

## Introduction

- Welcome to ITIL 4 Foundation
  - The purpose of the *ITIL 4 Foundation* publication is to introduce readers to the management of the modern IT-enabled services, provide them with an understanding of the common language and key concepts and show them how they can improve their work and the work of their organization with ITIL 4 guidance
  
- The Need for Service Management
  - Technology is advancing faster today than ever before. Developments such as cloud computing, infrastructure as a service, machine learning, and blockchain, have opened fresh opportunities for value creation, and led to IT becoming an important business driver and source of competitive advantage.
    - Every organization is a service organization
    - Almost all services today are IT enabled
    - Service management is defined as a set of specialized organizational capabilities for enabling value to customers in the form of services.
  
- About the Exam
  - 60 minutes
    - Candidates taking the exam in a language that is not in their native or working language may be awarded 25% extra time, i.e. 75 minutes in total
  
  - 40 questions, each question is worth 1 mark
    - 'standard'
    - 'missing word'
    - 'list' (2 correct items)
    - Very rarely, 'negative' ("what is NOT...")
  
  - Pass mark: 65% or higher (26 marks or above)
  
  - Bloom's levels 1 and 2
    - 9 questions at Bloom's Level 1 (Recall) = 22.5%
    - 31 questions at Bloom's Level 2 (Understand, Describe, Explain) = 77.5%
  
  - You can purchase a discounted voucher at Dion Training's website to save \$50 off the price of your exam voucher

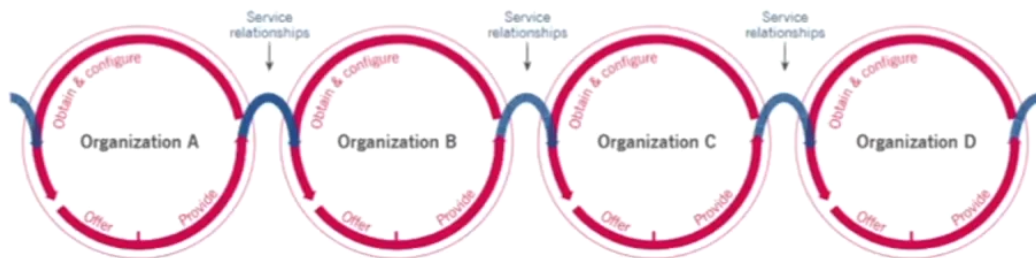
## Service Management

- Understanding Value
  - Service management is defined as a set of specialized organizational capabilities for enabling value to customers in the form of services.
  - Developing the specialized organizational capabilities mentioned in the above definition requires an understanding of:
    - the nature of value
    - the nature and scope of the stakeholders involved
    - how value creation is enabled through services
  - Value is the perceived benefits, usefulness and importance of something.
- How is Value Created?
  - There was a time when organizations saw their role as delivering value to their customers in much the way that a package is delivered to a building by a delivery company
  - This view treated the relationship between the service provider and the service consumer as mono-directional and distant
- Providers and Consumers Co-Create Value
  - More and more, organizations recognize that value is co-created through an active collaboration between providers and consumers, as well as other organizations that are part of the relevant service relationships.
  - Organizations who deliver services are referred to as service providers.
  - Those to whom services are delivered are referred to as service consumers.
- Organizations Facilitate Value Creation
  - An organization is a person or a group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives
  - Organizations vary in size and complexity, and in their relation to legal entities – from a single person or a team, to a complex network of legal entities united by common objectives, relationships and authorities.
  - Example:
    - IT department acting as a service provider within a wide business organization
- Service Consumer Roles
  - Customer
    - A person who defines requirements for services and takes responsibility for outcomes from service consumption
  - User
    - A person who uses services

