for measurement:

**Service levels** As well as normal SLAs targets we may need to collect availability management measures such as mean time to repair (MTTR) and mean time to restore service (MTRS), which are also used by problem management.

**Customer satisfaction** Surveys are conducted on a continual basis to measure and track how satisfied customers are with the IT organization.

**Business impact** Measure what actions are invoked for any disruption in service that adversely affects the customer's business operation, processes or its own customers.

**Supplier performance** Whenever an organization has entered into a supplier relationship where some services or parts of services have been outsourced or co-sourced it is important to measure the performance of the supplier.

**Market performance** This ensures the services remain aligned with those being delivered by other service providers in the IT service delivery community.

One of CSI's key sets of activities is to measure, analyse and report on IT services and IT service management (ITSM) results. Measurements produce data, which should be analysed over time to produce a trend. This will tell a story that may be good or bad. It is essential that measurements of this kind have ongoing relevance. What was important to know last year may no longer be pertinent this year.



## Step 3 – Gather the data – Purpose

- Gathering data requires having monitoring in place
- Quality is the key objective of monitoring
- Monitoring focuses on the effectiveness and efficiency of
  - Service
  - Process
  - Tool
  - Organization
  - CI

CSI will most likely focus on a specific subset of monitoring at any given time as against vast quantities of data that are produced by all monitoring activity. This is due to the fact that

- Monitoring for CSI will change over time
- CSI and SO need to agree what areas need to be monitored and for what purpose

It is important to remember that there are three types of metrics that an organization will need to collect to support CSI and other process activities:

**Technology metrics** These are often associated with component and application-based metrics such as performance, availability etc.

**Process metrics** These are captured in the form of CSFs, KPIs and activity metrics for the service management processes. These metrics can help determine the overall health of a process. KPIs can help answer key questions on quality, performance, value and compliance in following the process. CSI would use these metrics as input in identifying improvement opportunities for each process.

**Service metrics** These are the results of the end-to-end service. Technology metrics are normally used to help compute the service metrics

## Step 3 – Gather the data

What needs to be gathered?

- Whatever data has been identified as both needed and measurable
- Not all data is gathered automatically
- Manual procedures in place
- Data is entered manually by people
- Policies are in place to drive the right behavior

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As much as possible, you need to standardize the data structure through policies and published standards. For example, how do you enter names in your tools – John Smith; Smith, John; or J. Smith? These can be the same or different individuals. Having three different ways of entering the same name would slow down trend analysis and severely impede any CSI initiative.

## Step 3 – Gather the data

Where do you actually find the information?

- Service management tools, monitoring tools, reporting tools, investigation tools, existing reports and other sources
- Service management monitoring helps determine the health and welfare of service management processes in
  - Process Compliance
  - Quality
  - Performance
  - Value
  - Volume

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Service monitoring allows weak areas to be identified, so that remedial action can be taken (if there is a justifiable business case), thus improving future service quality. Service monitoring also can show where customer actions are causing the fault and thus lead to identifying where working efficiency and/or training can be improved.

Service monitoring should also address both internal and external suppliers since their performance must be evaluated and managed as well.

Service management monitoring helps determine the health and welfare of service management processes in the following manner:

**Process compliance** Are the processes being followed? Process compliance seeks to monitor the compliance of the IT organization to the new or modified service management processes and also the use of the authorized service management tool that was implemented.

**Quality** How well are the processes working? Monitor the individual or key activities as they relate to the objectives of the end-to-end process.

**Performance** How fast or slow? Monitor the process efficiency such as throughput or cycle times.

**Value** Is this making a difference? Monitor the effectiveness and perceived value of the process to the stakeholders and the IT staff executing the process activities.

**Volume** To determine the loading and throughput on the service management processes (e.g. number of incidents or number of changes).





## Step 3 – Gather the data

This activity needs to clearly define

Who is responsible for monitoring and gathering the data?

- How will the data be gathered?
- When and how often is the data gathered?
- Criteria to evaluate the integrity of the data.

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**Value** Is this making a difference? Monitor the effectiveness and perceived value of the process to the stakeholders and the IT staff executing the process activities.

**Volume** To determine the loading and throughput on the service management processes (e.g. number of incidents or number of changes).



## Step 3 – Gather the data – Inputs

- New business requirements
- Existing SLAs
- Existing monitoring and data capture capability
- Plans from other processes, e.g. availability management and capacity management
- The CSI register and existing service improvement plans (SIPs)
- Previous trend analysis reports
- List of what you should measure
- List of what you can measure
- Gap analysis report
- List of what to measure
- Customer satisfaction surveys

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### Reader's Note

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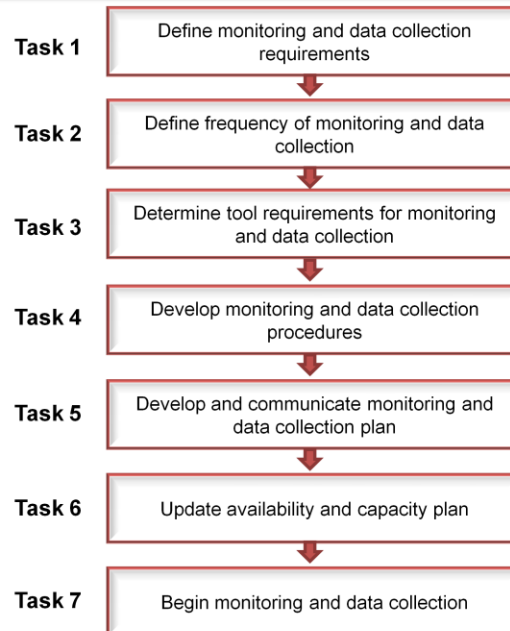
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## Step 3 – Gather the data – Procedures



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### Reader's Note

## Step 3 – Gather the data – Outputs

- Updated availability and capacity plans
- Monitoring procedures
- Identified tools to use
- Monitoring plan
- Input on IT capability
- Collection of data
- Agreement on the integrity of the data

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### Reader's Note

## Step 4 – Process Data – Purpose

- To convert the data into the required format and for the required audience
- Report-generating technologies are typically used at this stage
- Transformation of raw data into packaged information

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Report-generating technologies are typically used at this stage as various amounts of data are condensed into information for use in the analysis activity. The data is also typically put into a format that provides an end-to-end perspective on the overall performance of a service. This activity begins the transformation of raw data into packaged information. Use the information to develop insight into the performance of the service and/or processes. Process the data into information (by creating logical groupings), which provides a better means to analyse the information and data – the next step in CSI.

The output of logical groupings could be in spreadsheets, reports generated directly from the service management tool suite, system monitoring and reporting tools, or telephony tools such as an automatic call distribution tool.

Processing the data is an important CSI activity that is often overlooked. While monitoring and collecting data on a single infrastructure component is important, it is also important to understand that component's impact on the larger infrastructure and IT service. Knowing that a server was up 99.99% of the time is one thing; knowing that no one could access the server is another. An example of processing the data is taking the data from monitoring of individual components, such as the mainframe, applications, WAN, LAN, servers etc., and processing it into a structure of an end-to-end service from the customer's perspective

## Step 4 – Process Data – Questions

- What is the frequency of processing the data?
- What format is required for the output?
- What tools and systems can be used for processing the data?
- How do we evaluate the accuracy of the processed data?

What is the frequency of processing the data? This could be hourly, daily, weekly or monthly. When introducing a new service or service management process it is a good idea to monitor and process in shorter intervals than longer intervals. How often analysis and trend investigation activities take place will drive how often the data is processed.

What format is required for the output? This is also driven by how analysis is carried out and ultimately how the information is used.

What tools and systems can be used for processing the data?

How do we evaluate the accuracy of the processed data?

## Step 4 – Process Data – Inputs

- Data collected through monitoring
- Reporting requirements
- SLAs
- OLAs
- Service catalogue
- List of metrics, KPI, CSF, objectives and goals
- Report frequency
- Report template

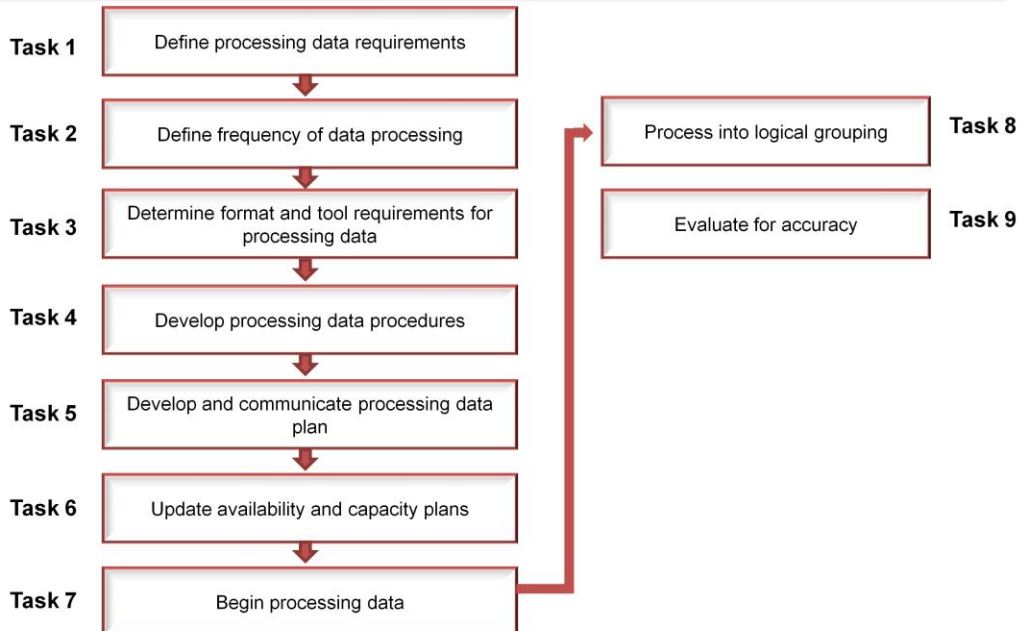
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### Reader's Note

## Step 4 – Process Data – Procedures



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### Reader's Note



## Step 4 – Process Data – Outputs

- Updated availability and capacity plans
- Reports
- Logical groupings of data ready for analysis

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### **Reader's Note**

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## Step 5 – Analyze Information & Data

- The purpose is to compare the information with the clearly defined objectives with measurable targets that were set in the service design, transition and operations lifecycle stages
- Data analysis transforms the information into knowledge of the events that are affecting the organization
- More skill and experience is required to perform data analysis than data gathering and processing
- Verification against goals and objectives is expected during this activity
- Not sufficient to simply produce graphs

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### Reader's Note

## Step 5 – Analyze Information & Data

What do we Analyze?

*Once the data is processed into information, you can then analyze the results, looking for answers to questions such as*

- Are there any clear trends?
- Are they positive or negative trends?
- Are changes required?
- Are we operating according to plan?
- Are we meeting targets?
- Are improvements required?
- Are there underlying structural problems?

In this step you apply knowledge to your information. Without this, you have nothing more than sets of numbers showing metrics that are meaningless. It is not enough to simply look at this month's figures and accept them without question, even if they meet SLA targets. You should analyse the figures to stay ahead of the game. Without analysis you merely have information. With analysis you have knowledge. If you find anomalies or poor results, then look for ways to improve.

It is interesting to note the number of job titles for IT professionals that contain the word 'analyst' and even more surprising to discover that few of these professionals actually analyse anything. This step takes time. It requires concentration, knowledge, skills, experience etc

## Step 5 – Analyze Information & Data

- To compare the information with the clearly defined objectives
- Confirmation that these objectives and the milestones were reached
- Have improvement initiatives been implemented
- Completion of each significant stage or milestone, conduct a review (PIR)

Service is actually made up of systems as well as other entities such as people and suppliers

Key Inputs are:

- Results of the monitored data
- Existing KPIs and targets
- Perceptions from customer satisfaction surveys

Be sure also to compare the information with the clearly defined objectives with measurable targets that were set in the service design, transition and operations lifecycle stages. Seek confirmation that these objectives and the milestones were reached. If not, have improvement initiatives been implemented? If so, then the CSI activities start again by gathering data, processing data and analysing data to identify if the desired improvement in service quality has been achieved. At the completion of each significant stage or milestone, conduct a review to ensure the objectives have been met. It is possible here to use the post-implementation review (PIR) from the change management process. The PIR will include a review of supporting documentation and the general awareness among staff of the refined processes or service. A comparison is required of what has been achieved against the original goals.

During the analysis activity, but after the results are compiled and the trends analysed and evaluated, it is recommended that internal meetings be held within IT managers to review the results and collectively identify improvement opportunities. It is important to have these internal meetings before you begin presenting and using the information, which is the next activity of CSI. IT is a key player in determining how the results and any actions items are presented to the business.

## Step 5 – Analyze Information & Data

- Analysis on the data also places the business in a position to make decision at
  - Strategic
  - Tactical
  - Operations Levels

without proper analysis, errors will continue to occur and mistakes will continue to be repeated.

- There will be little improvement
- Consideration must be given to the skills required to analyze from both a technical viewpoint and from an interpretation viewpoint

Data analysis transforms the information into knowledge of the events that are affecting the organization. As an example, a sub-activity of capacity management is workload management. This involves analysing the data to determine which customers use what resource, how they use the resource, when they use the resource and how this impacts the overall performance of the resource. You will also be able to see if there is a trend on the usage of the resource over a period of time. From an incremental improvement process this could lead to some focus on demand management, or influencing the behaviour of customers.

## Step 5 – Analyze Information & Data

Analyzing data seek answers to questions such as

- Are operations running according to plan?
- Are targets defined in SLAs or the service catalogue being met?
- Are there underlying structural problems that can be identified?
- Are improvements required?
- Are there any trends? If so, what are the trends showing? Are they positive trends or negative trends?
- What is leading to or causing the trends?

Are operations running according to plan? This could be a project plan, financial plan, availability plan, capacity plan or even an IT service continuity management (ITSCM) plan.

Trends are an indicator that more analysis is needed to understand what is causing it. When a trend goes up or down it is a signal that further investigation is needed to determine if it is positive or negative.

Without analysis the data is merely information. With analysis come improvement opportunities.

Throughout CSI, assessment should identify whether targets were achieved and, if so, whether new targets (and therefore new KPIs) need to be defined. If targets were achieved but the perception has not improved, then new targets may need to be set and new measures put in place to ensure that these new targets are being met.

