IT Service Management - ITIL

Information Technology Infrastructure Library

IT Service Management ~ ITSM covers IT services, processes, technology, staffing and personnel practices that contribute to the management of IT infrastructure

ITIL® represents the best practices in IT Service Management

- ✓ Becoming international standard
- ✓ Adopt & Adapt to organization's business needs
- ✓ The Client's business enablement is the main focus – not the technology
- ✓ Provides common language for both business and IT to operate from
- ✓ Makes processes consistent

Think of the service management as customer service for IT people

ITIL – set of publications that provide specific guidance to industry sectors or types and source of best practice for service management

The benefits of best practice guidance are that it:

- *Can be adopted and adapted:* Adopt the ITIL processes and practices and adapt them to suit almost any organization.
- *Improves efficiency:* It can improve efficiencies in the organization.
- *Satisfies customers: ITIL* can increase the organization's ability to provide services that meet the needs of it's customers.
- *Is scalable:* One size fits all. It doesn't matter if you have three people in the IT department or 3000, ITIL is just as applicable.

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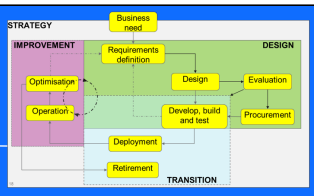
Let’s define few terms first

The general four main elements



Service is **a means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks**.

- **The service lifecycle**: The life of an IT service from inception through a development project and introduction into day-to-day use
- **Processes**: Sets of ways of doing things
- **Functions**: Organizational departments – the source of the resources who do the stuff needed to manage IT services
- **Roles**: Sets of responsibilities allocated to people or departments

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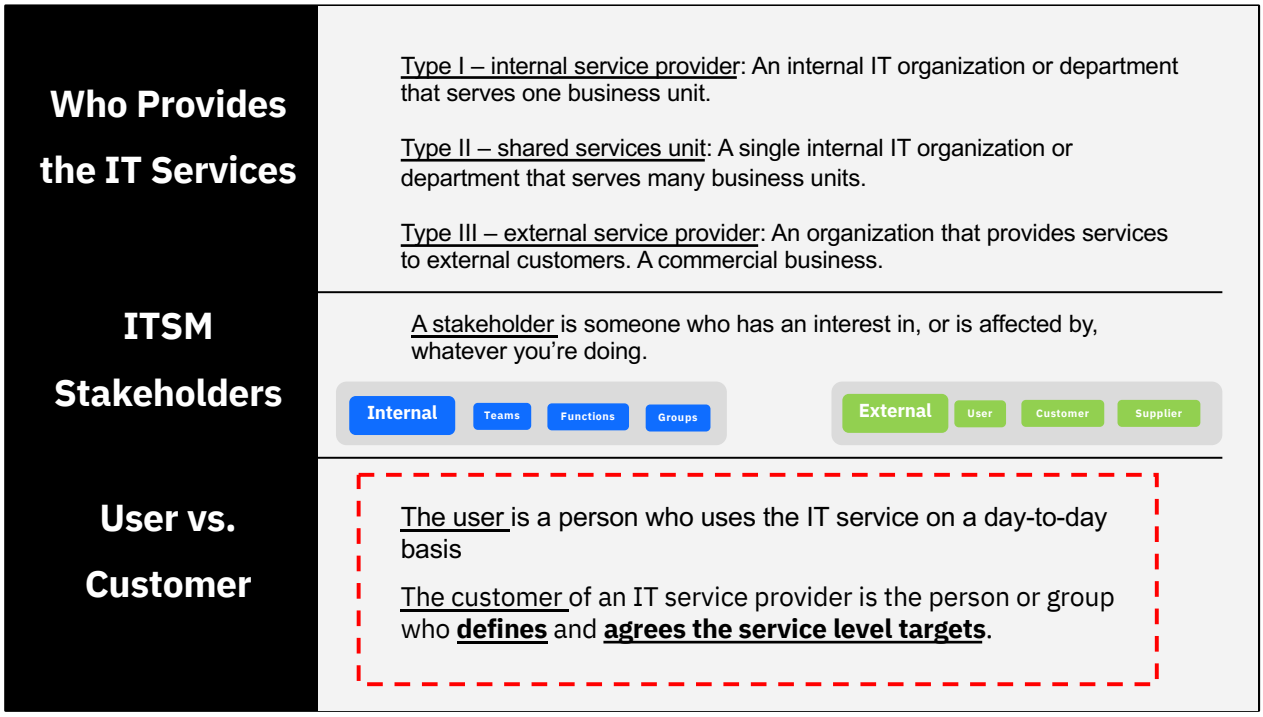
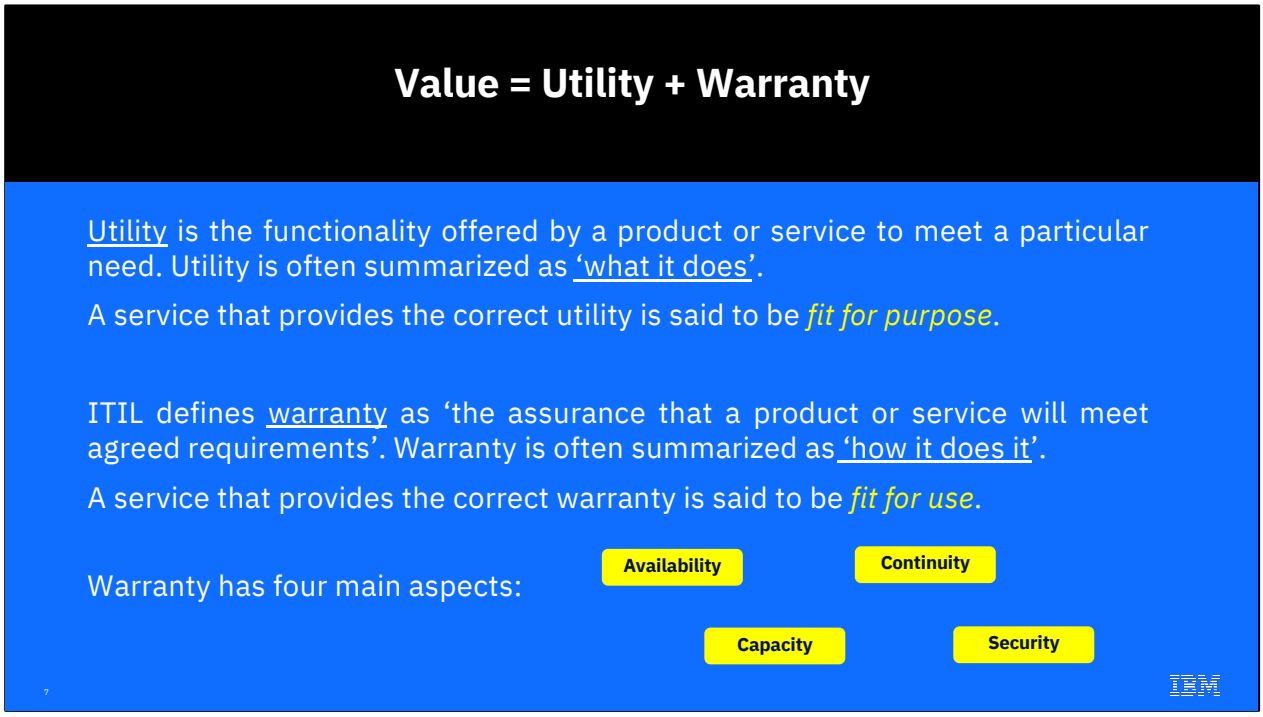


Service level describes, usually in measurable terms, the services a **service** provider furnishes a customer within a given time period. E.g. when used as a metric, **service level** measures the percentage of incoming calls that an agent answers live in an established amount of time.

Internal stakeholders are entities within a business (e.g., employees, managers, the board of directors, investors).
External stakeholders are entities not within a business itself but who care about or are affected by its performance (e.g., consumers, regulators, investors, suppliers).



Definition of **Service Value**: An objective or subjective benefit appreciated exclusively by the beneficiary from a service. Service value means **the difference between the original cost and the net salvage value of utility property**.

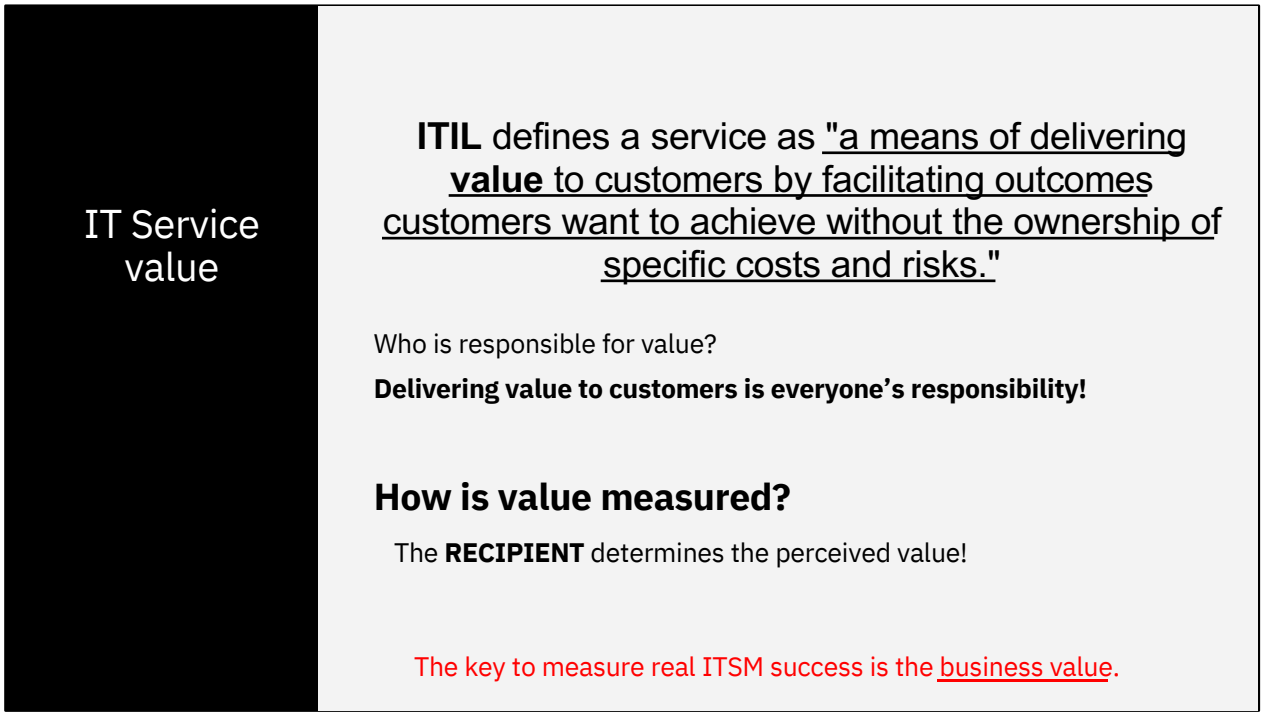
Availability is the ability of an IT service or configuration item to perform its agreed function when required

Continuity is the unbroken and consistent existence or operation of something over time.

Service capacity is the volume that a **service** can handle while maintaining standards of quality and performance.

Security refers to **the methods, tools and personnel used to**

defend an organization's digital assets. The goal of IT security is to protect these assets, devices and services from being disrupted, stolen or exploited by unauthorized users, otherwise known as threat actors.



In other words, when we do something for another organization that gives them something they want or value, we're providing a service. Value to a customer can change over time and staying connected to your customer base will help you track that.
In IT service management (ITSM) it might be a reduction in cost or cycle times. It depends on your customer and their wants/needs at the time. For example, a start-up IT organization must be very agile. However, large organizations are more likely looking for long-term IT projects with sustainability.