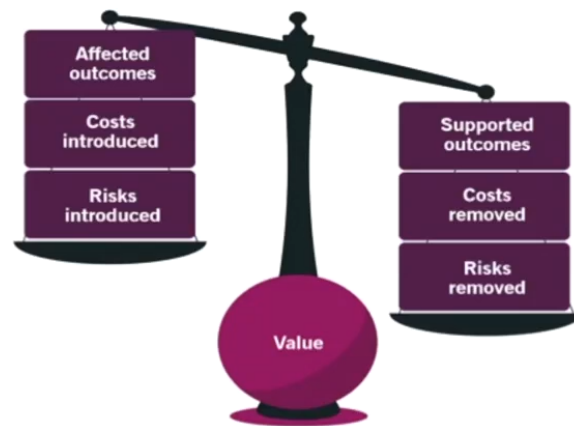
- Sponsor
  - A person who authorizes the budget for service consumption
- Other Stakeholders in Value
  - Beyond the consumer and provider roles, there are usually many other stakeholders that are important to value creation
    - Examples:
      - Shareholders
      - Employees
      - Community
- Services and Products
  - A service is a means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage specific costs and risks.
    - The services an organization provides are based on one or more of its products.
  - A product is a configuration of resources, created by the organization, that will be potentially valuable for their customers.
    - Products are typically complex and not fully visible to the consumer. The portion of a product that the consumer actually sees does not always represent all of the components that comprise the product and support its delivery.
    - Organizations define which product components their consumer see, and tailor them to suit their target consumer groups.
- What is a Service Offering?
  - A service offering is a description of one or more services, designed to address the needs of a target consumer group. A service offering may include goods, access to resources, and service actions.
    - Goods
      - Ownership is transferred to the consumer
      - Consumer takes responsibility for future use
    - Access to Resources
      - Ownership is not transferred to the consumer
      - Access is granted/licensed under agreed terms or conditions
    - Service Actions
      - Performed by the provider to address a consumer need
      - Performed according to agreement with the consumer

- What are Service Relationships?
  - Service provisioning consists of activities performed by a service provider to provide services.
  - Service consumption consists of activities performed by a service consumer to consume services/
  - Service relationship management consists of joint activities performed by a service provider and a service consumer to ensure continual value co-creation based on agreed and available service offerings.
- Service Provisioning
  - Management of provider resources configured to deliver the service
  - Provision of access to resources for users
  - Fulfillment of the agreed service actions
  - Service performance management and continual improvement
- Service Consumption
  - Management of the consumer resources needed to consume the service
  - Utilization of the provider's resources
  - Requesting of service actions to fulfill
  - Receipt of or acquiring of goods
- The Service Relationship Model

Service providers are also service consumers.



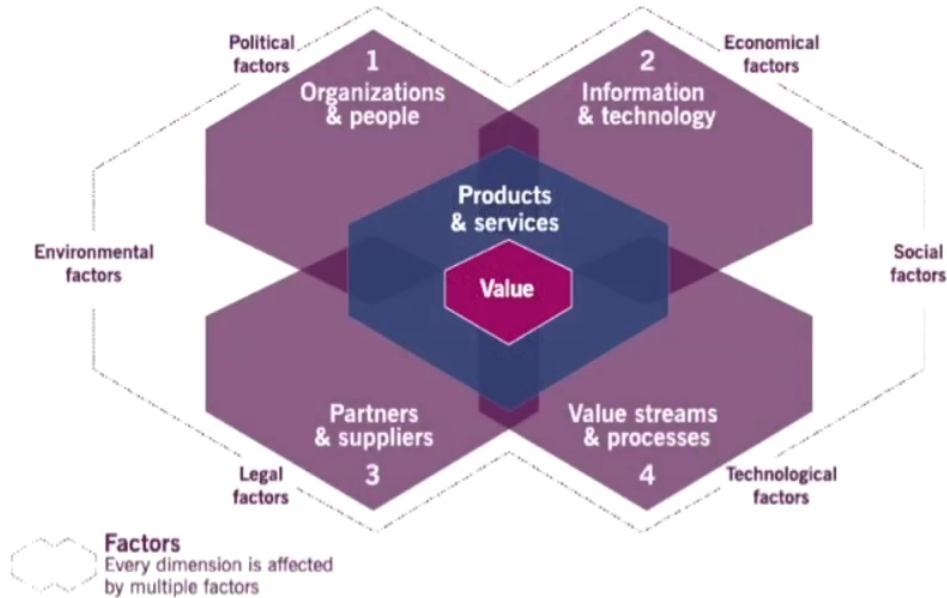
- Outcomes, Costs and Risks
  - A service is a means of enabling value co-creation by facilitating outcomes that customers want to achieve without the customer having to manage specific costs and risks.