When analysing the results from process metrics keep in mind that a process will only be as efficient as its limited bottleneck activity. So if the analysis shows that a process activity is not efficient and continually creates a bottleneck then this would be a logical place to begin looking for a process improvement opportunity

## Step 6 – Present & Use Information

Presenting the information is - Service Reporting

- To take our knowledge, which is represented in the
  - Reports
  - Monitors
  - Action plans
  - Reviews evaluations and opportunities
- Present it to the target audience in a
  - Clear
  - Digestible
  - Timely way

This stage involves presenting the information in a format that is understandable, at the right level, provides value, notes exceptions to service, identifies benefits that were revealed during the time period, and allows those receiving the information to make strategic, tactical and operational decisions. In other words, present the information in the manner that makes it the most useful for the target audience.

## Step 6 – Present & Use Information

### Distinct Audiences

- The Customers
- Senior IT Management
- Internal IT
- Suppliers

**The customers** Their real need is to understand whether IT delivered the service they promised at the levels they promised and, if not, what improvements are being implemented to improve the situation.

**Senior IT management** This group is often focused on the results surrounding CSFs and KPIs, such as customer satisfaction, actual versus plan, and costing and revenue targets. Information provided at this level helps determine strategic and tactical improvements on a larger scale. Senior IT management often wants this type of information provided in the form of a balanced scorecard or IT scorecard format to see the big picture at one glance.

**Internal IT** This group is often interested in KPIs and activity metrics that help them plan, coordinate, schedule and identify incremental improvement opportunities.

**Suppliers** This group will be interested in KPIs and activity metrics related to their own services and performance. Suppliers may also be targeted with improvement initiatives.



## Step 6 – Present & Use Information

SLA monitoring chart that provides a visual representation of an organization's ability to meet defined targets over a period of months

Target \ Period	January	February	March	April	May	June	July	August
A								
B								
C								
D								
E								
F								

Target Met

Target  
breached

Target  
threatened

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### Reader's Note

## Step 6 – Present & Use Information

### Common Problems in the Step

- Everyone gets the same report.
- The format is not what people want
- Lack of an executive summary
- Reports are not linked to any baseline, IT scorecard or balanced scorecard
- Too much supporting data is provided
- Reports are presented in terms that are not understandable

### Key Inputs

- Collated information
- Format details and templates etc
- Stakeholder contact details



### Reader's Note

## Step 7 – Implement Improvement

### The purpose

To use the knowledge gained and combine it with previous experience to make informed decisions about optimizing, improving and correcting services. Managers need to identify issues and present solutions



### Reader's Note

## Step 7 – Implement Improvement

Include many number of activities such as

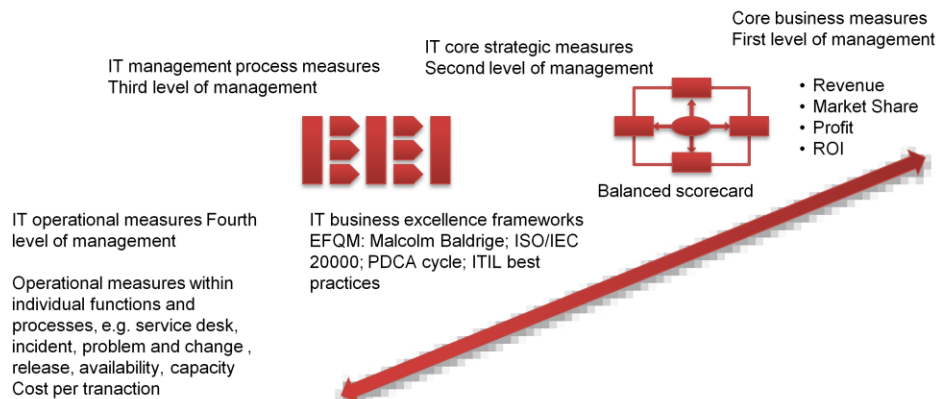
- Approval of Improvement
- Prioritizing the improvements based on ROI
- Submitting Business Case
- Integration with all Lifecycle stages
- Managing the Improvement Project
- Verify & Confirm the benefits

After a decision to improve a service and/or service management process is made, then the service lifecycle continues. A new service strategy may be defined, service design builds the changes, service transition implements the changes into production and then service operation manages the day-to-day operations of the service and/or service management processes. Keep in mind that CSI activities continue through each stage of the service lifecycle.

Each service lifecycle stage requires resources to build or modify the services and/or service management processes, potential new technology or modifications to existing technology, potential changes to KPIs and other metrics, and possibly even new or modified OLAs or underpinning contracts (UCs) to support SLAs. Communication, training and documentation are required to move a new or improved service, tool or service management process into production

## Step 7 – Implement Improvement

### ➤ Levels of Management for their Focus



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Understanding the level your intended audience occupies and their drivers helps you present the issues and benefits of your process in the correct manner. At the highest level of the organization are the strategic thinkers. Reports need to be short, quick to read and aligned to their drivers. Discussions about risk avoidance, protecting the image or brand of the organization, profitability and cost savings are compelling reasons to support your improvement efforts.

The second level of management consists of vice presidents and directors. Reports can be more detailed, but need to summarize findings over time. Identifying how processes support the business objectives, early warning around issues that place the business at risk, and alignment to existing measurement frameworks that they use are strong methods you can use to sell the process benefits to them.

The third level of management consists of managers and high level supervisors. Compliance to stated objectives, overall team and process performance, insight into resource constraints and continual improvement initiatives are their drivers. Measurements and reports need to market how these are being supported by the process outputs.

Lastly at the fourth level of the hierarchy are the staff members and team leaders. At a personal level, the personal benefits need to be emphasized. Therefore metrics that show their individual performance, provide recognition of their skills (and gaps in skills) and identify training opportunities are essential in getting these people to participate in the processes willingly.

## Step 7 – Implement Improvement

### Inputs

- Knowledge gained from presenting and using the information
- Agreed implementation plans
- A CSI register for those initiatives that have been initiated from other sources



### Reader's Note

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## Triggers – inputs – outputs

- Service catalogue
- SLRs
- The service review meeting
- Vision and mission statements
- Corporate, divisional and departmental goals and objectives
- Legislative requirements
- Governance requirements
- Budget cycle
- Customer satisfaction surveys
- The overall IT strategy
- Market expectations
- New technology drivers
- Flexible commercial models

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### Reader's Note

## Interfaces

CSI must integrate and interface with all other lifecycle stages

- Monitoring the progress of
  - Strategies
  - Standards
  - Policies
- Architectural Design
- Measurement & Metric System (CSF & KPI)
- Releases, Builds & Tests

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### Reader's Note



## Interfaces of Other Processes - SLM

SLM interfaces with 7 step Improvement process helping to drive what to measure and monitoring requirements, and by reporting service level achievements

### Step 3 & 4

- SLM needs to look at the monitoring data and service performance is being monitored and analyzed
- SLM should identify the Right audience, Reports are appropriately processed and analyzed
- SLM should define what to measure and which aspects to report
- SLM should be a part of the review process to monitor results
- SLM is responsible for developing and getting agreement on OLAs and external UCs that require internal or external monitoring

SLM needs to look at what is happening with the monitoring data to ensure that end-to-end service performance is being monitored and analysed.

SLM should also identify who gets the data, whether any analysis takes place on the data before it is presented, and if any trend evaluation is undertaken to understand the performance over a period of time. This information will be helpful in following CSI activities.

Through the negotiation process with the business, SLM would define what to measure and which aspects to report. This would in turn drive the monitoring and data collection requirements. If there is no capability to monitor and/or collect data on an item then it should not appear in the SLA. SLM should be a part of the review process to monitor results.

SLM is responsible for developing and getting agreement on OLAs and external UCs that require internal or external monitoring.

## Interfaces of Other Processes - SLM

### Step 5

- Analyzing the service level achievements compared to SLAs and service level targets
- Documenting and reviewing trends
- Identifying improvement opportunities
- Identifying the need to modify existing OLAs or UCs

### Step 6

- Conducts consistent service review meetings (internal and external)
- Supports the preparation of reports
- Updates the SLA monitoring (SLAM) chart
- Provides input into prioritizing improvement activities

### Step 7

- Often generates a good starting point for identifying improvement opportunities
- In conjunction with problem management and availability management, log an improvement opportunity in the CSI register

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### Reader's Note

## Interfaces: Availability - Capacity

### Step 3 & 4

- Monitoring and data collection capabilities
- Ensuring the availability and capacity plans
- Accountable for the actual infrastructure monitoring and data
- Providing skilled and trained staff
- Accountable for ensuring tools are in place to gather data
- Accountable for ensuring that the actual monitoring and data collection activities are consistently performed
- Responsible for processing the data at a component level and then working with SLM to provide service level data
- Processing data on KPIs such as availability or performance measures
- Utilizing the agreed reporting formats
- Analyzing processed data for accuracy.

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Providing significant input into existing monitoring and data collection capabilities and tool requirements to meet new data collection requirements, and ensuring the availability and capacity plans are updated to reflect new or modified monitoring and data collection requirements

Being accountable for the actual infrastructure monitoring and data collection activities that take place; therefore roles and responsibilities need to be defined and the roles filled with properly skilled and trained staff

Being accountable for ensuring tools are in place to gather data

Being accountable for ensuring that the actual monitoring and data collection activities are consistently performed

Being responsible for processing the data at a component level and then working with SLM to provide service level data

Processing data on KPIs such as availability or performance measures

Utilizing the agreed reporting formats

Analyzing processed data for accuracy.

## Interfaces: Availability - Capacity

### Step 5

- Analyzing and identifying trends on component and service data
- Comparing results with prior months, quarters or annual reports
- Identifying the need for updating the requirement for improvement
- Analyzing the performance of components
- Documenting and reviewing trends over a period of time
- Identifying improvement opportunities
- Analyzing processed data for accuracy

### Step 6

- Supporting preparation of the reports
- Providing input into prioritizing SIP or improvements
- Implementing incremental or fine-tuning activities that do not require business approval

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### Reader's Note

## Interfaces: Event – Incident - SD

### Step 3 & 4

- Event and incident detection through automation
- Automatically open incidents and/or auto-escalate incidents
- Automatically monitoring events and producing alerts
- Monitoring identifying abnormal situations and conditions avoiding possible service and component failures
- By monitoring the response times, repair times, resolution times and incident escalations
- By monitoring telephony items such as call volumes, average speed of answer, call abandonment rates
- By processing data on incidents and service requests
- By collecting and processing data on KPIs such as MTRS
- By processing data for telephony statistics at the service desk
- By utilizing the agreed reporting format
- By analyzing processed data for accuracy

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Through incident management defining monitoring requirements to support event and incident detection through automation; incident management also has the ability to automatically open incidents and/or auto-escalate incidents

Through event management automatically monitoring events and producing alerts, some of which may require CSI activities to correct

Through event and incident monitoring identifying abnormal situations and conditions, which helps with predicting and pre-empting situations and conditions thereby avoiding possible service and component failures

By monitoring the response times, repair times, resolution times and incident escalations

By monitoring telephony items such as call volumes, average speed of answer, call abandonment rates etc. so that immediate action can be taken when there is an increase in contacts to the service desk; this is important for the service desk as a single point of contact; it also applies to those service desks that provide support via email and the web

By processing data on incidents and service requests such as who is using the service desk and what is the nature of the incidents

By collecting and processing data on KPIs such as MTRS and percentage of incidents resolved within service targets

By processing data for telephony statistics at the service desk such as number of inbound/outbound calls, average talk time, average speed of answer, abandoned calls etc.

By utilizing the agreed reporting format

By analysing processed data for accuracy.



## Interfaces: Event – Incident - SD

### Step 5

- Documenting and reviewing incident trends on incidents, service requests and telephony statistics over a period of time to identify any consistent patterns
- Comparing results with prior months, quarters or annual reports
- Comparing results with agreed-to levels of service
- Identifying improvement opportunities
- Analyzing processed data for accuracy

### Step 6

- Supporting preparation of the reports
- Providing input into prioritizing SIPs or improvements
- Implementing incremental or fine-tuning activities that do not require business approval

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### Reader's Note

## Interfaces: Information Security

### Step 3 & 4

- Defining security monitoring and data collection requirements
- Monitoring, verifying and tracking the levels of security Policies
- Assisting in determining effects of security measures on the data monitoring and collection from the CIA perspectives
- Processing response and resolution data on security incidents
- Creating trend analyses on security breaches
- Validating success of risk mitigation strategies
- Utilizing the agreed upon reporting format
- Analyzing processed data for accuracy

Information security management relies on the activities of other processes to help determine the cause of security related incidents and problems. Information security management will submit requests for changes to implement corrections or for new updates to, for example, the anti-virus software. Other processes such as availability management (recoverability), capacity management (capacity and performance) and ITSCM (planning on how to handle crisis) will assist in planning longer term

## Interfaces: Information Security

### Step 5

- Documenting and reviewing security incidents for the current time period
- Comparing results with prior results
- Identifying the need for a SIP or improvements
- Analyzing processed data for accuracy

Information security management relies on the activities of other processes to help determine the cause of security related incidents and problems. Information security management will submit requests for changes to implement corrections or for new updates to, for example, the anti-virus software. Other processes such as availability management (recoverability), capacity management (capacity and performance) and ITSCM (planning on how to handle crisis) will assist in planning longer term



## Interfaces: Financial Management

### Step 3 & 4

- Tracking Actual expenditures v/s budget
- Verify costing or revenue targets are on track
- Monitor the ongoing cost per service
- Provide the necessary templates to assist CSI to create the budget and expenditure reports for the various improvements and compute the ROI

Financial management for IT services is responsible for monitoring and collecting data associated with the actual expenditures versus budget and is able to provide input on questions such as whether costing or revenue targets are on track. Financial management for IT services should also monitor the ongoing cost per service etc.

In addition financial management for IT services will provide the necessary templates to assist CSI to create the budget and expenditure reports for the various improvement initiatives as well as providing the means to compute the ROI of the improvements.

## Interfaces: Problem Management

### Step 5

- Perform root cause investigation as to what is leading identified trends
- Recommend improvement opportunities
- Compare results with prior results
- Compare results to agreed service levels

### Step 6

- Providing input into service improvement initiatives and prioritizing improvement initiatives
- Supporting preparation of the reports
- Providing input into prioritizing SIP or improvements
- Implementing incremental or fine-tuning activities that do not require business approval

Problem management plays a key role in the analysis activity as this process supports other processes in identifying trends and performing root cause analysis. Problem management is usually associated with reducing incidents, but a good problem management process is also involved in helping define process-related problems as well as those associated with services.