IT professionals do not typically focus on delivering value to customers and that's because service providers in general don't understand what value is – it's not quantifiable, it's not tangible, it's not definable, it's not measureable and so it can frighten them.
Management leader Peter Drucker famously said: *"Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for."*
To define and understand value we need to look to the customer to know what they want from the end service or product. The customer knows what they need it to *do* – it's not a case of just creating a website if the website doesn't facilitate all of the

customer's needs.
IT professionals and service providers need to start working closely with customers and end users to define the value and build long-lasting relationships, something seldom seen in IT. Understanding where the customer sees value needs to come from the top down; value is co-created and co-defined by both service provider and customer to decide the necessary activities and processes. If the value is known by the senior business managers in the IT/service provider organization it will be reflected in the services produced by IT professionals.

Value from the customer perspective
This is not to say IT professionals choose not to add value; IT professionals believe what they do is of value but the problem is it's from *their* perspective and not the *customer's*.
All organizations and senior business managers should be focused on what Jan Carlzon calls "Moments of Truth" – every single point of contact with a customer. We need to focus less on improving targets, measures and processes and more on trying to delight our customers at each Moment of Truth. It's been said before but I'll say it again: IT professionals are driven more by the technical side of what they do and less by the end-to-end service and this is something that needs to change. Service catalogues tell us which services are providing our customers with the most value and which are redundant and yet you'll rarely come across an organization with an accurate service catalogue. It's no good focusing on processes unless you have an understanding of how to create value for the customer and to do that we need the customer to tell us where the value comes from. The relative value of each service can then be recorded in the service catalogue and can then be used to prioritize improvements, tasks and activities.
The services IT provides to customers can provide value in a number of ways, dependent on the industry. Services can support the production and manufacturing of products, they can underpin financial services in the banking industry, they can ensure compliance and safety in the drug and airline industries and they can provide a corporate image and generate brand and shareholder value with public facing websites. Knowing your customer, knowing their industry and understanding where they find value in the services you provide is how you can increase the value you deliver.
It's so simple and yet we aren't doing it. Why? Face-to-face interaction has given way to technology. Too often we send an email instead of picking up a phone. We take fifteen minutes to word an email and wait hours, sometimes days, for a reply when the issue could have been resolved over the phone within minutes. The only way we can know exactly what a customer defines as value is to *ask* them and not via email; not everything they want comes across in an email. It really needs to be a face-to-face discussion with customers, wherever possible. A steering group should be established that allows senior customer and IT managers to take a step back, take a corporate view and decide what is needed and prioritize the activities of those creating and providing the services.
A corporate view from the top with collaboration from the customer, IT and the business is the answer. Once you've got that, all processes and activities can be

driven based on service importance and value.
There's room for development in best practice when looking at soft skills and the more practical, less technical side of IT. ITIL® touches on service strategy and there is mention of it in **project management best practice** too, but there's not enough there yet to really drive a change.

Focusing on the value stream
IT practitioners need to begin to focus more on the *value stream* following the Moment of Truth – that's how you manage the point of contact and deliver value to the customer.
There are five types of value stream/Moments of Truth in IT:

- **Customers get in touch when things go wrong**. This could be a failed service or something that isn't performing right on a laptop or PC – anything that needs IT involvement. Think about what route the customer has to follow in your organization when an issue occurs, who they have to go through and the amount of time it takes for the issue to be resolved. Is it an efficient service?
- **A standard request** – for example, a new employee needs a computer and phone, etc. How quickly can that be fulfilled?
- **The business has a new requirement** – how easy and effective is it for our business and customers to register their needs and how accurately are they captured and delivered?
- **A change in strategy** or a change in service, possibly even a new service. How can and should we respond?
- **Operational service** – every time someone logs on to a service it needs to be simple. They should be able to find exactly what they are looking for quickly. For example, a retailer's website would be pointless if customers couldn't find where to pay for their items.

Does the customer walk away from their interaction feeling unsatisfied, not listened to or confused? If the answer is yes then you're not delivering value to *them.* We should be making this process as simple as possible for the customer, not us and that's where value comes from – effective and efficient services that actually deliver something to the customer, or to their customer.

IT ASSETS

ITIL defines an asset as any resource or capability. The assets of a service provider include anything that may contribute to the delivery of a service. Assets can be management, organization, process, knowledge, people, information, applications, infrastructure, and financial capital.

Assets

RESOURCES

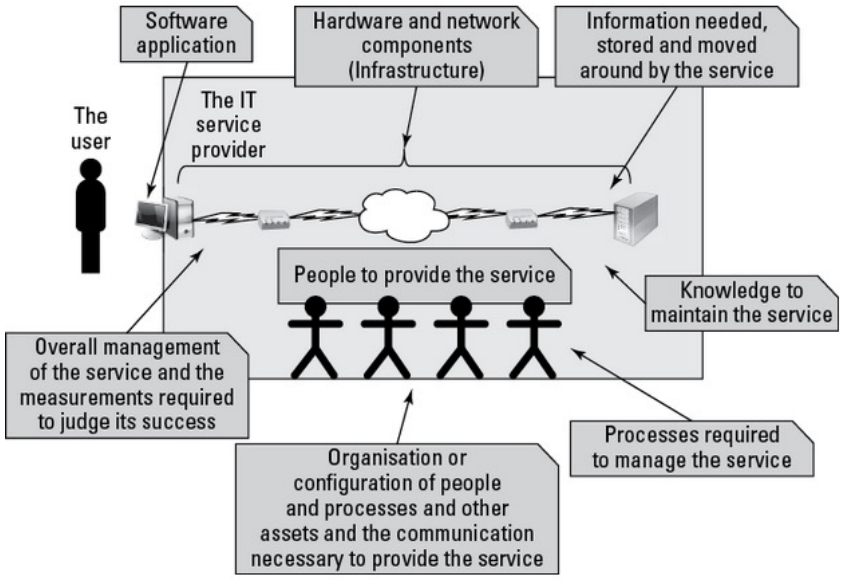
Resource is a generic term that includes IT infrastructure, people, money or anything else that may help to deliver an IT service.

CAPABILITIES

Capability is the ability of an organization, person, process, application, component or IT service to carry out an activity. Capabilities are intangible assets of an organization.

Traditional view sees IT Assets in an organization represent the CAPEX (the CAPital EXpenditures) part of IT Infrastructure. They can be hardware or software. Hardeware assets may include workstations and tehir components, network decvices, pronters, smartphones, etc. Software assets may include licenses, installations, OSs, etc. IT asset management is a set of business practices that incorporates all IT assets in an organization. It manages the overall life-cycle of assets by joining financial, inventory, contractual and risk management responsibilities for strategic decision making. However ITIL extends this definition and adds any resource or capabilty.

IT SERVICE and its Assets



Process, Procedure, Function and Role – the organizational aspects of ITIL

PROCESS
is a structured set of activities designed to accomplish a specific objective.

The **procedure** to tell staff how to perform each activity

FUNCTION
is a team or group of people and the tools they use to carry out one or more processes or activities

A **role** is a set of responsibilities, activities and authorities granted to a person or team. A role is defined in a process.

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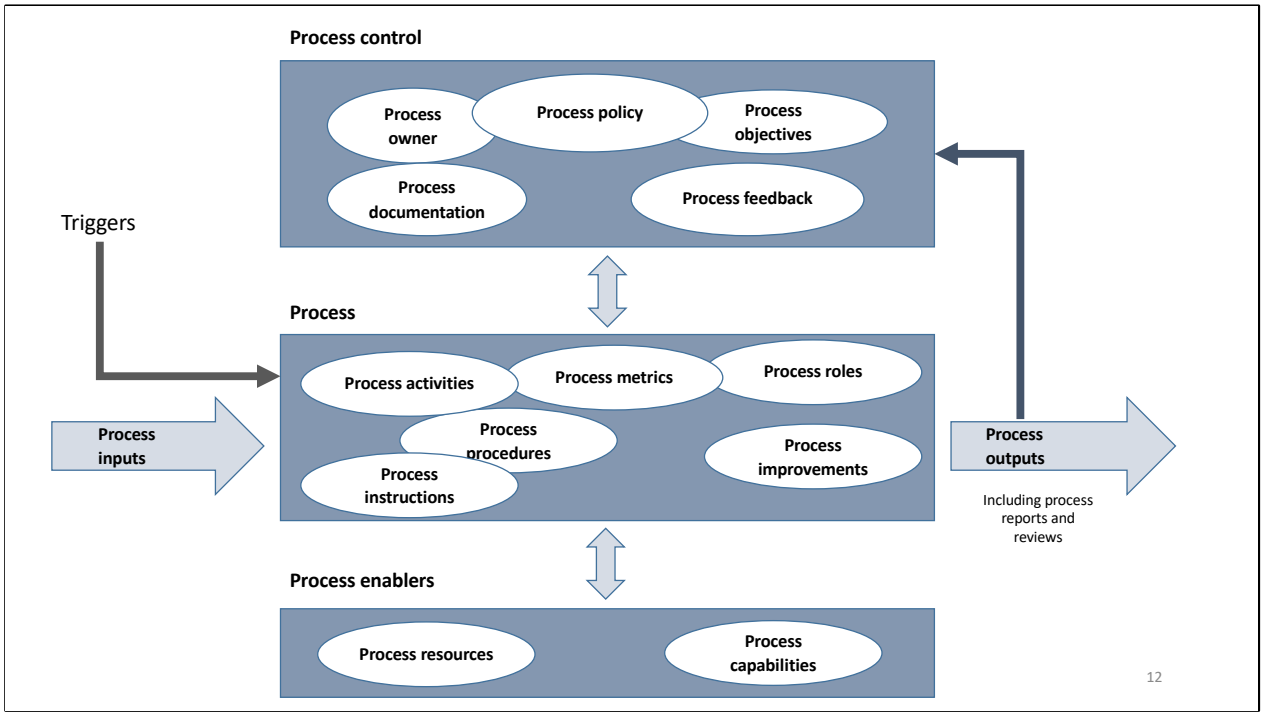
Process control
Process owner
Process policy
Process objectives
Process documentation
Process feedback
Triggers
Process
Process activities
Process metrics
Process roles
Process procedures
Process improvements
Process instructions
Process inputs
Process outputs
Including process reports and reviews
Process enablers
Process resources
Process capabilities
12

A perfect process will deliver no value if there aren't enough resources to implement it.

PROCESS CHARACTERISTICS

MEASURABLE	SPECIFIC RESULTS	DELIVERS TO CUSTOMER OR STAKEHOLDER	RESPONDS TO SPECIFIC TRIGGERS

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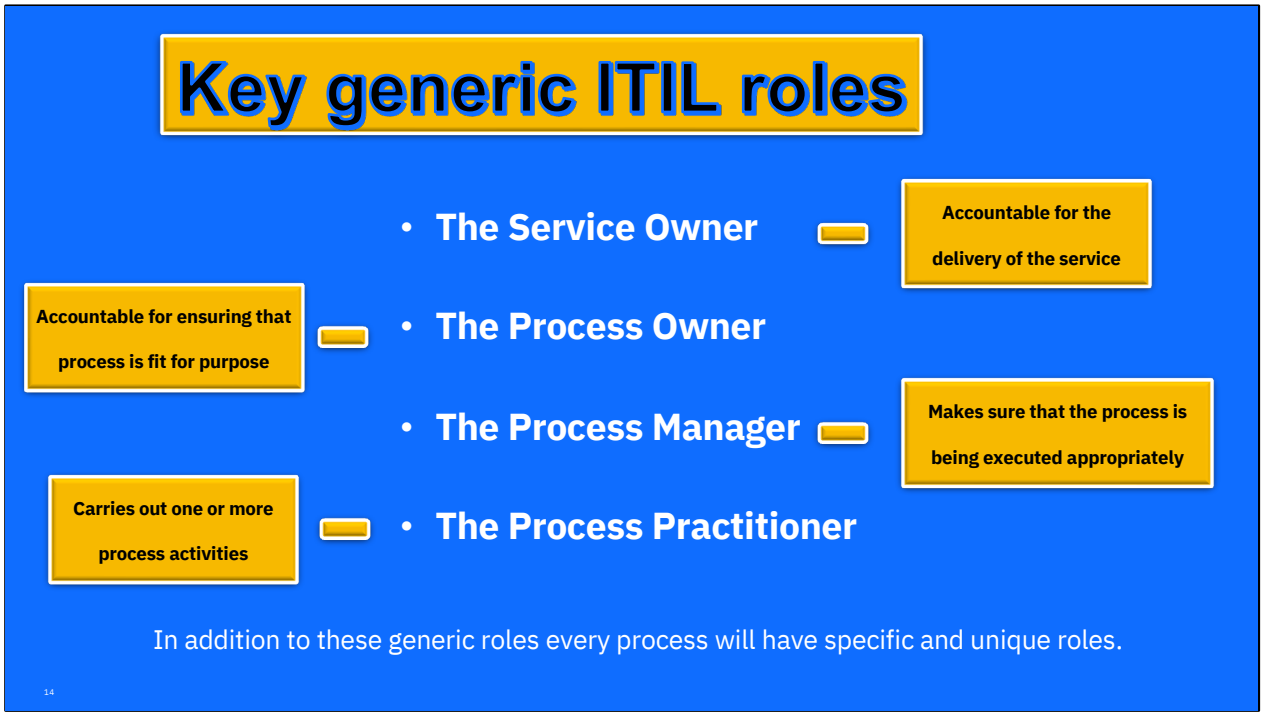