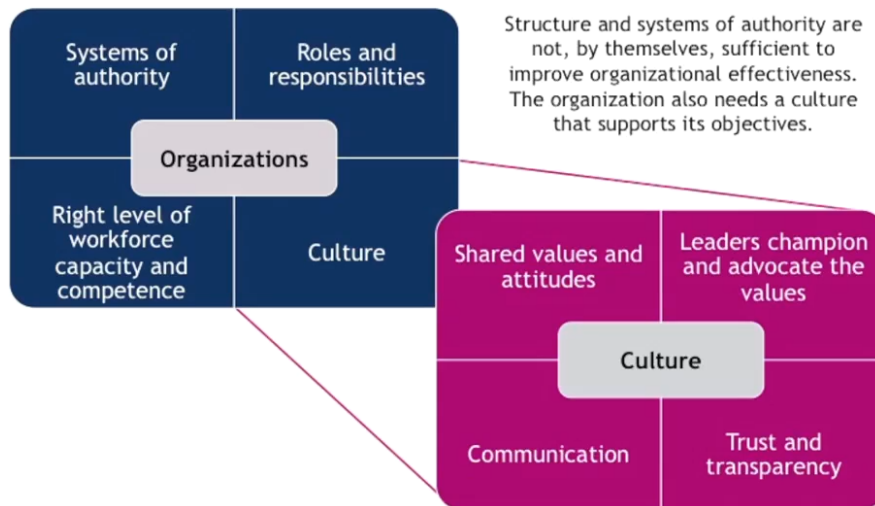
- Service Facilitate Outcomes
  - An output is a tangible or intangible deliverable of an activity.
    - Examples:
      - Report
      - Bill (of a consumed service)
      - Emails sent (using an email service)
  - An outcome is a result for a stakeholder enabled by one or more outputs.
    - Examples:
      - Being able to get to a destination in time for a meeting (outcome of using a smartphone-enabled travel service)
      - Being able to collaborate with remote coworkers (outcome of using an email service)
- Understanding Costs
  - Costs refer to the amount of money spent on a specific activity or resource.
    - There are costs removed from the consumer by the service.
      - Example: Uber/Lyft
        - No need for a car
        - No need to pay insurance, maintenance, gas
    - There are costs imposed on the consumer by the service, including charges by the service provider.
      - Example: Uber/Lyft
        - Need for a modern smartphone that's capable of running app
        - Need for a data plan to access the service
    - Costs expressed in non-financial terms can be translated into financial costs
      - Examples:
        - Number of man-hours (or person-hours)
        - Number of FTEs