## Interfaces: Change Management

- CSI to service should be raised through RFC
- RFC prioritized and categorized according to policies
- Release and deployment management responsible for moving this change to the live environment
- CSI is part of the PIR to assess the success or failure of the change
- All non-standard changes should be assessed by CSI

When CSI determines that an improvement to a service is warranted, a request for change (RFC) must be submitted. The RFC will be prioritized and categorized according to policies and procedures defined in the change management process. Release and deployment management, as a part of service transition, is responsible for moving this change to the live environment. Once the change is implemented, CSI is part of the PIR to assess the success or failure of the change. All non-standard changes should be assessed by staff involved in CSI.

## CSF & KPI

- CSF All improvement opportunities identified
  - KPI Percentage improvement in defects; for example, 3% reduction in failed changes; 10% reduction in security breaches
- CSF The cost of providing services is reduced
  - KPI Percentage decrease in overall cost of service provision; for example, 2.5% reduction in the average cost of handling an incident; 5% reduction in the cost of processing a particular type of transaction
- CSF The required business outcomes from IT services are achieved
  - KPI A 3% increase in customer satisfaction with the service desk; 2% increase in customer satisfaction with the warranty offered by the payroll service.



### Reader's Note



## Methods & Techniques

- Assessment
- Gap Analysis
- Benchmarking
- Service Measurement
- Metrics
- ROI
- Service Reporting

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A wide variety of methods and techniques can be used in the continual service improvement (CSI) activities ranging from 'soft and vague' to 'factual and scientific', often providing either both or a mixture of qualitative and quantitative measurement results. To ensure consistency of execution and effective measurement, especially for the activities of gathering and processing data, the techniques and methods that are used should be clearly documented in advance and communicated to the staff who will be responsible for their execution. To increase the trustworthiness of the factual data delivered to these processes it may be required for these processes to be audited for compliance to the agreed and prescribed methods and techniques.

An effective choice of methods and techniques for the analysis, presentation and use of the measurement information is highly dependent on the particular circumstances in which these tasks are performed and can generally not be documented in advance. A goal-oriented attitude and professional expertise and education of the individuals are required

## Assessment

### Assessments are

- Formal Mechanisms
- Compares Operational Processes with Performance Standards
- Measures improved Process Capability
- Identifies Shortcomings

### The advantage

- It provides an approach to sample particular elements of a process

Assessments are the formal mechanisms for comparing the operational process environment to the performance standards for the purpose of measuring improved process capability and/or to identify potential shortcomings that could be addressed. The advantage of assessments is they provide an approach to sample particular elements of a process or the process organization which impact the efficiency and the effectiveness of the process.

Just by conducting a formal assessment an organization is demonstrating its significant level of commitment to improvement. Assessments involve real costs, staff time and management promotion. Organizations need to be more than just involved in an assessment; they need to be committed to improvement.

Comparison of the operational environment to industry norms is a relatively straightforward process. The metrics associated with industry norms are typically designed into the process control structure. Sampling and comparison then can be considered an operational exercise. Dealing with gaps apparent from such monitoring and reporting are addressed as an element of the check stage of the improvement lifecycle. An assessment based on comparison to a maturity model has been common over the last few years.

## Assessment

- The metrics associated with industry norms are typically designed into the process control structure
- Sampling and comparison can be considered an operational exercise
- Dealing with gaps apparent from such monitoring and reporting are addressed as an element of the check stage of PDCA
- An assessment based on comparison to a maturity model has been common

A well-designed maturity assessment framework evaluates the viability of all aspects of the process environment including the people, process and technology as well as factors affecting overall process effectiveness within the business – culture of acceptance, process strategy and vision, process organization, process governance, business/IT alignment, process reporting/metrics and decision-making. The balance of this section focuses on this form of assessment. However the principles of maturity assessment can easily be extended to assessments based on industry norms.



## When to Assess?

Assessments can be conducted at any time in line with Improvement Lifecycle

- Plan (project initiation)
- Plan (project midstream)
- Do/check (process in place)

**Plan (project initiation)** Assess the targeted processes to form the basis for a process improvement project. Processes can be of many configurations and design, which increases the complexity of assessment data collection.

**Plan (project midstream)** A check during process implementation or improvement activities serves as validation that process project objectives are being met and, most importantly, provides tangible evidence that benefits are being achieved from the investment of time, talent and resources to process initiatives.

**Do/check (process in place)** Upon the conclusion of a process project, it is important to validate the maturation of process and the process organization through the efforts of the project team. In addition to serving as a decisive conclusion for a project, scheduling periodic reassessments can support overall organizational integration and quality efforts

## What to Assess?

The assessment's scope is one of the key decisions. Scope should be based on the assessment's objective and the expected future use of service and process assessments and assessment reports

There are three potential scope levels

- Process only
- People, process and technology
- Full assessment

All these factors are compared to the maturity attributes of the selected maturity model

The assessment's scope is one of the key decisions. Scope should be based on the assessment's objective and the expected future use of service and process assessments and assessment reports. Assessments can be targeted broadly at those processes currently implemented or focused specifically where known problems exist within the current process environment. There are three potential scope levels:

**Process only** Assessment only of process attributes based on the general principles and guidelines of the process framework which defines the subject process.

**People, process and technology** Extend the process assessment to include assessment of the organizational structure, skills, roles and talents of the managers and practitioners of the process as well as the ability of the process-enabling technology deployed to support the objectives and transaction state of the process.

**Full assessment** Extend the people, process and technology assessment to include an assessment of the culture of acceptance within the organization, the ability of the organization to articulate a process strategy, the definition of a vision for the process environment as an 'end state', the structure and function of the process organization, the ability of process governance to assure that process objectives and goals are met, the business/IT alignment via a process framework, the effectiveness of process reporting/metrics, and the capability and capacity of decision-making practices to improve processes over time.

All these factors are compared to the maturity attributes of the selected maturity model

## Gap Analysis

A business assessment tool enabling an organization to compare where it is currently and where it wants to go in the future

- The process involves
- Determining
- Documenting
- Approving

variance between business requirements and current capabilities

Gap analysis flows from benchmarking and service or process maturity assessments

Gap analysis can be conducted from different perspectives such as:

- The organization Incl. structure and capabilities of the people
- Business direction
- Business processes
- Information technology
- Gap Analysis Provides a foundation for how much effort in time, money
- and human Resources is required to achieve a particular goal

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### Reader's Note

## Benchmarking

Benchmarking is a specific type of assessment

- Is a process used in management especially at strategic level
- Benchmarking evaluate various aspects of their processes in relation to best practice, usually within their own sector
- May be a one-time occurrence
- Often treated as a continuous process to challenge good practices

Benchmarking is a specific type of assessment and is a process used in management, particularly strategic management, in which organizations evaluate various aspects of their processes in relation to best practice, usually within their own sector. This then allows organizations to develop plans on how to adopt such best practice, usually with the aim of increasing some aspect of performance. Benchmarking may be a one-time occurrence, but it is often treated as a continuous process in which organizations continually seek to challenge their practices.

Organizations have a growing need to get a clear view on their level of quality and performance compared with that of their competitors and in the eye of their customers. It isn't sufficient any more to have internal self-assessment reports on the status of IT performance; it is equally important to test and compare it with the view the market has on the performance of the organization. A positive result of this test and comparison can give a competitive edge to the organization in the marketplace and generates trust with its customers. The results of benchmarking and self-assessments lead to identification of gaps in terms of people, process and technology. A benchmark can be the catalyst to initiating prioritization of where to begin formal process improvement. The results of benchmarking must clearly display the gaps, identify the risks of not closing the gaps, and facilitate prioritization of development activities and communication of this information.

Benchmarking is actually a logical sequence of stages that an organization goes through to achieve continual improvement in its key processes

## Benchmarking Cooperation

It involves cooperation with others as benchmarking partners learn from each other where improvements can be made

- Ensure senior management support
- Take an external view
- Compare processes, not outputs
- Involve process owners
- Set up benchmarking teams
- Acquire the skills

### Ensure senior management support

**Take an external view** Bring together business intelligence and internal performance to draw conclusions about the way internal resources and processes must be improved to achieve and surpass the performance of others.

**Compare processes, not outputs** Comparisons with organizations in the same sector are unlikely to identify the significant improvements that have been made elsewhere or overturn the conventions of the sector.

**Involve process owners** Their involvement encourages acceptance and buy-in by those who will be affected immediately by the changes which will be required to improve performance.

**Set up benchmarking teams** As a benchmarking culture develops, people will apply the method as part of the normal way in which they manage their work.

**Acquire the skills** People who undertake benchmarking require a small amount of training and guidance; an experienced in-house facilitator or external consultant will probably be required to provide technical assurance and encouragement in the application of the method.

## Benchmarking - Summary

Benchmarks are only relevant when the comparison is of the same performance measures or indicators, and is with organizations of similar size, industry and geography

- Benchmarking procedure
- Benchmarking costs
- Value of Benchmarking
- Benchmarking as Lever
- Benchmarking as Steering instrument
- Benchmarking Categories
- Benchmarking Benefits
- Who is involved?
- What to Benchmark?
- Comparison with Industry norms
  - Process Maturity Comparison
  - Total Cost of Ownership
- Benchmark Approach



### Reader's Note

## Benchmarking

- Benchmarking procedure
- Identify problem areas of business process or a function
- A range of research techniques
  - Informal conversations with customers, employees, or suppliers
  - Focus groups
  - In-depth marketing research
  - Quantitative research
  - Surveys
  - Questionnaires
  - Re-engineering analysis
  - Process mapping
  - Quality control variance reports
  - Financial ratio analysis
- Benchmarking costs
- Visit costs
- Time costs
- Benchmarking database costs

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**Visit costs** This includes travel- and accommodation-related expenses for team members who need to travel to the site.

**Time costs** Members of the benchmarking team will be investing time in researching problems, finding exceptional companies to study, visits and implementation. This will take them away from their regular tasks for part of each day so additional staff might be required.

**Benchmarking database costs** Organizations that institutionalize benchmarking into their daily procedures find it is useful to create and maintain a database of best practices and the companies associated with each best practice.

## Benchmarking

### Benchmarking Value

- Benchmark is the basis for
  - Profiling quality in the market
  - Boosting self-confidence and pride in employees as well as motivating and tying employees to an organization
  - Trust from customers that the organization is a good IT service management provider
- Benchmarking as Lever
  - Is sometimes the only way to open an organization to new methods, ideas and tools to improve effectiveness
  - It helps break through resistance to change by demonstrating other methods of solving problems
  - Helps to come over the clutter
- 'The way we do it is the best because this is the way we've always done it'

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### Reader's Note



## Benchmarking

### Benchmarking – Steering Instrument

- Benchmarking is an ongoing method of measuring and improving products, services and practices
- It has been defined as 'the search for industry best practices which lead to superior performance'.

### Benchmarking Categories

- Internal benchmarks
- Comparison with industry norms provided by external organizations
- Direct comparisons with similar organizations
- Comparison with other systems or departments within the same company

Internal benchmarks – where an organization sets a baseline at a certain point in time for the same system or department and measures how it is doing today compared with the baseline originally set; this type of benchmark is often overlooked by organizations (service targets are a form of benchmark)

Comparison with industry norms provided by external organizations

Direct comparisons with similar organizations

## Benchmarking

### Benchmarking – Benefits

- Economy in the form of lower prices and higher productivity on the part of the service provider
- Efficiency by comparing the costs of providing IT services
- Effectiveness of business objectives realized compared with what was planned

Benchmarking helps the organization to focus on strategic planning by identifying the relative effectiveness of IT support for the business. The economy is the easiest area to investigate although efficiency and effectiveness may deliver the most benefit to the business. To obtain the maximum benefit, it is necessary to look at all of these three areas, rather than focusing on one to the exclusion of the others.

## Benchmarking – Who is Involved?

- The customer
- The user or consumer
- The internal service provider

There will also be participation from external parties

- External service providers
- Members of the public
- Benchmarking partners

**The customer** The business manager responsible for acquiring IT services to meet business objectives. The customer might demonstrate an interest in benchmarking by asking: 'How can I improve my performance in procuring services and managing service providers, and in supporting the business through IT services?'

**The user or consumer** Anyone who uses IT services to support his or her work. The user might demonstrate an interest in benchmarking by asking: 'How can I improve my performance by exploiting IT?'

**The internal service provider** Providing IT services to users under service level agreements (SLAs) negotiated with and managed by the customer. The provider might demonstrate an interest in benchmarking by asking: 'How can we improve our performance in the delivery of IT services which meet the requirements of our customers and which are cost-effective and timely?'

There will also be participation from external parties:

**External service providers** Providing IT services to users under contracts and SLAs negotiated with and managed by the customer

**Members of the public** Ordinary people are increasingly becoming direct users of IT services

**Benchmarking partners** Other organizations with whom comparisons are made in order to identify the best practices to be adopted for improvements

## Benchmarking – What to Benchmark?

- All organizations and service-provider infrastructures are unique and tangible intangible but influential factors that cannot easily and objectively be measured, such as goodwill, image and culture
- Benchmarking techniques can be applied at various levels from relatively straightforward in-house comparisons through to an industry-wide search for best practice
- Benchmarking comprises four basic stages
  - Planning
  - Analysis
  - Action
  - Review

one can apply the seven-step improvement process to benchmarking

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### **Reader's Note**

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## Comparison with Industry Norms

- Process maturity comparison
  - Conducting a process maturity assessment is one way to identify service management improvement opportunities comparing to the other organizations
- Total cost of ownership
  - TCO is defined as all the costs involved in the design, introduction, operation and improvement of services within an organization from its inception until retirement



### Reader's Note

## Benchmark Approach

- Benchmarking will establish the extent of an organization's existing maturity with best practice
- An internal conducted benchmark
- An external conducted benchmark
- Benchmarking activities need to be business-aligned.

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An internal conducted benchmark Completed internally using resources from within the organization to assess the maturity of the service management processes against a reference framework

An external conducted benchmark Completed by an external third-party company; most have their own proprietary models for the assessment of service management process maturity.

The results and recommendations contained within the benchmarking review can then be used to identify and rectify areas of weakness within the IT service management processes.