The service owner

The service owner owns a service. The service owner is usually someone in the IT provider organisation, and the role provides a point of contact for a given service. The service owner doesn't necessarily know everything about the service, but he does know a man (or woman) who does. Here are some responsibilities of the service owner role:

- Participates in internal service review meetings
- Represents the service across the organization
- Represents the service in change advisory board meetings
- Is responsible for continual improvement of the service and management of change in the service
- Understands the service and its components

The process owner

A process owner owns a process. This role is accountable for the process. For example, if the incident management process doesn't achieve its aim of restoring the service to the user, the process owner gets shouted at (hopefully not literally). The process owner is accountable for the process and is responsible for identifying improvements to ensure that the process continues to be effective and efficient. Here are a few responsibilities of the role:

- Ensuring that the process is performed in accordance with the agreed and documented process
- Documenting and publicising the process
- Defining and reviewing the measurement of the process using metrics such as key performance indicators (KPIs)

Every SM process adopted should have a defined process owner.

The process manager

A process owner (see the previous section) is accountable for the process, but may not get involved in the day-to-day management of the process. This is a separate role often allocated to a different person: the process manager. A process manager is responsible for operational management of a process. The process manager's responsibilities include planning and coordination of all activities required to carry out, monitor and report on the process.

Every service management process should have a defined process manager – though this may, of course, be the same person as the process owner.

The process practitioner

The process practitioner is the role that carries out one or many of the process activities. Basically, these people are the ones who do the work. However, it's important that they have a clear list of responsibilities related to the process that they get involved in.

Fit for purpose - well equipped or well suited for its designated role or purpose.

Generic Service Management Roles

PROCESS OWNER	PROCESS MANAGER	PROCESS PRACTITIONER	SERVICE OWNER
PO role SHOULD NOT be shared	Operational management of a process	Carries out the process activities	Accountable for the delivery of specific IT service
Defining the process strategy	Work with the process owner	Understands how their role links to services and creates value	Attends CAB
Assist the process design including metrics	Makes sure all process activities are carried out	Work with other stakeholders	Attends int. and ext. service review meeting
Process documentation assurance	Monitoring and reporting the process performance	Makes sure that inputs, outputs and interfaces are correct	Communicate with customers
Auditing the process	Appointing staff	Create and update records of their activities	Serving as SPOC
Process improvement	Work with service owner(s)		Participate in SLA and OLA negotiations
Polices and standards definition	Identify improvements		
Sponsoring the process	Makes improvements to process implementation		

CAB – Change Advisory Board
SPOC – Single Point of Contact
SLA – Service Level Agreement
OLA - Operation Level Agreement

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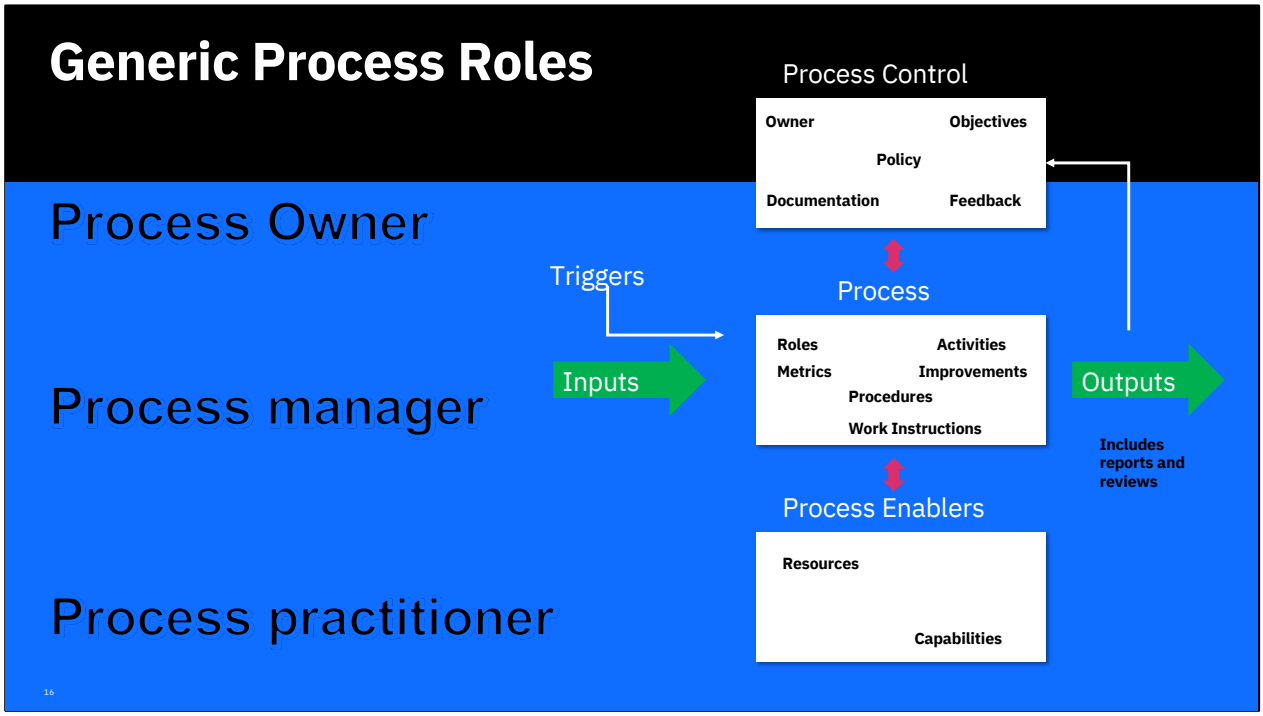
Change-advisory board.
A **change-advisory board** (CAB) delivers support to a **change**-management team by advising on requested **changes**, assisting in the assessment and prioritization of **changes**.

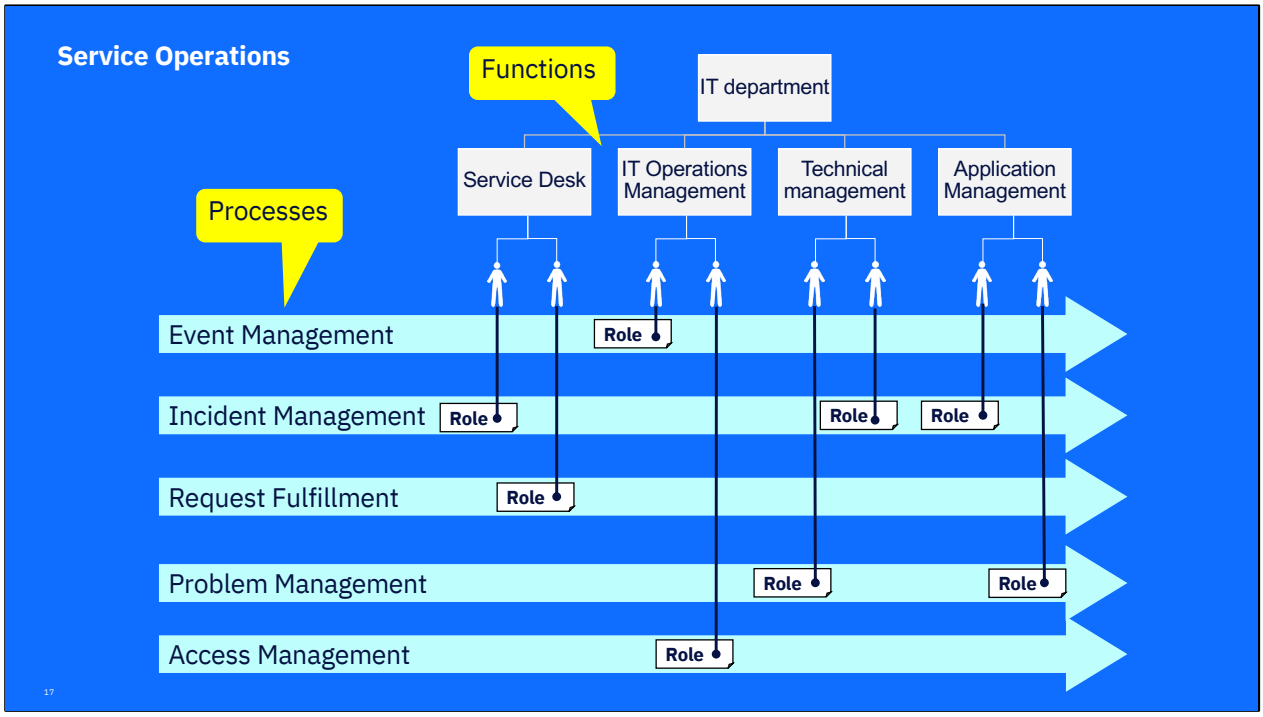
Service Level Agreement
A **service-level agreement** (SLA) is a commitment between a **service** provider and a client. Particular aspects of the **service** – quality, availability, responsibilities – are agreed between the **service** provider and the **service** user.

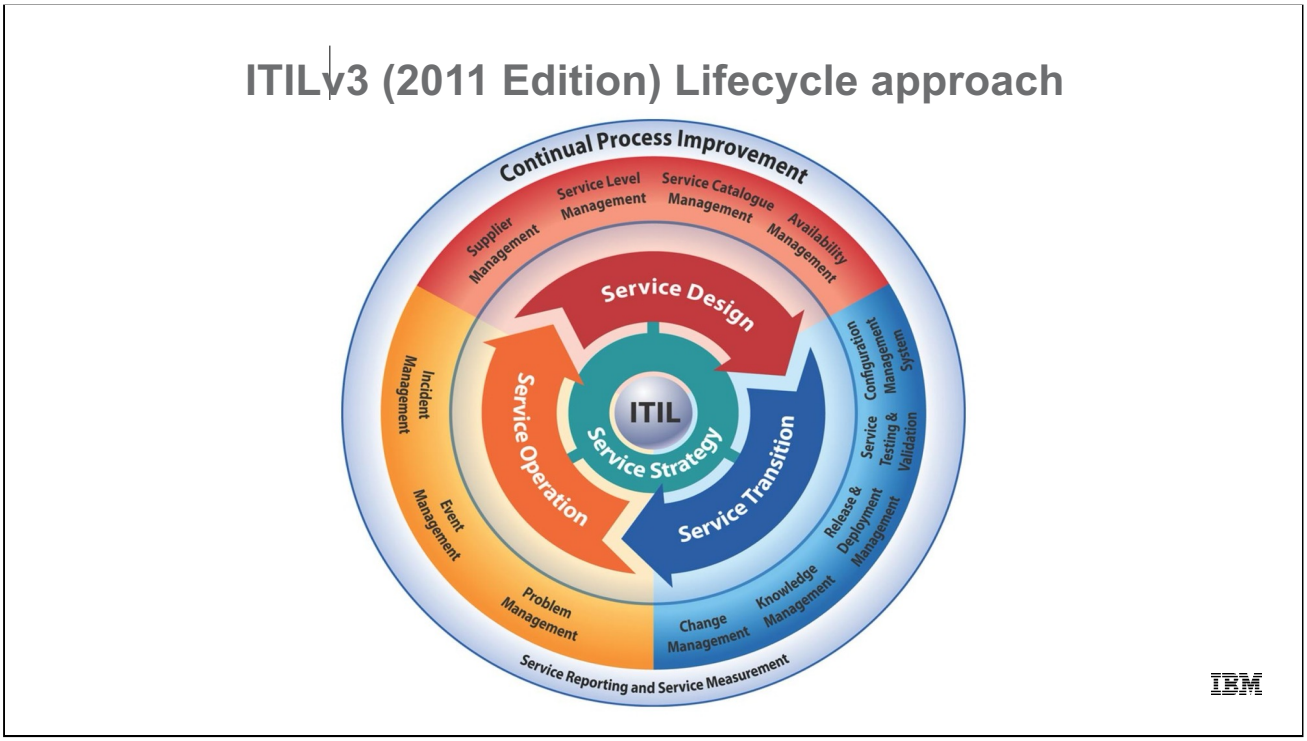
Operation Level Agreement
An **operational-level agreement** (OLA) defines the interdependent relationships in support of a service-**level agreement** (SLA). The **agreement** describes the responsibilities of each internal support group toward other support groups, including the process and timeframe for delivery of their services

Single Point of Contact
A **point of contact** (POC) or **single point of contact** (SPOC) is a person or a department serving as the coordinator or focal **point** of information concerning an activity or program. A SPOC is used in many cases where information is time-

sensitive and accuracy is important. For example, they are used in WHOIS databases.