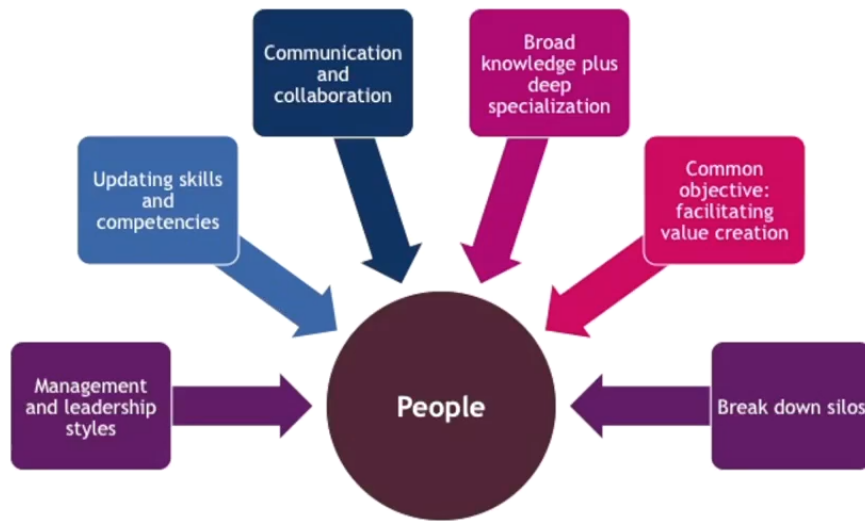
- Understanding Risks
  - Risks refer to possible events that could cause harm or loss, or make it more difficult to achieve objectives.
    - There are risks removed or reduced for the consumer by the service.
      - Example: Uber/Lyft
        - No risk of not finding parking for own car
    - There are risks potentially imposed on the consumer by the service.
      - Example: Uber/Lyft
        - Risk of failing smartphone, smartphone battery, or app itself
  - The consumer contributes to the reduction of risk through:
    - Actively participating in the definition of the requirements of the service and the clarification of its required outcomes
    - Clearly communicating the critical success factors and constraints that apply to the service
    - Ensuring the provider has access to the necessary resources of the consumer throughout the service relationship
      - Example: Uber/Lyft
        - Service provider should be able to get customer's location data in order to know where to dispatch a car
- Utility and Warranty
  - Utility is the functionality offered by a product or service to meet a particular need.
    - What the service does
    - Can be used to determine whether a service is 'fit for purpose'
    - Requires that a service support the performance of the consumer or remove constraints from the consumer
  - Warranty is the assurance that a product or service will meet agreed requirements.
    - How the service performs
    - Can be used to determine whether a service is 'fit for use'
    - Typically addresses areas such as availability, capacity, security levels and continuity
    - Requires that a service has defined and agreed conditions that are met

## Four Dimensions of Service Management

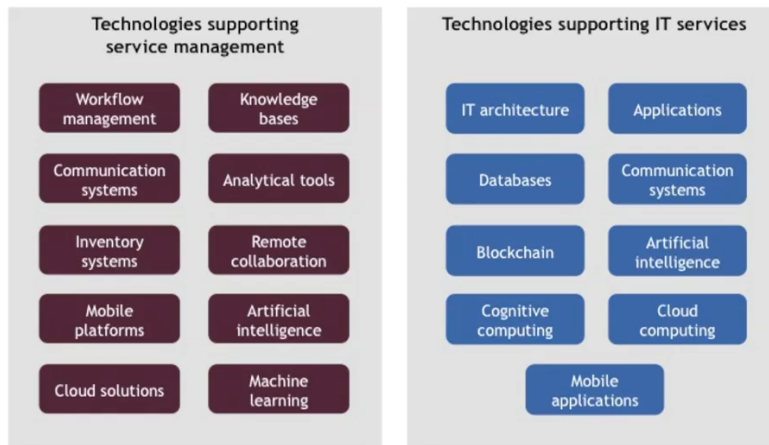


- Dimension 1: Organizations & People
  - Formal organizational structures
  - Culture
  - Required staffing and competencies
  - Roles and responsibilities

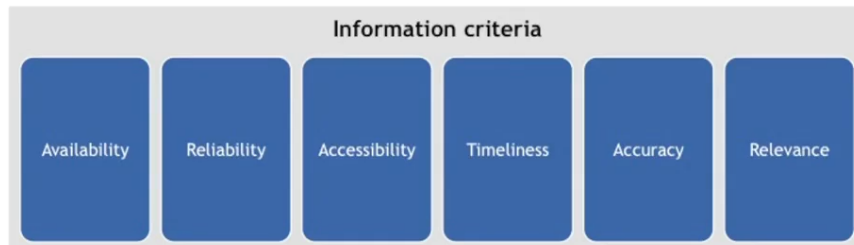




- Dimension 2: Information & Technology
  - Information and knowledge
  - Technologies
  - Relationships between the components



- For many services, information management is the primary means of enabling customer value.





- The challenges of information management, such as those presented by security and regulatory compliance requirements, as also a focus of this dimension.