Viewed from a business perspective, benchmark measurements can help the organization to assess IT services, performance and spend against peer or competitor organizations and best practice, both across the whole of IT and by appropriate business areas, answering questions such as:

- How does IT spend compare to other similar organizations – overall, as a percentage of revenue, or per employee?
- How does IT spend compare for similar functions, e.g. payroll functions either within an organization or with other organizations?
- How does IT spend compare across business units or business processes?
- How does IT spend compare across locations or technologies?
- How effective is IT service delivery (and identify opportunities and measures for improvement)?
- How efficient is IT service delivery (and identify opportunities and measures for improvement)?
- Which is the most appropriate sourcing option?

Is the value of a long-term sourcing contract being maintained year on year?



## Benchmark Types & Profiles

IT benchmarking types available separately or in combination

- Cost and performance for internal service providers
- Price and performance for external service providers
- Process performance against industry best practice
- Financial performance of high-level IT costs against industry or peers
- Effectiveness considering satisfaction ratings and business alignment at all levels

Benchmarking requires information about the organization's profile, complexity and relative comparators

- Company information profile
- Current assets
- Current best practices
- Complexity

The context for benchmarking requires information about the organization's profile, complexity and relative comparators. An effective and meaningful profile contains four key components:

**Company information profile** The company profile defines the landscape of an organization – basic information on the company size, industry type, geographic location and types of user are typical of data gathered to establish this profile.

**Current assets** The IT assets mix within the organization may include production IT, desktop and mobile clients, peripherals, network and server assets.

**Current best practices** These include policies, procedures and/or tools that improve returns, and their maturity and degree of usage.

**Complexity** This includes information about the end-user community, the types and quantities of varied technologies in use and how IT is managed

## Service Measurement

Three basic measurements that most organizations utilize, which ITIL Service Design covers in more detail

- Availability of the service
- Reliability of the service
- Performance of the service

For all sizes of businesses, private and public organizations, educational institutions, consumers and the individuals working within these organizations, IT services have become an integral means for conducting business. Without IT services many organizations would not be able to deliver the products and services in today's market. As reliance on these IT services increases so do the expectations for availability, reliability and stability. This is why having the business and IT integrated is so important. No longer can they be thought of separately. The same holds true when measuring IT services. It is no longer sufficient to measure and report against the performance of an individual component such as a server or application. IT must now be able to measure and report against an end-to-end service



## Design and Develop Framework

- The design of the measurement methods and metrics for
  - The services
  - The architectures
  - The components
  - The processes
- The first steps in developing a service measurement framework is to understand the critical business processes and their value
- The IT goals and objectives must support the business goals and objectives
- Establish strong link between the operational, tactical and strategic level goals and objectives

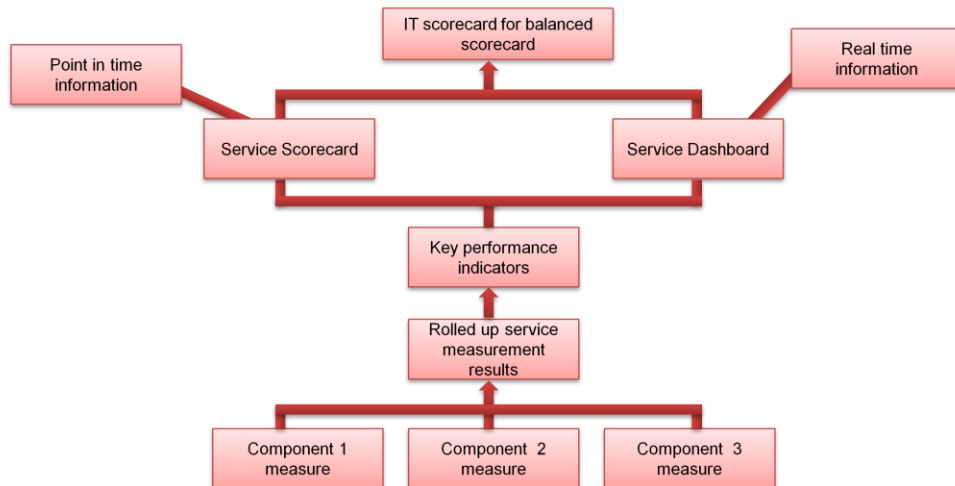
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### Reader's Note

## Measurement & Reporting



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Creating a service measurement framework will require the ability to build upon different metrics and measurements. The end result is a view of the way individual component measurements feed the end-to-end service measurement which should support KPIs defined for the service. This will then be the basis for creating a service scorecard and dashboard. The service scorecard will then be used to populate an overall balanced scorecard or IT scorecard.

## Measurement & Reporting

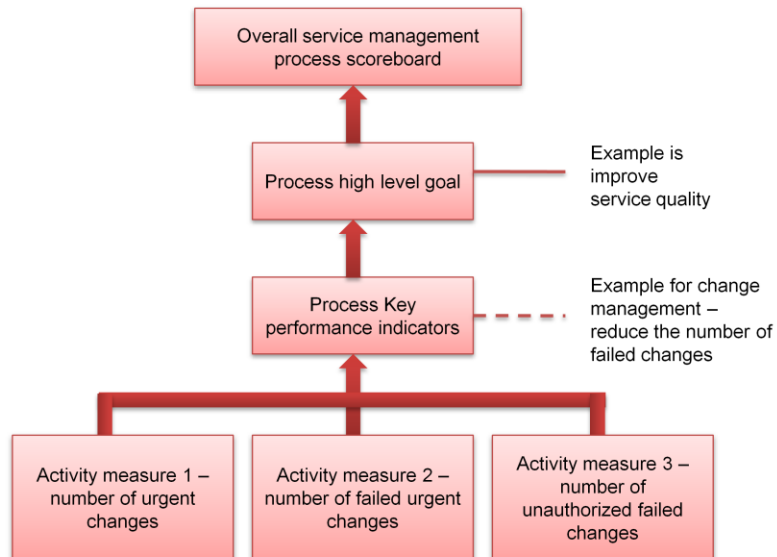
- The same principles apply when measuring the efficiency and effectiveness of a service management process
- The higher-level goal for change management is to improve the service quality
- One of the major reasons for service quality issues is the downtime caused by failed changes
- One of the major reasons for failed changes is often the number of urgent changes an organization implements with no formal process
  - The number of urgent changes
  - The number of failed urgent changes
  - Unauthorized changes that failed.

The same principles apply when measuring the efficiency and effectiveness of a service management process. These activity measures should support the process KPIs. The KPIs need to support higher-level goals. In Figure 5.6, the higher-level goal for change management is to improve the service quality. One of the major reasons for service quality issues is the downtime caused by failed changes. And one of the major reasons for failed changes is often the number of urgent changes an organization implements with no formal process. Therefore it would be advisable to capture the following key activity metrics:

- The number of urgent changes
- The number of failed urgent changes
- Unauthorized changes that failed.

There are four major levels to report on. The bottom level contains the activity metrics for a process and these are often volume type metrics such as number of requests for change (RFCs) submitted, number of RFCs accepted into the process, number of RFCs by type, number approved, number successfully implemented etc. The next level contains the KPIs associated with each process. The activity metrics should feed into and support the KPIs. The KPIs will support the next level, which is the high-level goal such as improving service quality, reducing IT costs or improving customer satisfaction. Finally, this high-level goal will feed into the organization's balanced scorecard or IT scorecard. When first starting out, be careful to not pick too many KPIs to support the high-level goal(s). Additional KPIs can always be added at a later time.

## Measurement & Reporting



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The KPIs are also linked to the service management process or processes that directly support the KPI. This table is not inclusive of all KPIs but simply an example of how KPIs may be mapped to processes.

## Metrics

Three types of metrics that an organization will need to collect to support CSI

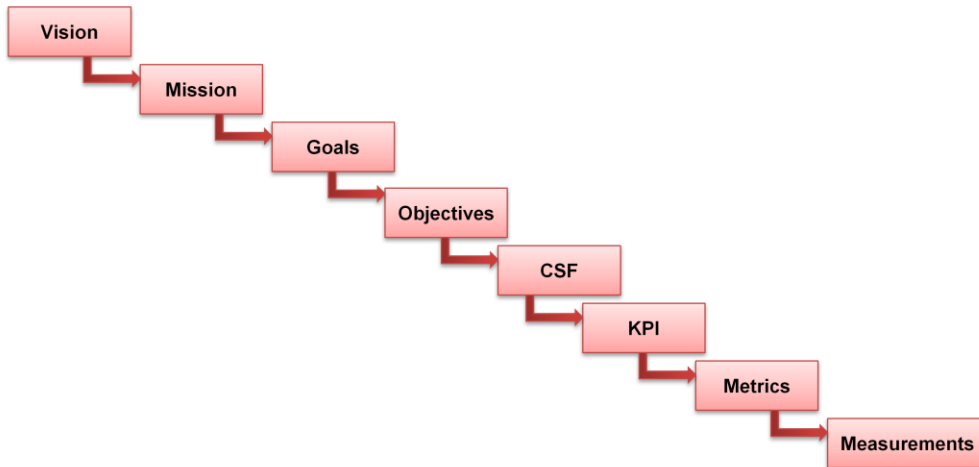
- Technology metrics
- Process metrics
- Service metrics

**Technology metrics** These metrics are often associated with component and application-based metrics such as performance, availability etc.

**Process metrics** These metrics are captured in the form of critical success factors (CSFs), KPIs and activity metrics for the service management processes. They can help determine the overall health of a process. KPIs can help answer four key questions on quality, performance, value and compliance of following the process. CSI would use these metrics as input in identifying improvement opportunities for each process.

**Service metrics** These metrics are a measure of the end-to-end service performance. Individual technology and process metrics are used when calculating the end-to-end service metrics

## Vision to Measurement



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In general, a metric is a scale of measurement defined in terms of a standard, i.e. a well-defined unit. Metrics are a system of parameters or ways of quantitative assessment of a process that is to be measured. Metrics define what is to be measured. Metrics are usually specialized by the subject area, in which case they are valid only within a certain domain and cannot be directly benchmarked or interpreted outside it. Generic metrics, however, can be aggregated across subject areas or business units of an enterprise

## How many CSFs and KPIs?

- It is recommended that no more than two to five KPIs are defined per CSF at any given time
- Additional KPIs can be added based on maturity of Service & Process
- Importance of Business & IT Management
- KPI may change over time
- Next is to identify the metrics and measurements required to compute the KPI

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### **Reader's Note**

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## Qualitative KPI

- CSF: Improving IT service quality
- KPI: 10% increase in customer satisfaction rating for handling incidents over the next six months.
- Metrics required
  - Original customer satisfaction score for handling incidents
  - Ending customer satisfaction score for handling incidents.
- Measurements
  - Incident-handling survey score
  - Number of survey scores



### **Reader's Note**



## Quantitative KPI

- CSF: Reducing IT costs
- KPI: 10% reduction in the costs of handling printer incidents.
- Metrics required:
  - Original cost of handling printer incidents
  - Final cost of handling printer incidents
  - Cost of the improvement effort
- Measurements:
  - Time spent on the incident by first-level operative and their average salary
  - Time spent on the incident by second-level operative and their average salary
  - Time spent on problem management activities by second-level operative and their average salary



### Reader's Note

## Quantitative KPI

- Time spent on the training first-level operative on the workaround
- Cost of a service call to third-party vendor
- Time and material from third-party vendor



### **Reader's Note**

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## Goals and Metrics

The quality of the service will be determined by

- how well each role meets its goals
- how well those conflicting goals are managed
- organizations find some way of measuring performance
  - By applying a set of metrics to each goal

Ultimately, the quality of the service will be determined by how well each role meets its goals, and by how well those sometimes conflicting goals are managed along the way. That makes it crucial that organizations find some way of measuring performance – by applying a set of metrics to each goal.

In the design phase of a service, key business drivers were translated into service level requirements (SLRs) and operations level requirements, the latter consisting of process, skills and technology requirements. This constitutes a translation from a business requirement into requirements for IT services and IT components. There is also the question of the strategic position of IT. In essence, the question is whether IT is viewed as an enabler or a cost centre, the answer to which determines the requirements for IT services and IT components. If IT is viewed as a cost centre, services might be developed to be used centrally in order to reduce TCO. Services will have those characteristics that will reduce total costs of ownership throughout the lifecycle. On the other hand, if IT is an enabler (which it has to be), services will be designed with the ability to adjust to changing business requirements and meet early time-to-market objectives

## Using Measurement and Metrics

- Validate
- Justify
- Direct
- Intervene

Service measurements and metrics should be used to drive decisions. Depending on what is being measured the decision could be strategic, tactical or operational. This is the case for CSI. There are many improvement opportunities but often only a limited budget to address the improvement opportunities, so decisions must be made. Which improvement opportunities will support the business strategy and goals, and which will support the IT goals and objectives? What are the ROI and VOI opportunities?

## Creating Scorecards and Reports

- Three main purposes of Service Measurement
  - To report on the service to interested parties
  - To compare against targets
  - To identify improvement opportunities.
  
- There are typically three distinct audiences
  - The business
  - IT management
  - IT operational/technical managers

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### **Reader's Note**

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## Creating Scorecards and Reports

- Balanced scorecard approach is one way to manage Strategy - Goal alignment
- It is important to select the right measures and targets to verify whether the goals are being achieved

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### **Reader's Note**

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## Creating Scorecards and Reports

### What is our vision



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When creating reports it is important to know their purpose and the details required. Reports can be used to provide information for a single month, or a comparison of the current month with other months to provide a trend for a certain time period. Reports can show whether service levels are being met or breached.

Before starting the design of any report it is also important to know the following:

- Who is the target audience of the report?
- What will the report be used for?
- Who is responsible for creating the report?
- How will the report be created?
- How frequently is the report to be created?
- What information will be produced, shared or exchanged?

## Setting Targets

- The CSFs and SLRs will give vital information
- To what we are trying to achieve and it is important that we keep the targets
- Targets set by management are quantified objectives to be attained
- They express the aims of the service or process
- Service targets are often defined in response to business requirements
- May result from new policy or regulatory requirements
- To consider a phased target approach, as the target in the first quarter may be lower than the second
- Setting targets is as important as selecting the right measures
- Good targets will be SMART (specific, measurable, achievable, relevant and time-bound)

. The CSFs and SLRs will give vital information as to what we are trying to achieve and it is important that we keep the targets in mind when measuring and reporting. Targets set by management are quantified objectives to be attained. They express the aims of the service or process at any level and provide the basis for the identification of problems and early progress towards solutions and improvement opportunities.