Generic Process Roles
Process Owner
Process manager
Process practitioner
Process Control
Owner
Objectives
Policy
Documentation
Feedback
Triggers
Inputs
Process
Roles
Activities
Metrics
Improvements
Procedures
Work Instructions
Outputs
Includes reports and reviews
Process Enablers
Resources
Capabilities
16


Service Operations
Functions
IT department
Service Desk
IT Operations Management
Technical management
Application Management
Processes
Event Management
Incident Management
Request Fulfillment
Problem Management
Access Management
Role
17



There are five stages in the ITIL V3 Service Lifecycle:

- Service Strategy,
- Service Design,
- Service Transition,
- Service Operation,
- Continual Service Improvement.

Service Strategy
The Service Strategy phase of the Service Lifecycle provides guidance on how to design, develop, and implement IT Service Management.
Students will understand how service strategies can be developed to give the business a distinct advantage in the marketplace. During Service Strategy, an organization will determine its target markets and how to differentiate itself from its competitors.
The organization's management team will understand the costs and risks associated with their Service Portfolios and can efficiently use this information in their operational decision-making. Practical examples will be used to describe the assessment and planning involved within the IT departments of small, medium, and large corporations. Having the proper strategies in place can give the company a proactive and productive approach to their business operations.

Service Design
The Service Design phase of the Service Lifecycle provides guidance on how to design and develop services and IT Service Management processes that will support the service strategies already developed. Learning how to design service plans will prepare IT professionals and business leaders to address customer concerns in the most proficient manner.

Service Transition
The Service Transition phase of the Service Lifecycle teaches IT professionals and their business associates to manage changes in a productive manner. Service Transition provides guidance on how to efficiently and effectively transition new and changed services into operations without disrupting or interrupting other services or processes.

Service Operation
The Service Operation phase of the Service Lifecycle provides guidance on the practical aspects of day-to-day business operations. The goal is for the IT department to keep things running smoothly, reliably, efficiently and cost-effectively. The activities and processes in this phase ensure that services are delivered to customers at the agreed upon levels with minimal interruptions and disruptions. Service Operation focuses on providing value to both the customer and the service provider.

Continual Service Improvement
Even if nothing changes in an organization, there is always room for development and improvement in IT services. Continual assessment is the key to understanding where improvements can be made. ITIL training can help learners identify where these possibilities for progress are.

Service Strategy

Setting the strategic direction of the IT Services.

- **Business relationship management:** Building a relationship between the service provider and the customers, identifying their needs and ensuring that the provider is able to meet these needs as they change over time and in different circumstances.
- **Service portfolio management:** Managing a provider's set of services throughout the lifecycle and approving business cases for investment in IT services.
- **Financial management for IT services:** Managing budgeting, accounting and charging for IT services, and identifying the cost of providing the IT services.
- **Demand management :** Understanding the patterns of business activity and how these relate to the use of the IT services.
- **Strategy management for IT services:** Identifying, developing and managing a strategy for how a service provider will enable an organization to achieve its business outcomes by providing and managing services that are matched to these outcomes.

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Service Design

The main purpose of the service design stage of the lifecycle is the design of the new or changed services for introduction into the live environment.

- **Design coordination:** Ensuring that the goals and objectives of the service design stage are met, by providing a single point of coordination and control
- **Service level management**: Ensuring that a defined level of service is agreed and delivered
- **Service catalogue management**: Ensuring that a service catalogue exists and is a reliable source of information about live services
- **Supplier management** : Managing third party suppliers and the products and services they supply
- **Availability management** : Managing the availability of services to ensure they are offered to users as agreed
- **Capacity management** : Managing service capacity to ensure it is sufficient, and performance of the services to ensure they work fast enough
- **IT Service continuity management** : Managing the recovery of the services when affected by a disaster or an event with a large impact on the business
- **Information security management** : Ensuring that the integrity of the information and data that is contained in and used by the IT service is maintained at the appropriate level to meet the business needs

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Service Transition

...plans and manages changes to services and deploy releases (install software, hardware and related components and documentation) into the live environment successfully..

- **Transition planning and support :** Providing coordination of all service transition activities
- **Change management :** Managing and controlling changes from request through to closure
- **Service asset and configuration management :** Maintaining a source of information about the services, their component parts, and the other assets required to deliver the services, and the relationships between them
- **Release and deployment management :** Managing the physical introduction of new or changed services and associated equipment into the live environment
- **Knowledge management :** Carrying out a lifecycle-wide process in which you improve the quality of management decision-making by ensuring that the right information and data are available throughout the service lifecycle
- **Change evaluation :** Ensuring that an independent view of any unexpected effects of a change has been evaluated, and that the customer's expectations are met
- **Service validation and testing :** Ensuring that components and services are tested and will provide the value in terms of utility and warranty that has been agreed with the business

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Service Operations

... coordinates and carries out the activities and processes required to deliver the services to business users and customers and manage them at agreed levels. Service operation also covers the ongoing management of the technology used to deliver and support services.

- **Event management :** Identifying electronic notifications that come from IT equipment and using them to ensure that the services are operating normally, and responding appropriately if services are behaving abnormally
- **Incident management :** Managing interruptions to or reductions in the quality of the services and ensuring that the service is restored within agreed timescales
- **Request fulfillment :** Managing requests that come from users; these may be simple questions about how to use an application, or requests for new equipment or software
- **Problem management :** Investigating and identifying the cause of incidents when considered necessary, and recommending permanent solutions
- **Access management :** Making sure that users have usernames and passwords for the services that they are allowed to use

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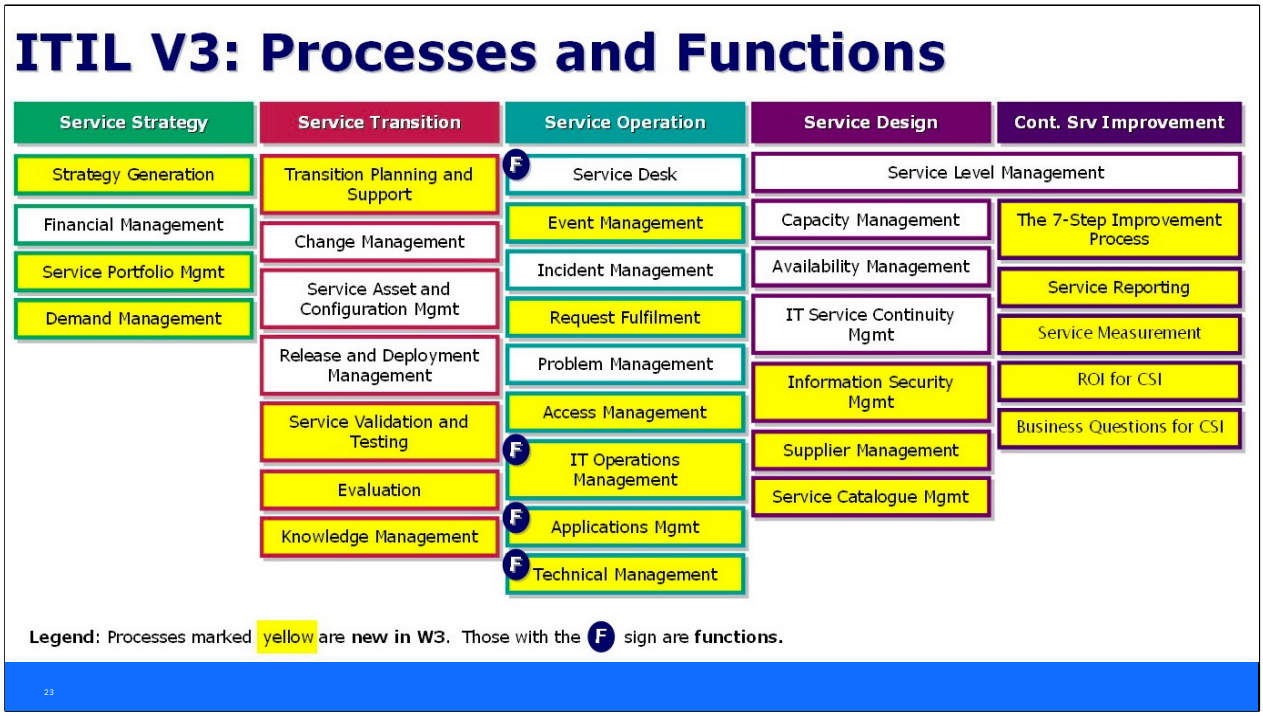
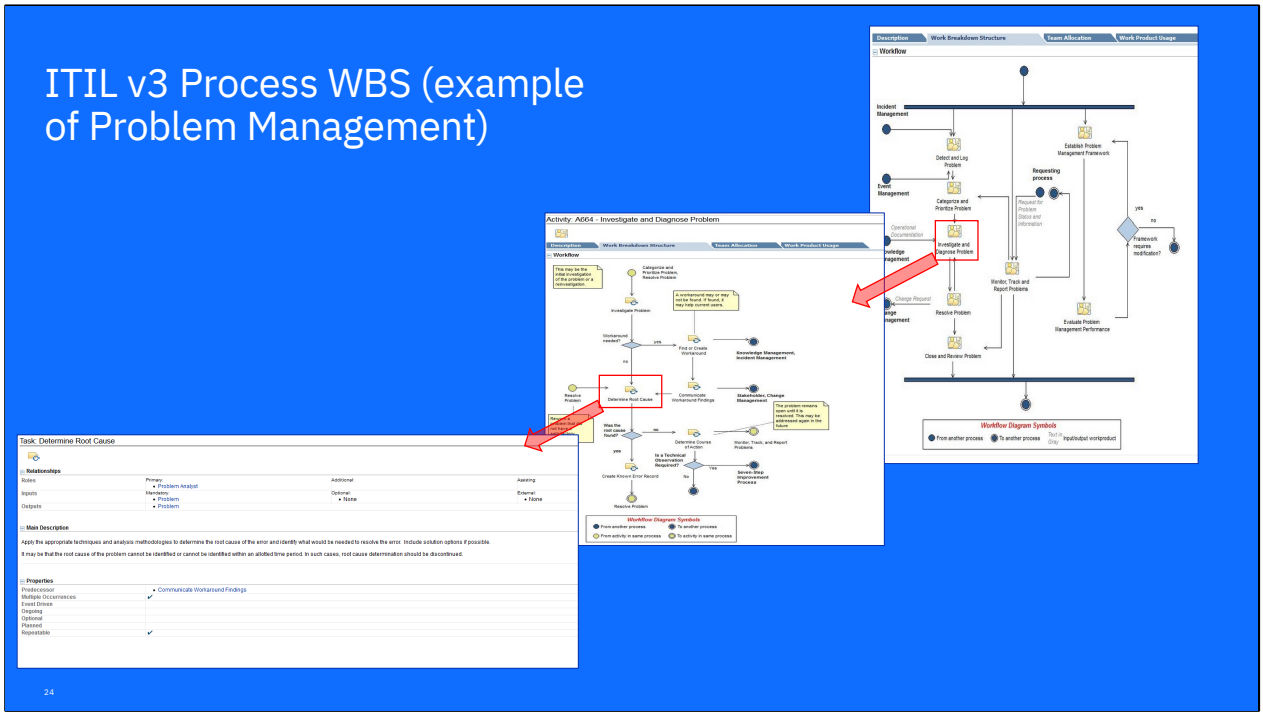