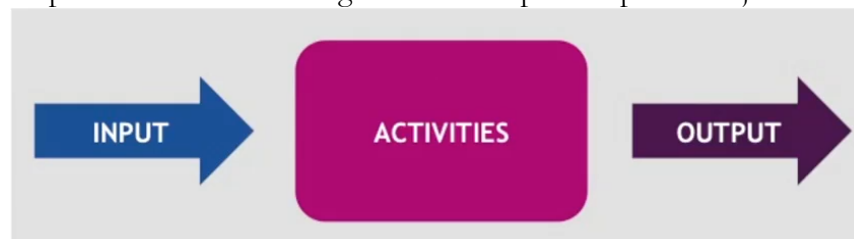
Information technology considerations			
✓	Is it compatible with the current architecture?	✓	Does the organization have the right skills to support and maintain it?
✓	Does it raise any regulatory, compliance, or information security control issues?	✓	Does it have sufficient automation capabilities to be developed, deployed and operated?
✓	Will it continue to be viable in the foreseeable future?	✓	Does it have additional capabilities that can be leveraged for other products or services?
✓	Does it align with the service provider or service consumer strategy?	✓	Does it introduce new risks or constraints to the organization?

- Organizational culture and the nature of the organization’s business will also have an impact on which technologies it chooses to use.
- Dimension 3: Partners & Suppliers
  - Service provider/service consumer relationships
  - Organization’s partner and supplier strategy
  - Factors that influence supplier strategies
  - Service integration and management
  - Service partnerships
    - Share common goals and risks
    - Collaborate to achieve desired outcomes
  - Goods and service supply
    - Formal contracts
    - Clear separation of responsibilities
  - Every organization and every service depend on some extent on services provided by other organizations.
  - Service integration and management
    - Involves the use of a specially established integrator to ensure that service relationships are properly coordinated
    - May be kept within the organization or can be delegated to a trusted partner
  - An organization’s strategy when it comes to using partners and suppliers should be based on its goal, culture and business environment.

- Dimension 4: Value Streams & Processes
  - Value streams and processes define the activities, workflows, controls and procedures needed to achieve agreed objectives.
    - Activities the organization undertakes
    - How activities are organized
    - How value creation is ensured for all stakeholders efficiently and effectively
  - A value stream is a series of steps an organization undertakes to create and deliver products and services to service consumers. It combines the organization's value chain activities.



- Value stream optimization may include process automation or adoption of emerging technologies and ways of work to gain efficiencies or enhance user experience
- A process is a set of interrelated or interacting activities that transforms inputs into outputs. Processes are designed to accomplish a specific objective.

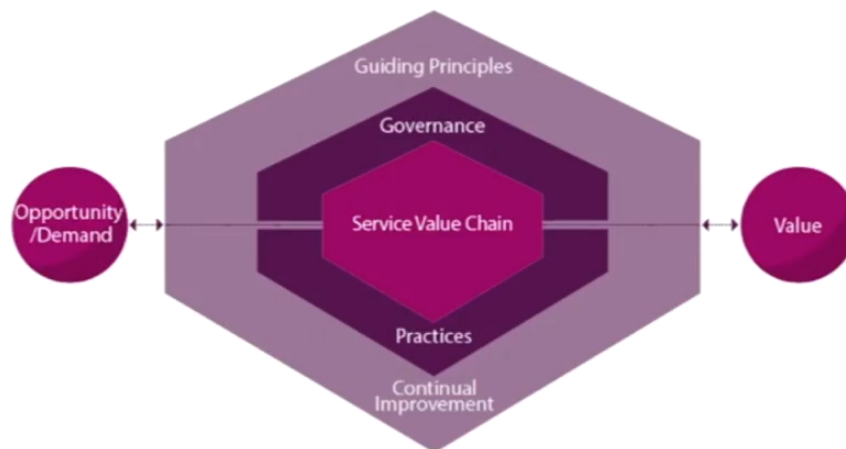


- A well-defined process can improve productivity within and across organizations.
- Value streams and processes for products and services:
  - What is the generic delivery model for the service, and how does the service work?
  - What are the value streams involved in delivering the agreed outputs of the service?
  - Who, or what, performs the required service actions?