Service targets are often defined in response to business requirements or they may result from new policy or regulatory requirements. SLM through SLAs will often drive the target that is required. Unfortunately, many organizations have had targets set with no clear understanding of the IT organization's capability to meet the target. That is why it is important that SLM looks at not only the business requirements but also IT capability to meet business requirements.

When first setting targets against a new service it may be advisable to consider a phased target approach, as the target in the first quarter may be lower than the second quarter. With a new service it would be unwise to enter into a SLA until overall capabilities are clearly identified. Even with the best service design and transition, no one ever knows how a service will perform until it is actually in production.

Setting targets is just as important as selecting the right measures. It is important that targets are realistic but challenging. Good targets will be SMART (specific, measurable, achievable, relevant and time-bound). Targets should be clear, unambiguous and easy to understand by those who will be working toward them.



## Balanced scorecard

Balanced scorecard, as an aid to organizational performance management

- Client perspective
- Internal processes
- Learning and growth
- Financial

Kaplan and Norton first introduced the idea of a balanced scorecard in the early 1992 Harvard Business Review. The need for such a method emerged out of a growing recognition that financial measures alone were insufficient to manage the modern organization. Much of the emphasis in today's work environment is preparation to achieve financial goals, achieve process innovations, train workers, and create and maintain new kinds of relationship with customers.

Client perspective IT as a service provider, primarily documented in SLAs

Internal processes Operational excellence utilizing incident management, problem management, change management, service asset and configuration management, and release and deployment management, as well as other IT processes; successful delivery of IT projects

Learning and growth Business productivity, flexibility of IT, investments in software, professional learning and development

Financial Align IT with the business objectives, manage costs, manage risks, deliver value; financial management for IT services is the process used to allocate costs and calculate ROI.

## IT Balanced scorecard

### Financial

As customers how do we view the costs of IT provision?

Understanding IT costs to the business  
Ability to control IT costs to the business  
Economy of IT provision  
Return on IT infrastructure investments  
IT contracts management

### Customer

What do we as customers expect of IT provision?

Availability of IT services  
Quality of IT services  
Performance of IT services  
Value for money IT services  
Reliability of the IT infrastructure  
Support of hands-on IT users

### Innovation

Does our IT infrastructure enable us to continue to improve the business?

Flexibility of the IT infrastructure  
Ability to control changes to IT services and the IT infrastructure  
Adaptability of the IT infrastructure to changing demand in the business  
Communication and Knowledge transfer  
Business productivity in relation to IT costs  
Harnessing (new) technology

### Customer

What must our IT providers (internally) excel at?

Service-oriented culture  
Skilled staff and IT expertise  
Efficiency of IT service provision  
Service delivery times  
Processing capacity  
Security  
Accountability of IT provision

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### Reader's Note

## SWOT Analysis

SWOT stands for strengths, weaknesses, opportunities and threats

- Develop, exploit and capitalize on the organization's **strengths**
  - Reduce, minimize or remove **weaknesses**
  - Take maximum advantage of **opportunities**
  - Manage, mitigate and eliminate **threats**
- 
- A strategic planning tool used to evaluate the strengths, weaknesses, opportunities and threats involved

The first step is to define the desired end state or objective. This objective definition must be explicit and approved by all participants in the process.

Once the objective is identified, SWOT are discovered and listed:

Strengths are internal attributes of the organization that are helpful to the achievement of the objective.

Weaknesses are internal attributes of the organization that are harmful to the achievement of the objective.

Opportunities are external conditions that are helpful to the achievement of the objective.

Threats are external conditions that are harmful to the achievement of the objective.

Correct identification of the SWOT is essential because subsequent steps in the process are all derived from the SWOT. To ensure a successful SWOT analysis, it is a good idea to ensure that the objective follows the SMART principle which stands for specific, measurable, achievable, relevant and time-bound.

SWOT analyses are used as inputs to the creative generation of possible strategies, by asking and answering the following four questions many times:

- How can we use each strength?
- How can we stop each weakness?
- How can we exploit each opportunity?
- How can we defend against each threat?

## SWOT Analysis

Strengths	Weaknesses
People with the right attitude, values and commitment	Reactive organization
Management commitment to CSI	Immature processes
CSI manager in place	Lack of monitoring and reporting tools
	Insufficient data
Opportunities	Threats
Increased market share of current services	Competition
Become a third-party service provider	New regulatory requirements
Efficiencies through more integrated operations	New technology
Be quicker to market with new products	Lack of trained staff
	Lack of knowledge management

### Common pitfalls of a SWOT analysis

The failure to correctly identify the end state will result in wasted resources and possibly failure. It is therefore important to align the SWOT analysis with the organization's vision, mission, goals and objectives. The following errors have been observed in published accounts of SWOT analysis. Making these errors can result in serious losses:

- Conducting a SWOT analysis before defining and agreeing on the desired end state
- Confusing opportunities (external to the company) with strengths (internal to the company); keep them separate
- Confusing opportunities with possible strategies; it may also be useful to keep in mind that SWOT is a description of conditions, while possible strategies define actions

## ROI

On one side is the investment cost

- Internal resource costs
- Tool costs
- Consulting costs

On the other side is what an organization can gain in a return

- These returns are often hard to define or quantify

On the other side is what an organization can gain in a return. These returns are often hard to define or quantify. In order to be able to compute these items it is important to know the following:

- What is the cost of downtime? This includes both lost productivity of the customers and the loss of revenue.
- What is the cost of doing rework? How many failed changes have to be backed out and reworked?
- What is the cost of carrying out redundant work? Many organizations that don't have clear processes in place and good communication often find that redundant work is being done.
- What is the cost of non-value added projects? Many projects have been fully funded and resourced, but because of changing requirements they no longer add value. Despite this the project moves forward instead of being stopped.
- What is the cost of late delivery of an application? Does this impact on the ability to deliver a new service or possibly an additional way to deliver an existing service?
- What is the cost of escalating incidents to second and third level support groups instead of resolving incidents at the first level? There is often a difference in utilization staff in second level and third level support groups. The more we escalate incidents to these groups the less time they have to work on projects that they may also be assigned to.
- What is the fully allocated hourly cost for different employee levels?

## Establishing the business case

Business case should articulate the reason for undertaking a service or process improvement initiative

- Possible, data and evidence should be provided relating to the costs
- and expected benefits of process improvement, noting that:
- Process redesign activities are more complex and therefore more costly than initially expected
- Organizational change impact is often underestimated
- Changed process usually requires changed competencies and tools, adding further to the expense



### Reader's Note

## Measuring Benefits Achieved

A need to measure the benefits actually achieved compares with benefits estimated

- The envisaged improvements were realized
- The benefits arising from the improvements were achieved
- The target ROI was achieved
- The intended value-added was actually achieved (VOI)
- The outcomes of the preceding points lead to further process improvement
- As ongoing costs and ongoing benefits continue to move.



### Reader's Note

## Service Reporting

- The business likes to see a historical representation of the past period's performance that portrays its experience
- Cross-referenced data must still be presented which align precisely to any contracted
- It is not satisfactory simply to present reports that depict adherence to SLAs
- IT needs to build an actionable approach to reporting
- A reporting ethos that focuses on the future as strongly as it focuses on the past

The business likes to see a historical representation of the past period's performance that portrays its experience; however, it is more concerned with those historical events that continue to be a threat going forward, and how IT intends to militate against such threats.

Cross-referenced data must still be presented which align precisely to any contracted, chargeable elements of the delivery, which may or may not be technical depending on the business focus and language used within contracts and SLAs.

It is not satisfactory simply to present reports that depict adherence (or otherwise) to SLAs, which in themselves are prone to statistical ambiguity. IT needs to build an actionable approach to reporting: this is what happened, this is what we did, this is how we will ensure it doesn't impact you again, and this is how we are working to improve the delivery of IT services generally.

A reporting ethos that focuses on the future as strongly as it focuses on the past also provides the means for IT to market its wares directly aligned to the positive or negative experiences of the business.



## Service Reporting Policy & Rules

- Targeted audience(s) and the related business views on what the service delivered is
- Agreement on what to measure and report
- Agreed definitions of all terms and boundaries
- Basis of all calculations
- Reporting schedules
- Access to reports and medium to be used
- Meetings scheduled to review and discuss reports

An ideal approach to building a business-focused service-reporting framework is to take the time to define and agree the policy and rules with the business and service design about how reporting will be implemented and managed.

## Availability in support of CSI

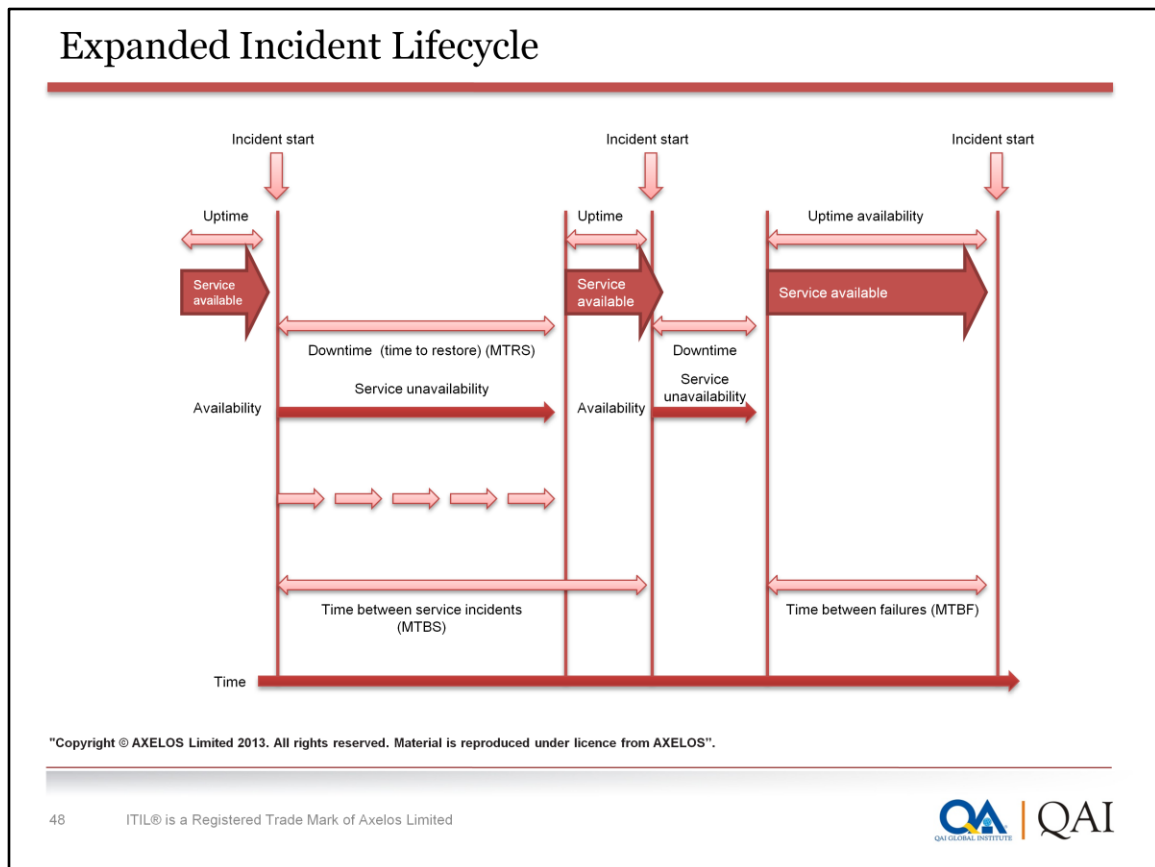
- Component failure impact analysis
- Fault tree analysis
- Service failure analysis
- Technical observation
- Expanded incident lifecycle

**Component failure impact analysis** Component failure impact analysis (CFIA) identifies single points of failure, IT services at risk from failure of various CIs and the alternatives that are available should a CI fail. It should also be used to assess the existence and validity of recovery procedures for the selected CIs. The same approach can be used for a single IT service by mapping the component CIs against the vital business functions and users supported by each component.

When a single point of failure is identified, the information is provided to CSI. This information, combined with business requirements, enables CSI to make recommendations on how to address the failure.

**Fault tree analysis** Fault tree analysis (FTA) is a technique that can be used to determine a chain of events that has caused an incident, or may cause an incident in the future. It offers detailed models of availability, and makes a representation of a chain of events using Boolean algebra and notation. Essentially FTA distinguishes between four events: basic events, resulting events, conditional events and trigger events.

When provided to CSI, FTA information indicates which part of the infrastructure, process or service was responsible in the service disruptions. This information, combined with business requirements, enables CSI to make recommendations about how to address the fault.



**Expanded incident lifecycle** A technique to help with the technical analysis of incidents affecting the availability of components and IT services (see Figure 5.13). The expanded incident lifecycle is further made up of two parts: time to restore service (also known as downtime) and time between failures (also known as uptime). There is a diagnosis part to the incident lifecycle as well as repair, restoration and recovery of the service.

Let's assume that CSI has decided to improve the incident lifecycle by reducing the mean time to restore service (MTRS) and expanding the mean time between failures (MTBF).

Here is an example of how availability management can assist in reducing downtime in the expanded incident lifecycle by using many techniques:

**Monitoring (detection of incident)** By adequately monitoring for availability of vital business functions through automated monitoring tools (set at the right threshold) that record and escalate incidents, the time it takes to detect and record incidents is reduced.

**Incident recording** Since one of availability management's goals is to 'optimize the ... support organization', educating and training first-line staff as well as simplifying and/or automating incident recording helps reduce the time it takes to record incidents.