ITIL V3: Processes and Functions
Service Strategy
Service Transition
Service Operation
Service Design
Cont. Srv Improvement
Strategy Generation
Financial Management
Service Portfolio Mgmt
Demand Management
Transition Planning and Support
Change Management
Service Asset and Configuration Mgmt
Release and Deployment Management
Service Validation and Testing
Evaluation
Knowledge Management
F Service Desk
Event Management
Incident Management
Request Fulfilment
Problem Management
Access Management
F IT Operations Management
F Applications Mgmt
F Technical Management
Service Level Management
Capacity Management
Availability Management
IT Service Continuity Mgmt
Information Security Mgmt
Supplier Management
Service Catalogue Mgmt
The 7-Step Improvement Process
Service Reporting
Service Measurement
ROI for CSI
Business Questions for CSI
Legend: Processes marked yellow are new in W3. Those with the F sign are functions.
23



WBS - Work-Breakdown Structure is is a deliverable-oriented breakdown of a project into smaller components. A work breakdown structure is a key project deliverable that organizes the team's work into manageable sections

Continual Service Improvement

... to continually align and realign IT services to changing business needs, by identifying and implementing improvements to IT services that support the business processes.

The activities of CSI primarily:

- Identifies or helps others identify opportunities for improvement.
- Prioritizes improvement activities.
- Sets up and runs (or helps others set up and run) improvement projects.

THE CONTINUOUS VS. CONTINUAL (see slide comments)!!!

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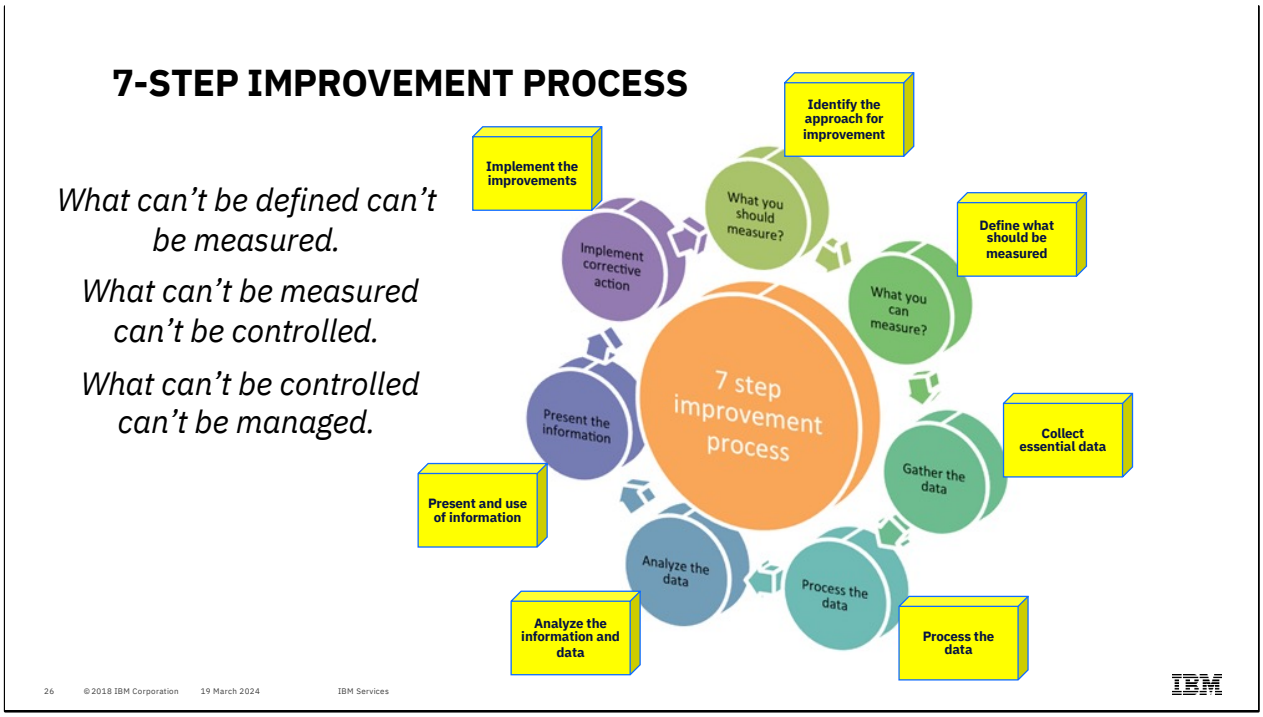
Continual - of regular or frequent recurrence; often repeated; very frequent
Continuous - uninterrupted in time; without cessation:

Although usage guides generally advise that continual may be used only to mean "intermittent" and continuous only to mean "uninterrupted," the words are used interchangeably in all kinds of speech and writing with no distinction in meaning: The president's life is under continual (or continuous) scrutiny. Continuous (or continual) bursts of laughter punctuated her testimony. The adverbs continually and continuously are also used interchangeably. To make a clear distinction between what occurs at short intervals and what proceeds without interruption, writers sometimes use the contrasting terms intermittent (intermittent losses of power during the storm) and uninterrupted (uninterrupted reception during the storm) or similar expressions. Continuous is not interchangeable with continual in the sense of spatial relationship: a continuous (not continual) series.

CONTINUAL CONTINUO (CON INTERRUPCIONES)
Continual indicates duration that continues over a long period of time, but with intervals of interruption. Here are some examples:
 The **continual** street repair disrupted traffic for nearly two years.
 I've had **continual** problems with this car ever since I bought it.
 I'm sorry - I can't work with these **continual** interruptions.
 In the end, it was the **continual** drinking that destroyed him.

CONTINUOUS CONTINUO (SIN INTERRUPCIONES)
Continuous indicates duration without interruption. Here are some examples:
 The **continuous** humming of the fluorescent lights gave him a headache.

 My computer makes a **continuou**s low buzzing noise.
 A **continuous** white line (= line without spaces) in the middle of the road means no overtaking.
 The tape ran in a **continuous** loop, repeating the same songs over and over.assages.



Continual Service Improvement is a type of process which utilizes techniques from quality management so as to learn from prior success and failures and aims constantly to increase efficiency and effectiveness of IT services and processes. The goal is to define and manage the **steps** needed to identify, define, gather **process**, analyze, present and implement **improvements**. The objective of the **seven-step process** is to identify opportunities for improving services, **process** etc and reduce the cost of providing services.

ITIL Continual Service Improvement should predominantly focus on maximizing the effectiveness and also increasing the efficiency of the IT Service Management Process. Listed below are a few objectives of ITIL Continual Service Improvement:

- To evaluate, analyze, and make necessary recommendations to improve the existing opportunities in each phase of the ITIL Service Lifecycle such as Service Strategy, Service Design, Service Transition, and Service Operation.
- Increasing the cost-effectiveness and process efficiency of the IT service.
- To ascertain and implement activities to increase the quality of the IT service and improve the effectiveness and efficiency of the IT service management process.
- To increase the cost-effectiveness of IT service delivery while maintaining the same level of customer satisfaction.
- To ensure that a standard and relevant method is used for quality management.

The Deming cycle-The PDCA cycle

The Deming Cycle (also known as the PDCA cycle) is used as the foundation for quality improvement activities across various types of enterprises. It is used in various industries for controlling and measuring results and taking appropriate steps based on the results to come up with a better output in the later steps.
The PDCA cycle is a four-part lifecycle and thus constitutes the acronym PDCA cycle: Plan, do, check, and act.

- **Plan:** The first step of the process involves planning the improvements. A gap analysis is undertaken and a plan is made to overcome the gap through a series of improvement steps.
- **Do:** The second phase refers to the Implementation of improvements. A project is instigated to close the gaps identified in the previous phase. This phase includes a series of changes to improve the process.
- **Check:** This phase is more accurately defined as monitoring, measuring, and reviewing. The end result of the implemented improvements is associated with the measures for success identified and approved in the planning phase.
- **Act:** The identified improvements are entirely implemented in this step.

The PDCA cycle can be utilized to improve any of the ITIL Service Management processes.

Principles and Basic Concepts of the Seven-Step Improvement Process

Continual Service Improvements should center on increasing efficiency, maximizing the effectiveness, reducing the cost of service, and underlying IT service management. And the only way to accomplish the task is to ensure that the improvement opportunities are identified throughout the service lifecycle.
The service providers operate in a very competitive market and they need to assess their services against the expectations in the market persistently.
New delivery mechanisms such as cloud computing can increase the efficiency of the service and need to be considered for implementation.
The service provided must be compared to the present market offerings to ensure that the service adds actual business value to the clients, so that the service provider remains competitive.
The services must be regularly reviewed to keep up with the latest technological advances to ensure that the services they are delivering are the most efficient.

Stages in the Seven-Step Improvement Process

The below mentioned seven steps constitute what is known as a knowledge spiral. The knowledge gathered from one level becomes the input to the other level. It moves from operational management to tactical management and finally strategic management.
Feedback from any stage of the service lifecycle can be used to identify improvement opportunities for any other stage of the lifecycle.
The stages in the 7 step improvement process are listed below:

- **Identify the approach for improvement:** Prior to implementing an improvement strategy, it's necessary to understand the necessity for continuous improvement. We must take into account the final goals we have set for the business and see how the IT organization can assist in achieving those targets through continuous improvements. Whilst accomplishing this, consider future and present plans as well.
- **Define what should be measured:** A comparison should be made amid what we can ideally measure and what we can actually measure. Gaps should be identified and a realistic measurement plan should be incorporated to support the strategy for improvement.
- **Collect the essential data:** Data is gathered through persistent monitoring. The process of monitoring can be done either through manually or technology can be utilized to the fullest to automate the entire process and simplify it.
- **Process the data:** Once the data is collected through continuous monitoring, it is then converted into the form required by the audience. This can be considered as a conversion of metrics into Key Performance Indicator (KPI) results and change the available data into information.
- **Analyze the information and data:** The multiple sources of data are combined to transform the information into knowledge, which is further analyzed to find the gaps and their impact on the overall business. The information is further evaluated considering all the relevant internal and external factors. It also helps to answer questions regarding something that is good or bad and is it expected and in line with the targets.
- **Proper presentation and utilization of information:** The information which is gathered and analyzed needs to be presented in a proper manner with the right amount of detail so that the information is comprehensible and provides the required amount of detail to support informed decision making.
- **Implement the improvements:** A change implemented with continuous improvement sets a new baseline for the entire process. The knowledge obtained should be combined with the previous experience and are used to make informed decisions and necessary improvements. The improvements which are made must focus on optimizing and correcting the services, processes, and tools.