- External Factors Influencing the Dimensions
  - The PESTLE model describes factors that constrain or influence how a service provider operates.
    - Political, Economic, Social, Technological, Legal, Environmental

## Service Value System

- What is the Service Value System?
  - The ITIL service value system (SVS) describes how all the components and activities of the organization work together as a system to enable value creation.
    - These components and activities, together with the organization's resources, can be configured and reconfigured in multiple combinations in a flexible way as circumstances change, but this requires the integration and coordination of activities, practices, teams, authorities and responsibilities to be truly effective.
  - The purpose of the SVS is to ensure that the organization continually co-creates value with all stakeholders through the use and management of products and services.

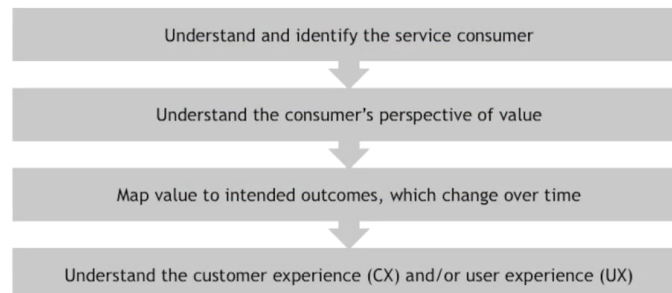


- Inputs of the SVS
  - Opportunities represent options or possibilities to add value for stakeholders or otherwise improve the organization.
  - Demand is the need or desire for products and services among internal and external consumers.
- Outcome of the SVS
  - The outcome of the SVS is value. The SVS can enable the creation of many different types of value for a wide group of stakeholders.
- Components of the SVS
  - The guiding principles are recommendations that can guide an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure.
  - Governance is the means by which an organization is directed and controlled.

- The service value chain is a set of interconnected activities that an organization performs in order to deliver a valuable product or service to its consumers and to facilitate value realization.
  - The ITIL practices are sets of organizational resources designed for performing work or accomplishing an objective.
    - Resources are people, processes, documentation, information assets, technologies, supplier contracts, etc.
  - Continual improvement is a recurring organizational activity performed at all levels to ensure that organization's performance continually meets stakeholders' expectations.
- Addressing the Challenge of Silos
    - The ITIL SVS has been specifically architected to enable flexibility and discourage siloed working.

## Guiding Principles

- What is a Guiding Principle?
  - A guiding principle is a recommendation that guides an organization in all circumstances.
    - The guiding principles can be used to guide organizations in their work as they adopt a service management approach and adapt ITIL guidance to their own specific needs and circumstances.
    - They allow organizations to integrate the use of multiple methods into an overall approach to service management. They are universally applicable to nearly any initiative.
- Applying the Guiding Principles
  - The guiding principles encourage and support organizations in continual improvement at all levels. They are universally applicable to nearly any initiative and to relationships with all stakeholder groups.
  - *For example, the first principle, focus on value, can (and should) be applied to all relevant stakeholders and respective definitions of value, not only to service consumers.*
  - Organizations should not use just one or two of the principles, but should consider the relevance of each of them and how they apply together. Not all principles will be critical in every situation, but they should all be reviewed on each occasion to determine how appropriate they are.
- The Seven Guiding Principles
  - Focus on value
  - Start where you are
  - Progress iteratively with feedback
  - Collaborate and promote visibility
  - Think and work holistically
  - Keep it simple and practical
  - Optimize and automate
- Focus on Value
  - Everything the organization does should link back, directly or indirectly, to value for itself, its customers and other stakeholders.