**Investigation** Using the FTA method, availability management assists in reducing the time to investigate by creating proper investigation procedures for incident management staff. The same logic applies to the diagnosis of the incident cause, resolution and recovery

## Capacity in support of CSI

- Business capacity management
- Service capacity management
- Component capacity management
- Workload management and demand management
- Iterative activities of capacity management
  - *Trend analysis*
  - *Modeling*
  - *Analytical modeling*
  - *Simulation modeling*
  - *Baseline models*

The capacity management process must be responsive to changing requirements for processing capacity. New services are required to underpin the changing business. Existing services will require modification to provide extra functionality

A prime objective of the business capacity management sub-process is to ensure that future business requirements for IT services are considered and understood, and that sufficient capacity to support the services is planned and implemented in an appropriate timescale

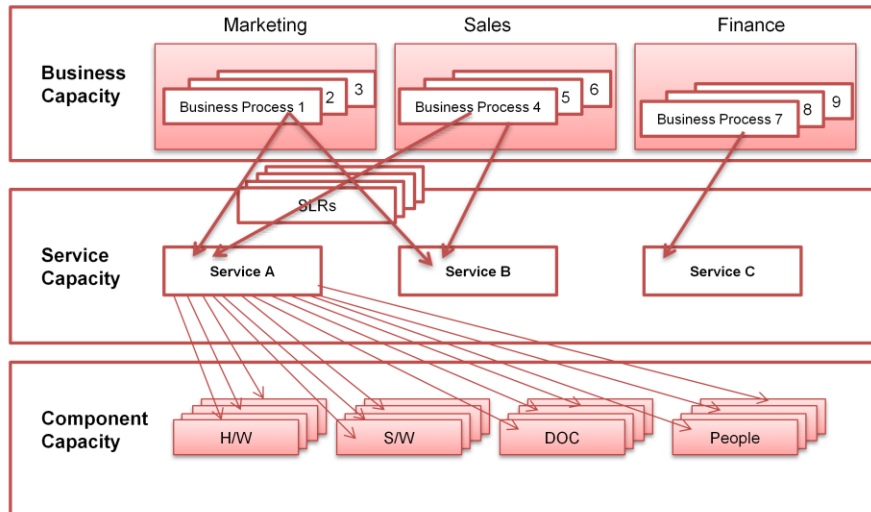
A prime objective of the service capacity management sub-process is to identify and understand the IT services, their use of resource, working patterns, peaks and troughs, as well as to ensure that the services can and do meet their SLA targets. In this sub-process, the focus is on managing service performance

A prime objective of the component capacity management sub-process is to identify and understand the capacity and utilization of each of the components of the IT infrastructure. This ensures the optimum use of the current hardware and software resources in order to achieve and maintain the agreed service levels

Workload management can be defined as understanding which customers use what service, when they use the service, how they use the service, and finally how using the service impacts the performance of a single or multiple systems and/or components that make up a service.

Demand management is often associated with influencing the end users' behaviour. By influencing the end users' behaviour an organization can change the workload thus improving the performance of components that support IT services. Using demand management can be an effective way of improving services without investing a lot of money

## Capacity in support of CSI



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### Reader's Note

## ITSCM in support of CSI

- CSI initiative to improve services have integration with ITSCM as changes to the service requirements, infrastructure are imminent
- ITSCM allows an IT organization to identify, assess and take responsibility for managing its risks

Any CSI initiative to improve services needs to also have integration with ITSCM as any changes to the service requirements, infrastructure etc. need to be taken into account for any changes that may be required for the continuity plan. That is why it is important for all SIPs to go through change management.

Business continuity management (BCM) is concerned with managing risks to ensure that an organization can continue operating to a predetermined minimum level. The BCM process involves reducing the risk to an acceptable level and planning for the recovery of business processes should a risk materialize and a disruption to the business occur.

ITSCM allows an IT organization to identify, assess and take responsibility for managing its risks, thus enabling it to better understand the environment in which it operates, decide which risks it wishes to counteract, and act positively to protect the interests of all stakeholders (including staff, customers, shareholders, third parties and creditors). CSI can complement this activity and help to deliver business benefit.

## Problem Management in support of CSI

- CSI and problem management are closely related as one of the goals of problem management is to identify and remove errors permanently
- Problem management also supports CSI activities through trend analysis
- Problem management activities are generally conducted within the scope of service operation and CSI must take an active role

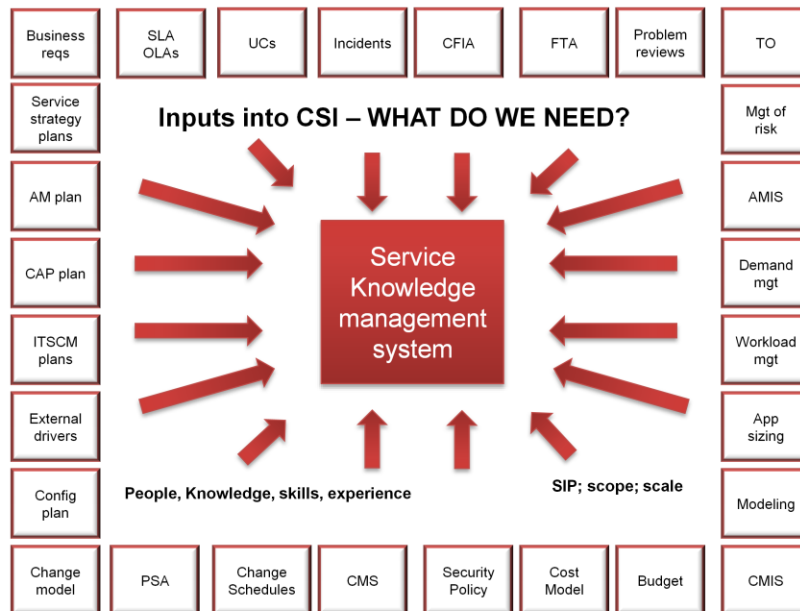
CSI and problem management are closely related as one of the goals of problem management is to identify and remove errors permanently that impact services from the infrastructure. This directly supports CSI activities of identifying and implementing service improvements.

Problem management also supports CSI activities through trend analysis and the targeting of preventive action.

Problem management activities are generally conducted within the scope of service operation and CSI must take an active role in the proactive aspects of problem management to identify and recommend changes that will result in service improvements.

Further information on the problem management process can be found in ITIL Service Operation.

## Knowledge Management for CSI



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One of the key domains in support of CSI is knowledge management. Capturing, organizing, assessing for quality and using knowledge is great input in CSI activities. An organization has to gather knowledge and analyse what the results are in order to look for trends in service level achievements and/or results and output of service management processes. This knowledge is used to identify improvement opportunities for inclusion in the CSI register, for subsequent review and prioritization of the register, and for building SIPs.

Knowledge management in today's market is vastly different from what it was 10 years ago. Just in that short amount of time there has been:

An increase in the rate of change in industry and market landscapes, as barriers to entry have decreased and new opportunities opened up

An increase in employee turnover, as it has become more socially acceptable and often beneficial to change companies during a career to develop and share new experiences and perspectives

An increase in access to information via the internet and a more open global economy

Greater market competition forcing company employees to share knowledge between departments and subsidiaries.



## Knowledge Management for CSI

- Enhancing the organization's effectiveness through better decision-making enabled by having the right information at the right time
- Enhancing customer–supplier relationships through sharing information and services to expand capabilities
- Improving business processes through sharing lessons learned, results and best practices across the organization

Knowledge management is key to the overall viability of the enterprise, from capturing the competitive advantage in an industry to decreasing cycle time and cost of an IT implementation. The approach to cultivating knowledge depends heavily on the make-up of the existing knowledge base, and knowledge management norms for cultural interaction.

There are two main components to successful knowledge management:

An open culture where knowledge – best practices and lessons learned – is shared across the organization and individuals are rewarded for it. Many cultures foster an environment where 'knowledge is power' (the more you know that others do not, the more valuable you are to the company). This type of knowledge hoarding is a dangerous behaviour for a company to reward since that knowledge may leave the company at any time. Another tenet of an open culture is a willingness to learn. This is an environment where growing an individual's knowledge base is rewarded and facilitated through open support and opportunities.

The infrastructure – a culture may be open to knowledge sharing, but without the means or infrastructure to support it, even the best intentions can be impaired, and over time this serves as a demotivator, quelling the behaviour. This infrastructure can be defined in various ways; it may be a technical application or system which allows individuals to conduct online, self-paced training, or it may be processes such as post-mortems or knowledge sharing activities designed to bring people together to discuss best practices or lessons learned.



## Various Roles

- Service Owner
- Process Owner
- Process Manager
- Process Practitioner
- CSI Manager

What is a service manager?

Service manager is a generic term for any manager within the service provider. The term is commonly used to refer to a business relationship manager, a process manager or a senior manager with responsibility for IT services overall. A service manager is often assigned several roles such as business relationship management, service level management (SLM) and CSI

## Role – Service Owner

- Ongoing Service Delivery
- Working with BRM
- Ensuring appropriate communication Customer
- Assisting in Service Models
- Identify Improvement Opportunities
- Liaising with Process Owners
- Represent the Service Across Organization Incl. CAB
- SPOC for Major Incidents of the Service
- Participating Internal & External Reviews
- Working with CSI Manager

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Ensuring that the ongoing service delivery and support meet agreed customer requirements

Working with business relationship management to understand and translate customer requirements into activities, measures or service components that will ensure that the service provider can meet those requirements

Ensuring consistent and appropriate communication with customer(s) for service-related enquiries and issues

Assisting in defining service models and in assessing the impact of new services or changes to existing services through the service portfolio management process

Identifying opportunities for service improvements, discussing these with the customer and raising RFCs as appropriate

Liaising with the appropriate process owners throughout the service lifecycle

Soliciting required data, statistics and reports for analysis and to facilitate effective service monitoring and performance

Providing input in service attributes such as performance, availability etc.

Representing the service across the organization

Understanding the service (components etc.)



Serving as the point of escalation (notification) for major incidents relating to the service

Representing the service in change advisory board (CAB) meetings

Participating in internal service review meetings (within IT)

Participating in external service review meetings (with the business)

Ensuring that the service entry in the service catalogue is accurate and is maintained

Participating in negotiating service level agreements (SLAs) and operational level agreements (OLAs) relating to the service

## Role – Service Owner

The Service Owner is Primary Stakeholder in all underlying Processes which enable or support

- Incident management
- Problem management
- Release and deployment management
- Change management
- Service asset and configuration management
- Service level management
- Availability management and capacity management
- IT service continuity management
- Information security management
- Financial management for IT services

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**Incident management** Is involved in (or perhaps chairs) the crisis management team for high-priority incidents impacting the service owned

**Problem management** Plays a major role in establishing the root cause and proposed permanent fix for the service being evaluated

**Release and deployment management** Is a key stakeholder in determining whether a new release affecting a service in production is ready for promotion

**Change management** Participates in CAB decisions, authorizing changes to the services they own

**Service asset and configuration management** Ensures that all groups which maintain the data and relationships for the service architecture they are responsible for have done so with the level of integrity required

**Service level management** Acts as the single point of contact for a specific service and ensures that the service portfolio and service catalogue are accurate in relation to their service

**Availability management and capacity management** Reviews technical monitoring data from a domain perspective to ensure that the needs of the overall service are being met

**IT service continuity management (ITSCM)** Understands and is responsible for ensuring that all elements required to restore their service are known and in place in the event of a crisis



**Information security management** Ensures that the service conforms to information security management policies

**Financial management** for IT services Assists in defining and tracking the cost models in relation to how their service is costed and recovered.

## Role – Process Owner

Process owner is accountable for ensuring that a process is fit for purpose:

Accountabilities are

- Defining process strategy
- Assisting process design
- Sponsoring, designing and change its metrics
- Ensuring process documentation
- Defining policies and standards
- Auditing the process
- Reviewing the process strategy
- Communicating process information
- Providing process resources
- Ensuring required knowledge available
- Reviewing opportunities for process enhancements
- Addressing issues

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Sponsoring, designing and change managing the process and its metrics

Defining the process strategy

Assisting with process design

Ensuring that appropriate process documentation is available and current

Defining appropriate policies and standards to be employed throughout the process

Periodically auditing the process to ensure compliance to policy and standards

Periodically reviewing the process strategy to ensure that it is still appropriate and change as required

Communicating process information or changes as appropriate to ensure awareness

Providing process resources to support activities required throughout the service lifecycle

Ensuring that process technicians have the required knowledge and the required technical and business understanding to deliver the process, and understand their role in the process

Reviewing opportunities for process enhancements and for improving the efficiency and effectiveness of the process

Addressing issues with the running of the process





Identifying improvement opportunities for inclusion in the CSI register

Working with the CSI manager and process manager to review and prioritize improvements in the CSI register

Making improvements to the process

## Role – Process Owner

Process owner is accountable for ensuring that a process is fit for purpose:

Accountabilities are

- Identifying improvement opportunities for inclusion in the CSI register
- Working with the CSI manager
- Making improvements to the process

Sponsoring, designing and change managing the process and its metrics

Defining the process strategy

Assisting with process design

Ensuring that appropriate process documentation is available and current

Defining appropriate policies and standards to be employed throughout the process

Periodically auditing the process to ensure compliance to policy and standards

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Addressing issues with the running of the process

Identifying improvement opportunities for inclusion in the CSI register

Working with the CSI manager and process manager to review and prioritize improvements in the CSI register

Making improvements to the process

## Role – Process Manager

Process manager is accountable for operational management of a process :

Accountabilities are

- Working with the process owner to plan and coordinate all process activities
- Ensuring all activities are carried out as required
- Appointing people to the required roles
- Managing resources assigned to the process
- Working with service owners and other process managers
- Monitoring and reporting on process performance
- Identifying improvement opportunities for inclusion in the CSI register
- Working with the CSI manager and process owner to review and prioritize CSI register entries
- Making improvements to the process implementation

The process manager role is accountable for operational management of a process. There may be several process managers for one process, for example regional change managers or IT service continuity managers for each data centre. The process manager role is often assigned to the person who carries out the process owner role, but the two roles may be separate in larger organizations

Working with the process owner to plan and coordinate all process activities

- Ensuring all activities are carried out as required throughout the service lifecycle
- Appointing people to the required roles
- Managing resources assigned to the process
- Working with service owners and other process managers to ensure the smooth running of services
- Monitoring and reporting on process performance
- Identifying improvement opportunities for inclusion in the CSI register
- Working with the CSI manager and process owner to review and prioritize improvements in the CSI register
- Making improvements to the process implementation

## Role – Process Practitioner

Process practitioner is responsible for carrying out one or more process activities :

Responsibilities are

- Carrying out one or more activities of a process
- Understanding how their role contributes to the overall delivery of service and creation of value for the business
- Working with other stakeholders, such as their manager, co-workers, users and customers, to ensure that their contributions are effective
- Ensuring that inputs, outputs and interfaces for their activities are correct
- Creating or updating records to show that activities have been carried out correctly