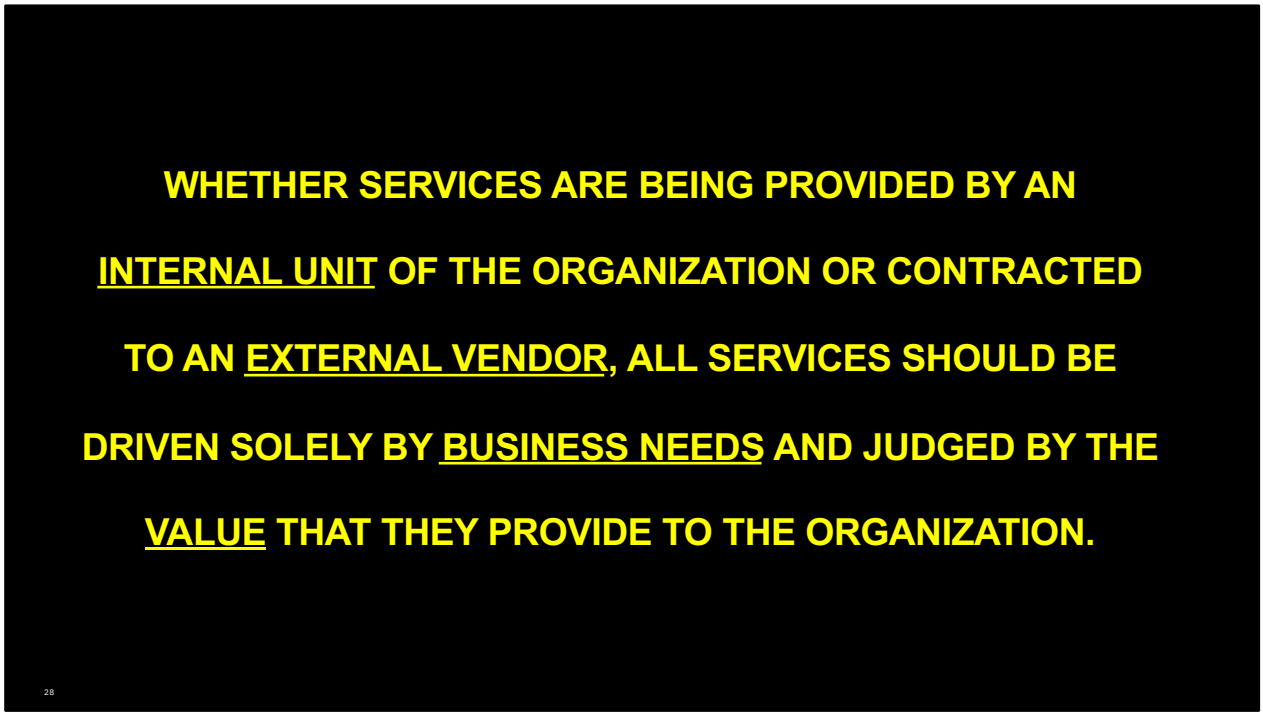
To conclude

The 7 step improvement process is a vital process of CSI and thus identifies the opportunities available for improving services, tools, processes, etc. The process initiates service measurement, service reporting, and improvement. This helps to define the service baseline and processes, metrics, KPIs, critical success factors, and corrective measures are taken to identify and improve the gaps in the IT service management.

ITIL CSI desires a commitment from the people working throughout the service lifecycle. It requires enduring attention to monitoring, analyzing, a well thought plan, and reporting results aiming towards improvement.

TCO – Total Cost of Ownership

Total cost of ownership (**TCO**) is a financial estimate intended to help buyers and owners determine the direct and indirect costs of a product or system. It is a management accounting concept that can be used in full cost accounting or even ecological economics where it includes social costs.



The term ‘best practice’ generally refers to the ‘best possible way of doing something’. As a concept, it was first raised as long ago as 1919, but it was popularized in the 1980s through Tom Peters’ books on business management. The idea behind best practice is that one creates a specification for what is accepted by a wide community as being the best approach for any given situation. Then, one can compare actual job performance against these best practices and determine whether the job performance was lacking in quality somehow. Alternatively, the specification for best practices may need updating to include lessons learned from the job performance being graded. Enterprises should not be trying to ‘implement’ any specific best practice, but adapting and adopting it to suit their specific requirements. In doing this, they may also draw upon other sources of good practice, such as public standards and frameworks, or the proprietary knowledge of individuals and other enterprises.

Common Misconceptions about ITIL

- Treating ITIL as training only
- Misinterpreting ITIL as the “dogma”
- Thinking ITIL is for the service desk and support staff only
- Believing that processes introduce unnecessary bureaucracy
- Assuming that ITIL “consumes” a lot of time, staff and money

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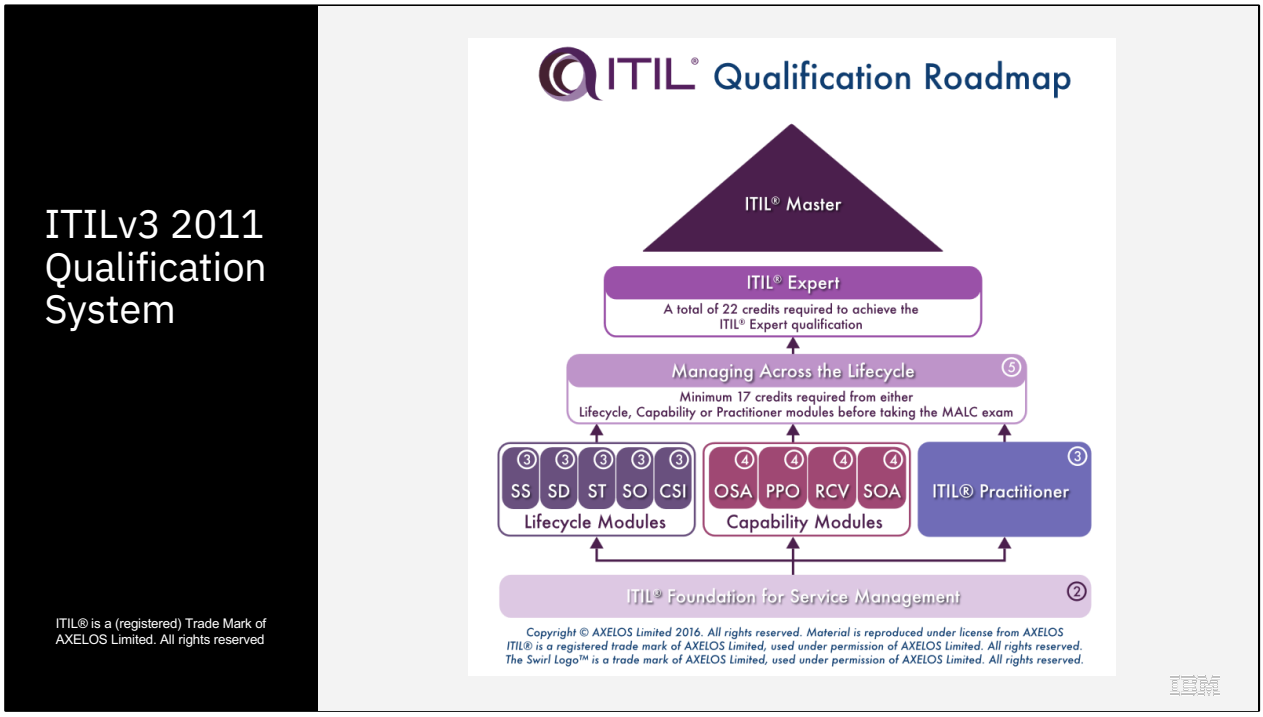
ITIL as the “dogma” – meaning process for process implementation only instead of process supporting business



The ITIL certification scheme provides a modular approach to the ITIL framework, and is comprised of a series of qualifications focused on different aspects of ITIL best practice to various degrees of depth and detail.
The tiered structure of the qualification offers candidates flexibility relating to the different disciplines and areas of ITIL and the ability to focus their studies on key areas of interest.
There are five certification levels within the scheme:

Foundation

The ITIL Foundation level is the entry level certification which offers you a general awareness of the key elements, concepts and terminology used in the ITIL service lifecycle, including the links between lifecycle stages, the processes used and their contribution to service management practices.

Practitioner

The ITIL Practitioner level is the next stage in the ITIL scheme. It has been developed to provide a step between Foundation and the Intermediate Level and aims to improve the ability of individuals to adopt and adapt ITIL in their organizations.

Intermediate

The ITIL Intermediate level certification has a modular structure with each module providing a different focus on IT Service Management. You can take as few or as many Intermediate qualifications as you need. The Intermediate modules go into

more detail than the Foundation level and Practitioner, and provide an industry-recognized qualification.

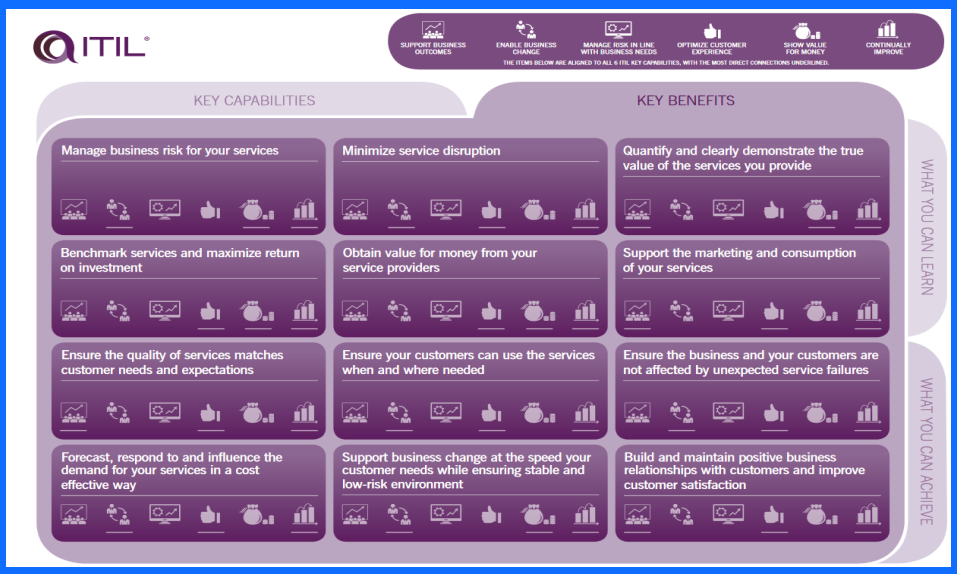
Expert

The ITIL Expert level qualification is aimed at those who are interested in demonstrating knowledge of the ITIL Scheme in its entirety. The certificate is awarded to candidates who have achieved a range of ITIL certifications and have attained a well rounded, superior knowledge and skills base in ITIL Best Practices.

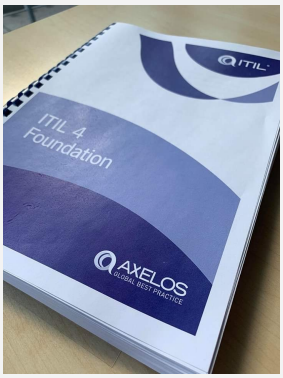
Master

To achieve the ITIL Master certification, you must be able to explain and justify how you have personally selected and applied a range of knowledge, principles, methods and techniques from ITIL and supporting management techniques, to achieve desired business outcomes in one or more practical assignments.

ITIL- Key benefits



ITIL® 4 Foundation Book



ITIL® v3 was based on 5 books (Lifecycles)
ITIL® 4 introduces the concept of ITIL® 4 Foundation book
Existing ITIL® 4 book (217 pages) consists of following sections:

1. Introduction
2. Key concepts of Service Management
3. The four dimensions of service management
4. The ITIL® Service Value System
5. ITIL® Management Practices

Appendix A: Examples of value streams

This new book is using “story telling” approach so the story of a fictious company called “Axle Car Hire” will lead you through the reading, helping the understanding.

The original ITIL was created in the late 1980s as a framework of best practices for delivering value to the business through information technology (IT) services. Throughout the past three decades, the ITIL framework has gone through several iterations, with ITIL 4, the much-anticipated update to the framework, released in 2019.
ITIL 4 addresses common critiques of previous versions, adds new terminology and models, and focuses on the concepts of value, cost, and risk. Find out what's new in this framework, as well as what you and your organization need to know to get started using it.

What led to this latest update? To understand, let's first examine the history of this framework.
The first version of ITIL was published in 30 separate volumes and released over a 12-year period beginning in 1989. ITIL Version 2 came out in the year 2000 and included a reorganization and refinement of the ITIL framework into eight publications. The ITIL framework leaped forward in 2007, with the newly released ITIL V3 (also called ITIL 2007 edition) organized around the five stages of the IT service lifecycle. This framework had a strong emphasis on IT roles and responsibilities, as well as clearly defined processes and sub-processes for managing IT services from their initial strategic inception through to continual improvement

and service termination.

In 2013, AXELOS, a joint venture set up by the UK Government and Capita, was established to manage manage ITIL and other Office of Government Commerce (OGC) best practice properties.
Aside from some minor updates in the ITIL 2011 release, the ITIL V3 standard remained the industry-leading framework for **IT service management (ITSM)** until the release of ITIL 4 in February 2019.

ITIL 4 represents a much-needed update to the ITIL framework. While ITIL V3 advanced process-oriented delivery of IT services and strengthened the relationship between IT services and business value, there were still many criticisms of ITIL V3:

- **Too prescriptive and inflexible.** Due to its heavy focus on processes and sub-processes, some IT professionals felt ITIL V3 compelled them to adopt elements of the framework that might not have been suitable for their unique circumstances.
- **Lack of guiding principles**. The organization of processes around a service lifecycle tells IT organizations what to do without necessarily explaining why or offering high-level guidance or core principles to follow. As a result, organizations using ITIL V3 lacked a set of reliable principles that could direct IT decision-making beyond the prescribed ITIL processes.
- **Lack of emphasis on value delivery.** ITIL V3's focus on service management processes meant that it overlooked some of the external factors that impact value creation, such as effective governance and working methods.

Prior to the release of ITIL 4, Stuart Rance, a long-time ITIL author and IT service management industry authority, described five key reasons why the ITIL V3 2011 Edition required updating:

1. Excessive focus on process
2. Siloed implementation
3. Insufficient focus on value, outcomes, costs, and risks
4. The need for support for digital transformation
5. The need for compatibility with Agile, Lean, DevOps, and other management approaches

The update strives to reinforce linkages with business strategy while maintaining core ITIL elements from previous versions that are valuable. To that end, ITIL 4 has been redesigned and restructured to address these criticisms and ensure that ITIL remains the most relevant international framework for IT service management.

Why new version?

- **Too prescriptive and inflexible**
- **Lack of guiding principles**
- **Lack of emphasis on value delivery**

- **Too prescriptive and inflexible.** Due to its heavy focus on processes and sub-processes, some IT professionals felt ITIL V3 compelled them to adopt elements of the framework that might not have been suitable for their unique circumstances.
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- **Lack of emphasis on value delivery.** ITIL V3's focus on service management processes meant that it overlooked some of the external factors that impact value creation, such as effective governance and working methods.

How ITIL 4 Is Different from ITIL V3

- the loss of the ITIL V3 service lifecycle terminology and imagery, and changes to the elements that comprised it:
  - **service strategy** (there's now a strategy management practice),
  - **service transition** (there's now "Design and transition" in the service value chain shown below), and
  - **service operation** (there's now "Delivery and support" in the service value chain).
- The most significant structural update to ITIL is the organization of the framework around two core components:
  - **ITIL Service Value System (SVS)**
  - **Four Dimensions Model**.
- Seven new guiding principles (see slide notes)

TIL 4 represents a fundamental reorganization of the ITIL framework with an increased focus on the concepts of value, cost, and risk. The new framework includes many of the same components as ITIL V3 while incorporating updated knowledge and concepts that reflect a more value-oriented focus to IT service delivery.

The most obvious changes in ITIL 4 are the loss of the ITIL V3 service lifecycle terminology and imagery, and changes to the elements that comprised it: service strategy (there's now a strategy management practice—more on "management practices" in a minute), service transition (there's now "Design and transition" in the service value chain shown below), and service operation (there's now "Delivery and support" in the service value chain). The most significant structural update to ITIL is the organization of the framework around two core components: the **ITIL Service Value System (SVS)** and the **Four Dimensions Model**.

A common criticism of the ITIL V3 framework was that it lacked a set of overarching principles to inform the design and execution of ITSM processes. ITIL V3 was sometimes viewed as an overly prescriptive standard because it told IT organizations *what* processes to implement and *when*, but often failed to explain *why* or *how* a process should be managed in a specific way.

To address this issue, the ITIL 4 framework includes a set of seven guiding principles that ITIL practitioners can follow as they seek to drive value creation for their IT organizations. These guiding principles can play an important role in guiding IT decision-making and help IT managers develop their own strategies and conclusions in cases where the ITIL framework does not provide explicit guidance. Below, it is described each of the seven new guiding principles of ITIL 4.

1. Focus on Value - The first guiding principle of ITIL reminds practitioners that their focus should always be on delivering value to the business, either directly or indirectly, through the effective management of IT services.

2. Start Where You Are - The second guiding principle of ITIL reminds organizations not to throw out their existing systems when adopting the ITIL 4 framework. Instead, organizations are encouraged to preserve capabilities that meet their needs, improve them when necessary, and develop new ones when required.

3. Progress Iteratively with Feedback - Big changes, even big improvements, can often lead to big problems that are difficult to measure or resolve. ITIL 4 practitioners are encouraged to improve their processes iteratively, collecting feedback and measuring success along the way to avoid setbacks. Change takes time. Slow and steady wins and changes should be measured for success before the organization builds on them further.

4. Collaborate and Promote Visibility - ITIL 4 practitioners are encouraged to promote transparency and visibility of IT operations between team members, stakeholders, and partners. Increased visibility promotes communication and collaboration between departments, enables project and process owners to collect valuable feedback and insight from throughout the organization, and helps eliminate redundancies and information or knowledge silos.

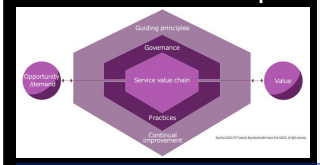
5. Think and Work Holistically - The fifth guiding principle of ITIL 4 encourages practitioners to assume responsibility for how their work fits into the overall service value system. No task exists in a vacuum and each action, sub-process, or process should be conducted with a view to minimizing risks and costs while delivering the greatest amount of value for the business.

6. Keep It Simple and Practical - Simplicity and practicality are antithetical to the view that some practitioners have of ITIL as a prescriptive and inflexible framework. ITIL 4 addresses this criticism by directing its practitioners to simplify and right-size the use of processes, tools, and resources to match organizational needs. As a side note, ITIL V3's "processes" are called "practices" in ITIL 4, a change that reflects their newly emphasized flexibility for the needs of IT organizations.

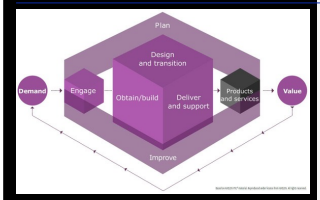
7. Optimize and Automate - The final guiding principle of ITIL encourages practitioners to automate and optimize processes wherever possible. Manual

processes are easily forgotten or overlooked, error-prone by nature, and tedious and time-consuming. IT organizations should automate anything that they can, reserving human intervention for processes where it is genuinely necessary.

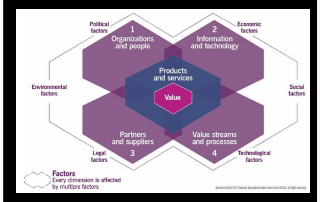
ITIL® 4 Concept



- Introduces Service Value System
  - Describes basic elements of the system via which the value of the product is being created with the aim on the customer and user requirements and experience. It's a map of the main elements/capabilities you need to have in place to run a highly efficient, effective, and agile service management organization



- Describes model of the value creation – Service Value Chain
  - And its 6 main activities for each process/practice
- Does not contain processes description in the lifecycle
  - Lists 34 management practices within 3 basic groups
    - General Management, Service management, Technical Management



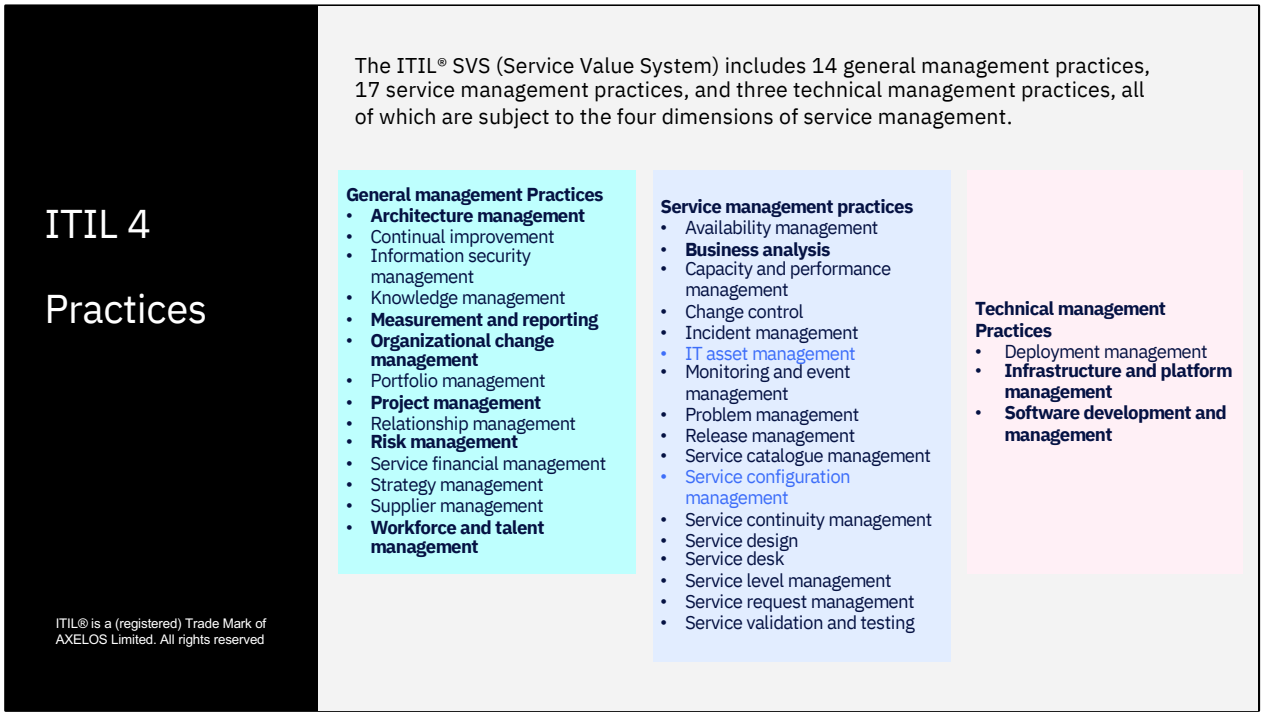
- Bases description of 4 Dimensions on v3 `s four attributes of SM
  - Critical mission in value creation
  - Includes important external factors to consider (economical, political, social, etc)

The new **ITIL Service Value System** describes the chain of activities necessary to convert a business opportunity or demand for a service into business value. The IT service lifecycle has been refined into a new operational model known as the **ITIL Service Value Chain** that acts as the core component of the SVS. These changes reflect ITIL 4's new focus on "the co-creation of value."

The **Four Dimensions Model** is a new version of the **4P's Model** that was represented in ITIL V3, which included people, products, partners, and processes. The Four Dimensions Model addresses:

- Organizations and people
- Information and technology products
- Partners and suppliers
- Value streams and processes

IT organizations are encouraged to assess the impact, value, costs, and risks associated with each of the 4Ps in each component of the service value system.



As to the “management practices” point above: first, the 26 ITIL V3 processes have been replaced with ITIL 4 management practices. Some of the V3 processes have maintained their ITIL V3 name, while others have been renamed, and new processes have been added. There are now 34 management practices in total—divided into general management, service management, and technical management categories.

In "ITIL® Foundation, ITIL 4 Edition," a guide put out by AXELOS, these management practices are defined as: “A set of organizational resources designed for performing work or accomplishing an objective.” So, more than the processes of old.

Each Practice is described in detail, including description on how the practice contributes in the SVS. ITIL® no longer describes these as processes, in process steps, but rather explains how they contribute to value creation, explaining their mission, etc.

Architecture Management – A complete architecture management practice should address all architecture domains: business, service, information, technology, and environment.

Measurement and reporting – Supporting CSI, this practice make sure

management has data and information to make decisions, based on collected KPIs.