### Reader's Note

## Role – CSI Manager

The role of CSI manager is essential for a successful improvement program

CSI manager should influence positively all levels of management to ensure necessary support and resources are committed

- Developing the CSI domain
- Communicating the vision of CSI
- Ensuring that CSI roles are filled
- Designing the CSI register
- Working with service owners, SLM, the seven-step improvement manager, to identify and manage improvement opportunities
- Work with SLM to ensure that monitoring requirements are defined
- Ensuring that monitoring tools are in place to gather data
- Ensuring that baseline data is captured
- Defining and creating reports on CSI critical success factors (CSFs), key performance indicators (KPIs) and CSI activity metrics

- Working with service owners, service level managers, the seven-step improvement manager, other process managers and functions to identify and manage improvement opportunities:
  - Identifying improvement opportunities for inclusion in the CSI register
  - Reviewing and prioritizing improvements in the CSI register
  - Building improvement plans and making improvements
- Identifying other frameworks, models and standards that will support CSI activities
- Ensuring that knowledge management is an integral part of routine operations
- Ensuring that CSI activities are coordinated throughout the service lifecycle
- Reviewing analysed data
- Presenting recommendations to senior management for improvement
- Helping prioritize improvement opportunities
- Leading, managing and delivering cross-functional and cross-divisional improvement projects
- Building effective relationships with the business and IT senior managers
- Identifying and delivering process improvements in critical business areas across manufacturing and relevant divisions
- Setting direction and providing a framework through which improvement objectives can be delivered
- Coaching, mentoring and supporting fellow service improvement professionals

## Role – Seven Step Improvement Process

- Seven-step improvement process owner
- Seven-step improvement process manager
- Reporting analyst

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**Seven-step improvement process owner** The seven-step improvement process owner's responsibilities typically include:

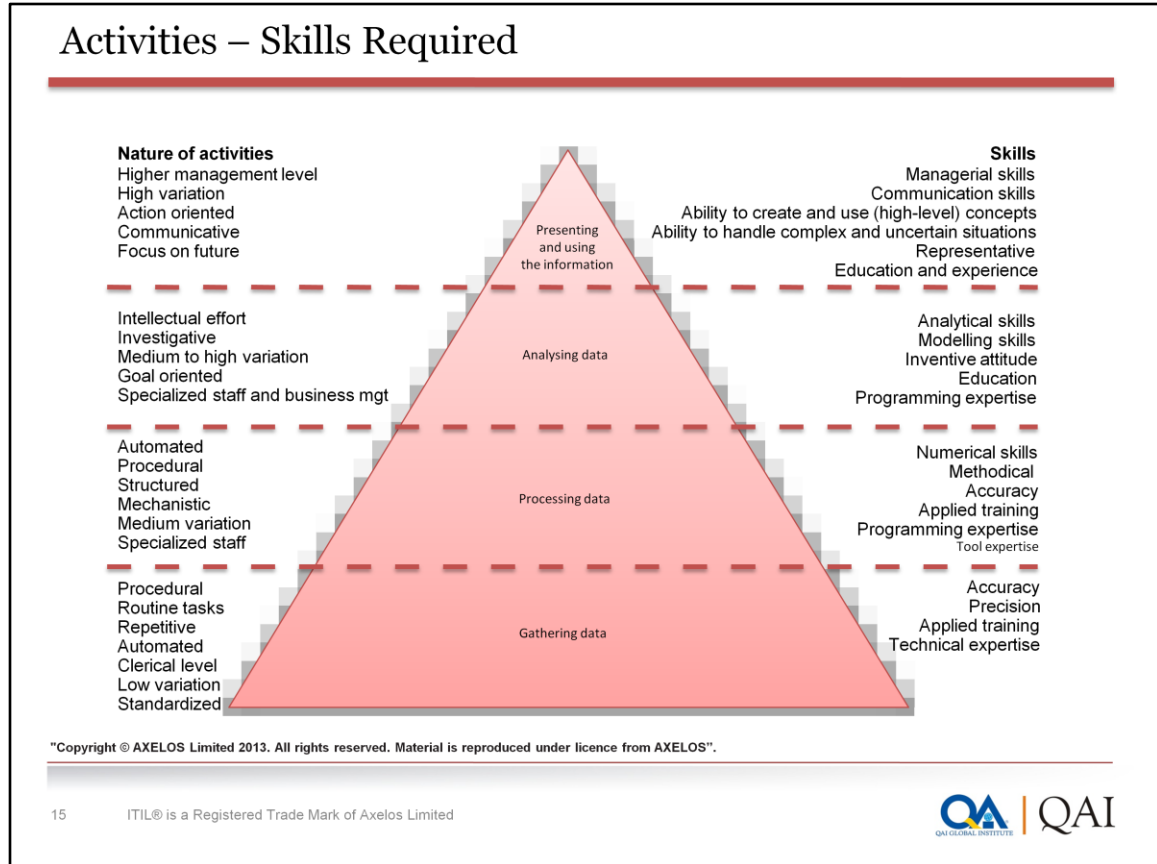
- Carrying out the generic process owner role for the seven-step improvement process (see section 6.3.2 for more detail)
- Working with the CSI manager, service owners, process owners and functions to include appropriate elements of the seven-step improvement process throughout the service lifecycle.
- Seven-step improvement process manager

The seven-step improvement process manager's responsibilities typically include:

- Carrying out the generic process manager role for the seven-step improvement process (see section 6.3.3 for more detail)
- Planning and managing support for improvement tools and processes
- Working with the CSI manager, service owners, process owners and functions to maintain the CSI register
- Coordinating interfaces between the seven-step improvement process, other processes, service managers and functions.

**Reporting analyst** The reporting analyst is a key role for CSI and will often work in concert with SLM. The reporting analyst reviews and analyses data from components, systems and sub-systems in order to obtain a true end-to-end service achievement. The reporting analyst will also identify trends and establish if they are positive or negative. This information is then used to present the data.





In addition to the specific roles and activities described above, many activities of the seven-step improvement process take place in other processes and functions throughout the service lifecycle. CSI will only be successful if the required activities are clearly identified and assigned to appropriate roles



## CSI Manager V/S Other Roles - FOCUS

	CSI	SLM	SO	BRM
IT services	S	P	P	P
IT systems	S		P	
Processes	P	S	S	S
Customers	S	P	S	P
Technology	P	S	P	

\*P – Primary; S – Secondary; Blank = no specific responsibility

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### Reader's Note

## CSI Manager V/S Other Roles - RESPONSIBILTIES

	CSI	SLM	SO	BRM
Developing and maintaining the catalogue of existing services		P	S	P
Developing and maintaining OLAs		P	S	
Gathering service level requirements (SLRs) from the customer	S	P	S	P
Negotiating and maintaining SLAs with the customer	S	P	S	S
Understanding underpinning contracts (UCs) as they relate to OLAs and SLAs	S	P	S	S
Ensuring appropriate service level monitoring is in place	P	P	S	

\*P – Primary: S – Secondary: Blank = no specific responsibility



### Reader's Note

## CSI Manager V/S Other Roles - RESPONSIBILTIES

	CSI	SLM	SO	BRM
Producing, reviewing and evaluating reports on service performance and achievements regularly	P	P	P	P
Conducting regular meetings with the customer to discuss service level performance and improvement	S	P	S	S
Conducting yearly SLA review meetings with the customer	S	P	S	S
Ensuring customer satisfaction with the use of a customer satisfaction survey	S	P	S	P
Initiating appropriate actions to improve service levels through service improvement plans (SIPs)	P	P	P	P
Negotiating and agreeing OLAs and SLAs	S	P	S	S

\*P – Primary: S – Secondary: Blank = no specific responsibility



### Reader's Note

## CSI Manager V/S Other Roles - RESPONSIBILTIES

	CSI	SLM	SO	BRM
Ensuring the management of UCs as they relate to OLAs and SLAs	S	S	S	
Working with the service level manager to provide services to meet the customer's requirements	P		P	P
Appropriate monitoring of services or systems	P	P	S	
Producing, reviewing and evaluating reports on service or system performance and achievement to the service level manager and the service level process manager	P	P	P	S
Assisting in appropriate actions to improve service levels (SIP)	P	P	P	P

\*P – Primary: S – Secondary: Blank = no specific responsibility



### Reader's Note

## Responsibility model – RACI

- Definitions of accountability and responsibility are essential for effective service management
  - Responsible
  - Accountable
  - Consulted
  - Informed

RACI is an acronym for the four main roles of being:

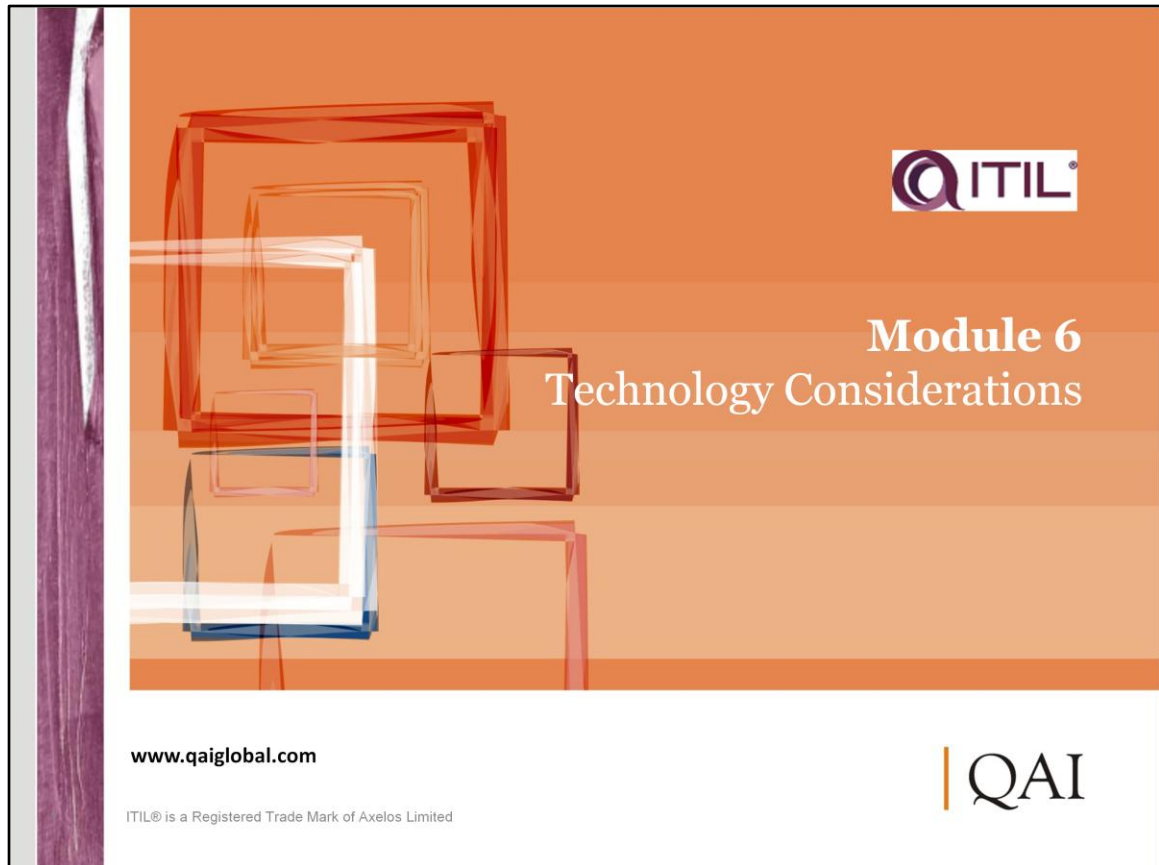
**Responsible** The person or people responsible for correct execution – for getting the job done

**Accountable** The person who has ownership of quality and the end result. Only one person can be accountable for each task

**Consulted** The people who are consulted and whose opinions are sought. They have involvement through input of knowledge and information

**Informed** The people who are kept up to date on progress. They receive information about process execution and quality.

When using RACI, there is only one person accountable for an activity for a defined scope of applicability. Several people may be responsible for executing parts of the activity. In this model, accountable means end-to-end accountability for the process. Accountability should remain with the same person for all activities of a process



## Service Management Suites

Software vendors to provide tools and suites of tools that are very compatible with the ITIL process framework providing

- Integration between the processes
- Associated record types
- Offered via cloud computing

Functionality of all these types of tool creates a rich source of data and provides many of the inputs to CSI

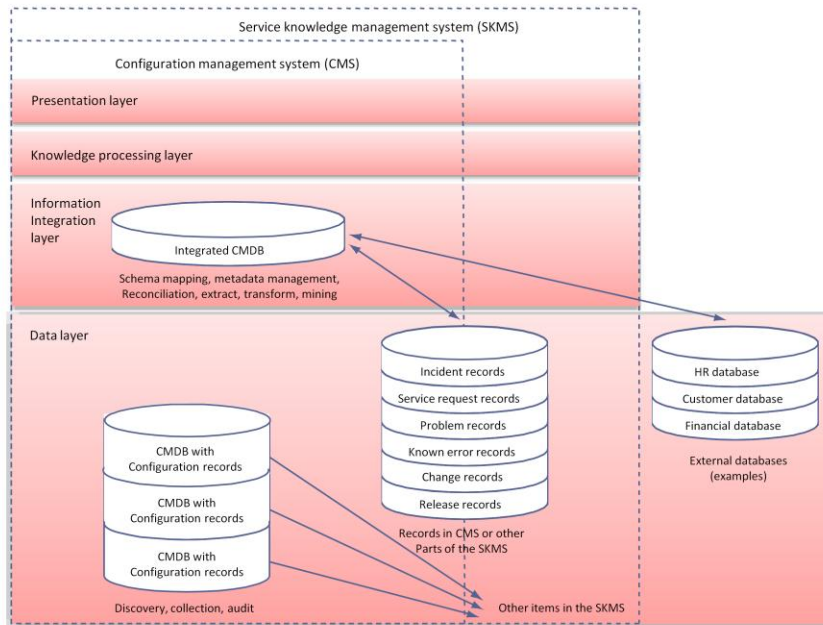
- Incidents
- Problems
- Changes

**Incidents** Incidents that capture the service or the configuration item (CI) affected are a prime input to CSI enabling an understanding of the issues affecting the overall service provision and related support activities. Incident matching functionality allows the service desk to quickly relate like issues and create master records that highlight common situations affecting the users with associated resolution data to enhance problem identification and reduce the mean time to restore service (MTRS).