Organizational change management – Described as separate Practice, this is a practice focusing on organization itself, affecting behavior, culture, work or people roles.

Project management – Lists using project management techniques as one of the important part of the organization.

Risk management – Asks for a Risk management system to be in place, to assure organized approach to managing risks to the organization. Mentions ISO31k

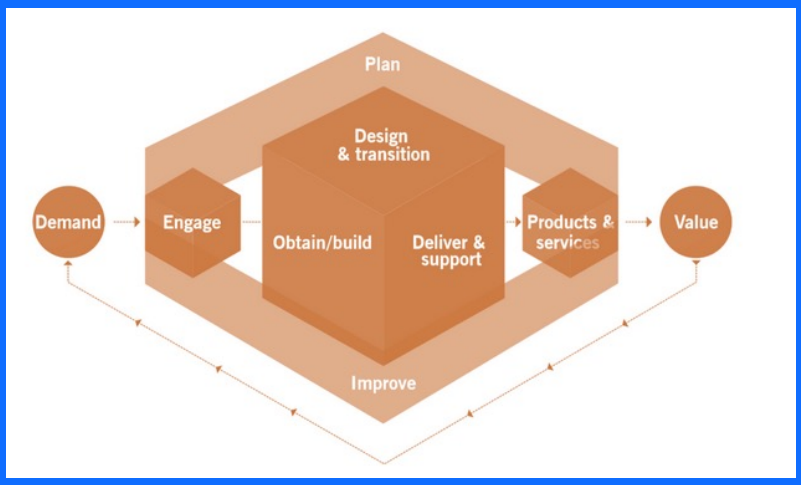
Workforce and talent management – set of activities focusedon successfully engaging with the organization's employees and people resources, including planning, recruitment, onboarding, learning and development, performance measurement, and succession planning.

Business analysis – analyses business, so processes, services, etc to achieve understanding in business need. Cooperates with C(S)I, evaluates and proposes actions on IT services side to fulfill business needs, making sure IT strategy supports the Business strategy.

Infrastructure and platform management – Similar to technical management function in V3, speaks about technology management. Includes SaaS, PaaS and IaasS, Cloud service models, talking about how needs to be infrastructure managed to deliver the value.

Software development and management – Simmilar to Applications management in V3 speaks about applications development and their management through the lifecycle.

ITIL 4 new model for value creation – the Service Value System



ITIL 4 Service Value Chain of Activities

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This system is representative of how all the components and activities of an organization come together to facilitate value creation through IT-enabled services. Central to this system is the Service Value Chain. This is an operating model for delivery of services through six key activities, which can be combined in a variety of ways to provide a flexible set of value streams.

The six key activities of the Service Value Chain are Plan, Improve, Engage, Design and Transition, Obtain/Build, and Deliver and Support. Each of these contributes to value creation by transforming various inputs into specific outputs. These inputs may be external, or they may come from other activities within the value chain itself. Each activity is supported by one or more Practices. This combination of Service Value Chain activities and practices is then transformed into a value stream for specific tasks, or to respond to situations.
The Service Value Chain has key inputs and outputs for each activity. Inputs can come from external sources, such as Governance; they also come from other activities in the Service Value Chain, such as Improve, Engage, and Obtain/Build. Similarly, outputs can be provided to external consumers, as well as to other activities within the Service Value Chain.
Plan
The Plan activity ensures understanding of the vision, current status, and

improvement direction for all four dimensions, as well as products and services across the organization. This is a very strategic activity.

Improve

The Improve activity's purpose is the continual improvement of products, services and practices across all the Service Value Chain activities and the four dimensions of service management.

Engage

The Engage activity provides understanding of stakeholder needs, transparency, and good relationships with all stakeholders. This activity takes requirements from customers and transforms them into design requirements for the Design and Transition activity.

Design and Transition

Design and Transition ensures that services and products meet stakeholder expectations, considering quality, cost and time-to-market. The primary focus is to take the requirements from Engage and provide specifications for Obtain/Build. This activity also delivers new and changed services and products to the Deliver and Support activity.

Obtain/Build

The Obtain/Build activity is responsible for ensuring that all service components are available when and where needed, and that they meet the agreed specifications. Requirements delivered by Design and Transition are transformed into service components that are, in turn, provided to the Deliver and Support activity, as well as to Design and Transition.

Deliver and Support

Deliver and Support delivers services and products to the customer, ensuring that such delivery meets agreed specifications and the stakeholders' expectations. This is where the proverbial rubber meets the road, and where the customer sees and co-creates value. Its primary inputs are the services and products delivered by Design and Transition, as well as service components delivered by Obtain/Build.

As one can see, each activity engages in a highly interdependent lifecycle, all leading to value creation for stakeholders. Individual streams include specific roles and responsibilities, and these are dependent on the service or product being provided. As each activity transforms its inputs to specific outputs, new activities take over, further developing the overall value chain. The Improve activity is the overarching guide to gradual and continual improvement in all activities and value streams.

The Service Value Chain exists as the core of the ITIL Service Value System, it is informed and impacted by each of the other aspects of the Service Value System. Through this interaction and the six key activities of the Service Value Chain, value is delivered to stakeholders in the form of services and products.

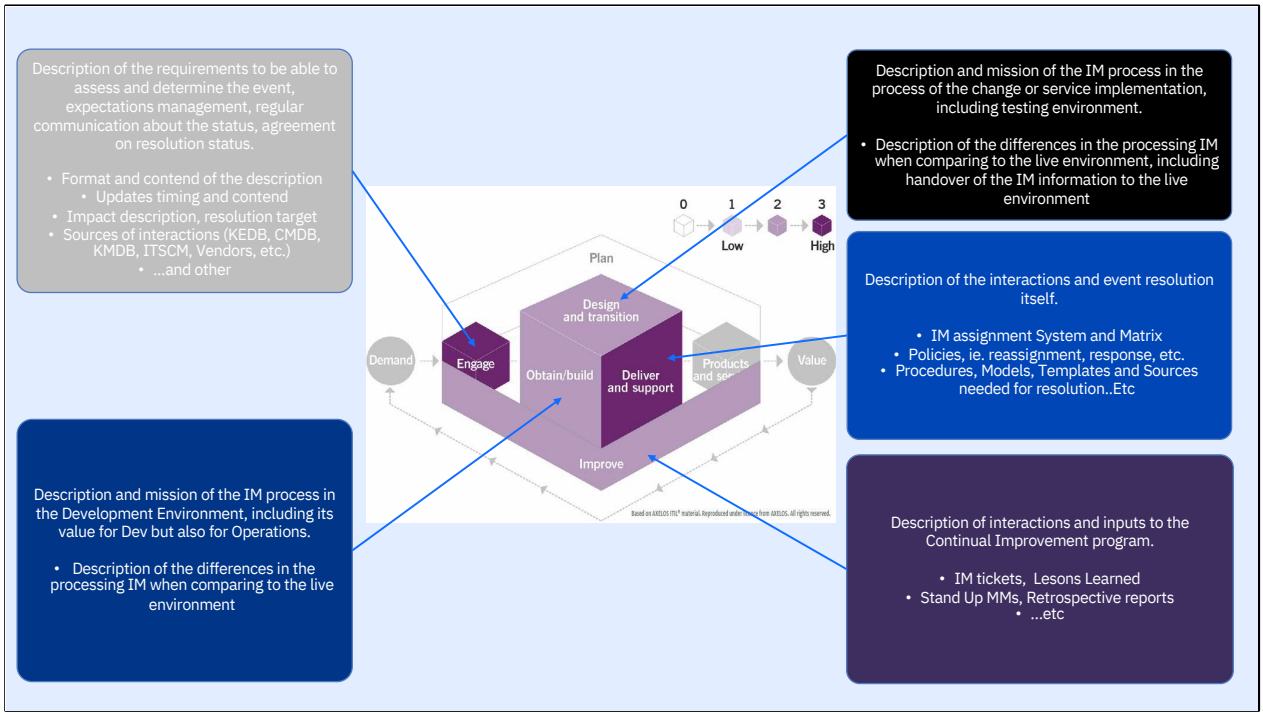
ITIL® 4 way of implementation

IT Service Value definition must be fully understood and clearly described

- …which will not be possible without customers and consumers inputs
- Value must be understood on all levels of elements which are co-creating value, such as internal and external staff, vendors, etc

Governance/ Management System

- From the Demand collection system to the Value delivery
- Understanding and addressing all External factors affecting the Value creation
- Setting up and communicating the management framework (ie. AGILE usage, Automation approach, etc.)
- Processes described in one unified format with description of every of the Service's 6 activities Value
- Description and Communication of the Continual Improvement Framework


Description of the requirements to be able to assess and determine the event, expectations management, regular communication about the status, agreement on resolution status.
• Format and contend of the description
• Updates timing and contend
• Impact description, resolution target
• Sources of interactions (KEDB, CMDB, KMDB, ITSCM, Vendors, etc.)
• ...and other
Description and mission of the IM process in the process of the change or service implementation, including testing environment.
• Description of the differences in the processing IM when comparing to the live environment, including handover of the IM information to the live environment
0
1
2
3
Low
High
Plan
Design and transition
Demand
Engage
Obtain/build
Deliver and support
Products and ser
Value
Improve
Description of the interactions and event resolution itself.
• IM assignment System and Matrix
• Policies, ie. reassignment, response, etc.
• Procedures, Models, Templates and Sources needed for resolution..Etc
Description and mission of the IM process in the Development Environment, including its value for Dev but also for Operations.
• Description of the differences in the processing IM when comparing to the live environment
Description of interactions and inputs to the Continual Improvement program.
• IM tickets, Lesons Learned
• Stand Up MMs, Retrospective reports
• ...etc

ITIL® 4 Implementation Summary

- ITIL4 is more of a general set of recommendations than ITILv3
  - Consultants generally believe that ITILv3 remains a more detailed set of recommendations when it comes to processes itself
  - ITIL4 is more based on DevOps approach
- Organizational assesment with aim on understanding missing pieces of Value creation withn the Goverance is suggested
  - Understanding all levels of Service management (Operational, Tactical and Strategic)
  - Thorough communication of the Value
- On the level of the processes: Understand the Interactions (Value Inputs and Outputs), including all steps
  - On all levels – Internal and External
  - Assess External factors and have Management system for these
  - Define and Implement Guiding Principles
  - Understand Internal and External inputs and outputs and its involvement and Value in the overall Value creation

ITIL® 4 Certification scheme

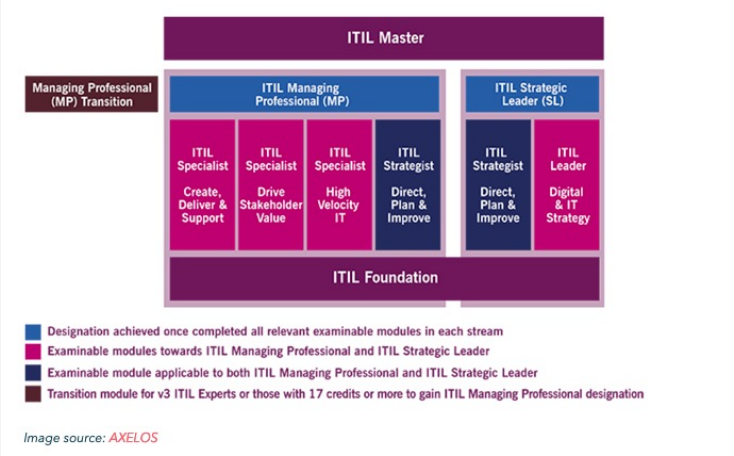


Image source: AXELOS

ITIL Managing Professional (ITIL MP) – which is aimed at IT practitioners working within technology and digital teams. It provides practical and technical knowledge.

ITIL Strategic Leader (ITIL SL) – which positions ITIL not just for IT operations but for all digitally enabled services.

ITIL 4's expanded guidance and emphasis on value creation is likely to cause a significant shift in the way that organizations manage IT services.
The service value system and four dimensions model increase the scope of the framework beyond IT processes to include every aspect of IT service delivery and value creation.

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Next session April 2nd

ITSM in practice

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