**Problems** These are defined with integrated links to the associated incidents that confirmed their existence. Using the configuration data from the configuration management system (CMS) to understand the relationships, problem management now has a source of related data to enable the root cause analysis process including change and release history of the affected CI or service.

**Changes** These are often the first area of investigation following a service failure, again using the integration capabilities of the ITSM tool suite; it can be easier to trace the changes that have been made to a service or a CI. The change schedule and projected service outage (PSO) can be automated using calendaring capabilities to ensure visibility of changes and calculated impacts to the service level agreements (SLAs). Recent improvements in the ITSM tools now allow for automated risk assessment and prioritization of changes, highlighting potential conflicts and reducing the administrative overhead for the change advisory board

## Architectural Layers of CMS



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The integration of incidents, problems and changes within a single solution also provides a platform for these toolsets to introduce web-style enterprise search functionality, which will search across this semi-structured data looking for specific error codes, phrases and issues



## SM Suites - Functionality

- Configuration Data
- Releases
- SLM

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Tool functionality in support of service asset and configuration management and the CMS has never been more advanced, with extensive discovery and service dependency mapping capabilities. The CMS is the foundation for the integration of all ITSM tool functionality and is a critical data source for the CSI mission. While the service provider must still define the overall service asset and configuration management process and create the data model associated with their specific environment, the tools to establish and manage the CMS and the overall service delivery architecture have become very powerful. Key functionality includes: discovery and reconciliation capabilities to capture CIs within the environment; visualization of the hierarchy and CI relationships for ease of understanding and support; audit tools to streamline the verification activities; and the ability to federate data sources where appropriate.

The ability to coordinate releases and manage the contents of these releases is also more mature, with native support for the definitive libraries and key integration points to the CMS and to specialized version control software packages. Functionality typically includes support for release records that consolidate and contain release contents, enabling the attachment of related objects and documents pertaining to the release. Integration is normally provided to enable hyperlinking to the associated change records that are part of a release and the related incident, problem or service request records that were the catalyst for the original request for change (RFC)

Service level management (SLM) functionality is also well supported within the ITSM tool suites of today, enabling the linkage of incidents, problems, changes and releases to associated SLM records such as SLAs, operational level agreements (OLAs) and underpinning contracts (UCs). Most tool suites support automated SLA monitoring (SLAM) charts highlighting which agreements are within tolerance, are threatened or have been broken. This automation is driven by the ability to define key SLA criteria and use related operational support records to trigger thresholds



## Systems & NW Management

These tools are

- Specific to Technology
- Supports Service Management
- Correlation
- Generates ERROR messages

This data feeds into

- Incident Management
- Availability Management
  - MTRS
  - MTBF

Also Supports

- S/W Deployments
- Supports in Change & Release and Deployment Processes

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These tools are typically specific to the technology platforms that are under management and are used to administer the various domains but can provide a wide variety of data in support of the service management mission. These tools generate error messages for event management and correlation that ultimately feed the incident management and availability management processes. Utilization data from these platforms is the prime source for capacity and performance management and the most accurate method for establishing true availability of components that will support improvements in the area of MTRS and mean time between failures (MTBF). As the dynamic, real-time view of the current state of the service delivery chain this information can be integrated with the known service dependencies within the CMS to give enhanced visibility into the service provision to the end user. Many of these tools also support technology proprietary methods for software deployment within their domains (e.g. release of patches, pushing of firmware upgrades to remote components on the network) and can provide metric data in support of CSI for the change management and release and deployment management processes, along with dynamic updates to the CMS

## Event Management

Events are created by IT service, Configuration Item & Monitoring Tool

Events can be programmed to communicate

- Operational information
- Warnings
- Exceptions

Event management software can perform

- Event correlation
- Impact analysis
- Root cause analysis to separate out these false-positive messages

Warning and exception events are created when a tool senses a threshold has been met or an error condition is discovered. The major issue with this capability can be the significant volume of messages that are created from both the actual event and the up- and down-stream impact, which can make it difficult to determine the real issue.

Specialized event management software can perform event correlation, impact analysis and root cause analysis to separate out these false-positive messages. Events are captured and assessed by rules-based, model-based and policy-based correlation technologies that can interpret a series of events and derive, isolate and report on the true cause and impact. These technologies support the CSI mission by providing information on availability impacts and performance thresholds that have been exceeded related to capacity or utilization. Well-correlated event management data provides a cost-effective method to improve the reliability, efficiency and effectiveness of the cross-domain IT infrastructure that supports the provision of business services.

A by-product of the extensive and often complex checks performed by these event management products is the collection of raw performance data to be used by many processes – for example, within capacity management analysis activities. This would allow simulated log-ons at any time during the day or night to check database availability and performance.

## Event Management

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*Rules-based*

*Model-based*

*Policy-based*

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## Performance Management

Tools allow for the collection of availability, capacity and performance data from a multitude of domains and platforms within the IT infrastructure environment

- Analysis of responsiveness, transaction and traffic throughput - to optimize performance of the IT services
- Workload assessment with predictive trend analysis of future growth and required capacity for each of the IT services
- The construction of performance, resource and data usage profiles
- Predictive performance technology enabling the evaluation of tuning alternatives for systems, networks, databases and applications
- Generation of the data required to report on SLAs, identify opportunities for improvement to include in the CSI register



### Reader's Note

## Statistical Analysis Tools

Raw data from many other tools needs to be captured into a single repository for collective analysis

- This data provides input to the availability management and capacity management processes and supports the analysis of

MTRS – MTBF - Service Failure - Demand Management – Workload Analysis - Service Modeling - Application Sizing

Tools provide the functionality to

- Group data logically
- Model current services
- Enable predictive models

To support future service growth, utilizing a wide array of analysis techniques



### Reader's Note

## Project & Portfolio Management

Tools support the registration, decision support, costing, resource management, portfolio visibility and project management

Integration points generally include:

- Task assignments for development activities
- Change and release build based on the agreed portfolio
- Capture of resource data from ITSM
- Total cost of ownership (TCO) of the service portfolio
- Resource utilization data to financial management



### Reader's Note

## Financial Management for IT Services

Financial management is a critical component of the IT services. Tools collect raw metering data sources

- Operating systems
- Databases
- Middleware
- Applications

Associating this usage with users of services from specific departments

Data collectors gather critical usage metrics for each of the technologies being measured, link in the costing information from

- Accounting software
- Then report
- Analyze
- Allocate costs



### **Reader's Note**



## Financial Management for IT Services

Enabling customers to evaluate the information in many dimensions

Most tools interface with the CMS to manage costs for each CI and resource to generate data related to billing, reporting, charging and cost analysis



### **Reader's Note**

## Business Intelligence / Reporting

- Statistical analysis environment that requires a toolset to support technical data is not enough
- The decisions made based on Business related Data is Critical

IT services becomes increasingly complex

- Distribution of services expands
- Centralized control is diminished

There will be a growing reliance on tools and software functionality to

- Administer
- Manage
- Improve

To ensure overall governance of IT service provision



### Reader's Note



## Implementation – Where to Start

- Important to have identified and filled the critical Roles
  - CSI manager
  - Service Owner
  - Reporting Analyst
- Monitoring and reporting on
  - Technology metrics
  - Process metrics
  - Service metrics need to be in place.
- Internal service review meetings need to be scheduled in order to review
  - Internal IT review to occur before any external review meeting

Immature processes usually have poor data quality if any at all. This is often because there are no processes or very ad hoc processes. Other organizations have multiple processes working with multiple tools being used to support the processes. If any monitoring is going on it may be at a component or application level but not from an end-to-end service perspective. There is no central gathering point for data, no resources allocated to process and analyse the data, and reporting consists of too much data broken into too many segments for anyone to analyse. Some organizations don't have any evidence of reporting at all

## Where to Start – Lifecycle Approach

To start looking at the output from the different lifecycle stages

Lifecycle Stage personnel need to

- Monitor
- Report on their activities
- Trend evaluation and analysis
- Identify improvement opportunities

This needs to be done by every part of the lifecycle

Until the service is implemented we may not know if the right strategy was identified, so we may not have input until later for service strategy improvement



### Reader's Note

## Where to Start – Functional Approach

- Components failure has a direct impact on service availability
- Its a short-term solution
- End-to-End Service review is long term

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### **Reader's Note**

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## Governance

Governance should be addressed from a strategic view

- ITSM needs to expand from Operational to Tactical to Strategic

### To address

- Business Process Automation
- Market Globalizations
- Increasing Dependency

### For

- Reliable management
- Delivery of core business services

The Control OBJECTives for Information and related Technology (COBIT) is a governance and control framework for IT management created by ISACA and the IT Governance Institute (ITGI).

COBIT is based on the analysis and harmonization of existing IT standards and good practices and conforms to generally accepted governance principles. It covers five key governance focus areas: strategic alignment, value delivery, resource management, risk management and performance management. COBIT is primarily aimed at internal and external stakeholders within an enterprise who wish to generate value from IT investments; those who provide IT services; and those who have a control/risk responsibility.

COBIT and ITIL are not 'competitive', nor are they mutually exclusive – on the contrary, they can be used in conjunction as part of an organization's overall governance and management framework. COBIT is positioned at a high level, is driven by business requirements, covers the full range of IT activities, and concentrates on what should be achieved rather than how to achieve effective governance, management and control. ITIL provides an organization with best-practice guidance on how to manage and improve its processes to deliver high-quality, cost-effective IT services. The following COBIT guidance supports strategy management and continual service improvement (CSI):

COBIT maturity models can be used to benchmark and drive improvement.

Goals and metrics can be aligned to the business goals for IT and used to create an IT management dashboard.

The COBIT 'monitor and evaluate' (ME) process domain defines the processes needed to assess current IT performance, IT controls and regulatory compliance

## Governance

### To achieve we need

- Formalized service management processes
- Specialized service
- Work management tools

Introducing service management processes into internal IT organizations requires a transformation to the IT culture

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## Organizational Change

Frameworks fail to take into account the softer aspects involved in organizational change such as overcoming resistance to change, gaining commitment, empowering, motivating, involving and communicating

Eight steps that need to be implemented, and the main reasons why

- transformation efforts fail (from Kotter, 1996)
- Create a sense of urgency
- Form a guiding coalition
- Create a vision
- Communicate the vision
- Empower others to act on the vision
- Plan for and create short-term wins
- Consolidate improvements and produce more change
- Institutionalize the change



### Reader's Note

## Communication Strategy & Plan

Timely and effective communication forms an important part of ITSM it is critical that participants and stakeholders are informed of all changes to the

- Processes
- Activities
- Roles and Responsibilities

The goal of the communications plan is to build and maintain awareness, understanding, enthusiasm and support among key influential stakeholders

- Define Communications Plan
  - Who is messenger
  - What is Message
  - Who is targeted Audience
  - Time & Frequency
  - Method of Communication
  - Provide Feedback Mechanism
- Communication Transformation

The Communications plan should include a role to:

- Design and deliver communications to the different CSI roles, stakeholders such as other ITSM process roles and identified target audiences
- Identify forums for customer and user feedback
- Receive and deliver responses and feedback to the project manager and/or process team members.
- Key activities for the communications plan include:
  - Identifying stakeholders and target audiences
  - Developing communications strategies and tactics
  - Identifying communication methods and techniques
  - Developing the communications plan (a matrix of who, what, why, when, where and how)
  - Identifying the project milestones and related communications requirements
- The tools and techniques to use to gain a perspective on the level of audience understanding, e.g. surveys, website hits, event participation etc.



## Challenges

Implementing any type of change within an organization is a major Challenge

- Lack of management commitment
- Inadequate resources, budget and time
- Lack of mature service management processes
- Lack of information, monitoring and measurements
- Lack of knowledge management
- A resistance to planning and a reluctance to be proved wrong
- Lack of corporate objectives, strategies, policies and business direction
- Lack of IT objectives, strategies and policies
- Lack of knowledge and appreciation of business impacts and priorities
- ....



### Reader's Note

## Challenges

- Diverse and disparate technologies and applications
- Resistance to change and cultural change
- Poor relationships and communication, and lack of cooperation between IT and the business
- Lack of tools, standards and skills
- Tools too complex and costly to implement and maintain
- Over-commitment of resources with an associated inability to deliver (e.g. projects always late or over budget)
- Poor supplier management and/or poor supplier performance

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### Reader's Note

## Critical Success Factors

- Appointing a CSI manager
- Adopting CSI within the organization
- Management commitment – ongoing, visible participation in CSI activities such as creating vision for CSI, communicating vision, direction setting and decision-making, when appropriate
- Defining clear criteria for prioritizing improvement projects
- Adopting the service lifecycle approach
- Having sufficient and ongoing funding for CSI activities
- Resource allocation – people dedicated to the improvement effort not as just another add-on to their already long list of tasks to perform
- Technology supporting the CSI activities
- Adopting processes – embracing service management processes instead of adapting it to suit their own personal needs and agenda

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### Reader's Note

## Risks

- Being over-ambitious
- Not discussing improvement opportunities with the business
- Not focusing on improving both services and service management processes
- Not prioritizing improvement projects
- Implementing CSI with little or no technology
- Implementing a CSI initiative with no resources
- Implementing CSI without knowledge transfer and training

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### Reader's Note

## Risks

- Not performing all steps of the seven-step improvement process
- Lack of making strategic, tactical or operational decisions based on knowledge gained
- Lack of management taking action on recommended service improvement opportunities
- Lack of meeting personnel in the business to understand new business requirements
- Lack of communication/awareness campaign for any improvement, or it is late or missing altogether
- Not involving the right people at all levels to plan, build, test and implement the improvement
- Removing testing before implementation or only partially testing so all aspects of the improvement (people, process and technology) must be tested, including the documentation



### Reader's Note



## CSI Conclusions

- Implementing CSI is not an easy task: it requires a change in management and staff attitudes and values that continual improvement is something that needs to be carried out proactively and not reactively.
- Identifying the risks and challenges before implementing CSI is a critical first step. A SWOT analysis (examining strengths, weaknesses, opportunities and threats) can help identify these items. It is important to define mitigation strategies for the risks and identify how to best overcome challenges that an organization may encounter.
- Knowing the CSFs before undertaking CSI implementation will help manage the risks and challenges. Don't try to change everything at once



### Reader's Note