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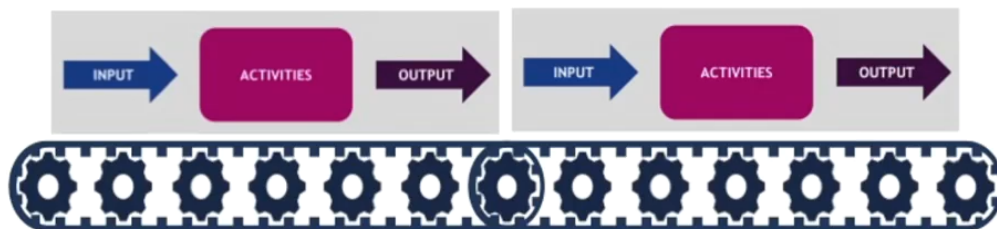
- Application
  - Know how consumers use each service.
  - Encourage a focus on value among all staff.
  - Focus on value during operational activity as well during improvement initiatives.
  - Include a focus on value in every step of any improvement initiative.
- Start Where You Are
  - When engaged in any improvement initiative, do NOT start over without first considering what is already available to be leveraged.
    - Decisions on how to proceed should be based on accurate information obtained through direct observation supported by appropriate and effective measurement.
    - Measurement should be used to support the analysis of what has been observed rather than to replace it. Over-reliance on data analytics and reporting can introduce biases and risks in decision-making.
    - The act of measuring can affect the results.
    - “When a measure becomes a target, it ceases to be a good measure”
  - Application
    - Look at what exists as objectively as possible.
    - Determine if successful practices or services can be replicated or expanded.
    - Apply your risk management skills in the decision-making process.
    - Recognize that sometimes nothing from the current state can be reused.
- Progress Iteratively with Feedback
  - Working in a time-boxed, iterative manner with feedback loops embedded into the process allows for greater flexibility, faster responses to customer and business needs, the ability to discover and respond to failure earlier, and an overall improvement in quality.
  - Organize work into smaller, manageable sections.
    - Sequential or simultaneous
    - Manageable and managed
    - Tangible results
    - Timely manner
    - Can be built on to create future improvements
  - A feedback loop is a situation where part of the output of an activity is used for new input.
    - Example:
      - Feedback survey in customer support provider
    - The initiative and its component iterations, must be continually reevaluated to reflect changes in circumstances. Seek and use feedback before, throughout, and after each iteration.

- Feedback loops between participants helps them understand where work comes from, outputs go and how their actions affect the outcomes.
  - Application
    - Comprehend the whole but do something.
    - The ecosystem is constantly changing, so feedback is essential.
    - Fast does not mean incomplete.
- Collaborate and Promote Visibility
  - When initiatives involve the right people in the correct roles, efforts benefit from better buy-in, more relevance and increased likelihood of long-term success.
  - People and perspectives for successful collaboration can be found in all stakeholder groups
  - Without transparency:
    - There may be an impression that the work is not a priority
    - Improvement work may take a lower priority over other tasks with daily urgency.
  - Insufficient visibility of work leads to poor decision-making. It is important to:
    - Understand the flow of work
    - Identify bottlenecks and excess capacity
    - Uncover waste.
  - Application
    - Collaboration does not mean consensus.
    - Communicate in a way the audience can hear.
    - Decisions can only be made on visible data.
- Think and Work Holistically
  - A holistic approach to service management requires an understanding of how all the parts of an organization work together in an integrated way.
    - Address all four dimensions
    - Understand the full-service value chain
  - Application
    - Recognize the complexity of the systems.
    - Collaboration is key to thinking and working holistically.
    - Where possible, look for patterns of interactions between system elements.
    - To make something simple, you have to understand its complexity, and then proceed to some simple representation
    - Automation can facilitate working holistically.
- Keep it Simple and Practical
  - Outcome-based thinking should be used to produce practical solutions which deliver valuable outcomes while using the minimum number of steps needed.
    - Establish a holistic view of the organization's work.

- Start with an uncomplicated approach, add later.
  - Do not try to produce a solution for every exception.
  - Be mindful of competing objectives.
- Application
  - Ensure value.
  - Simplicity is the ultimate sophistication.
  - Do fewer things but do them better.
  - Respect the time of the people involved.
  - Easier to understand, more likely to adopt.
  - Simplicity is the best route to achieving quick wins.
- Optimize and Automate
  - Optimization means to make something as effective and useful as makes sense. Before an activity can be effectively automated, it should be optimized to whatever degree is possible and reasonable.



- Automation is the use of technology to perform a step or series of steps correctly and consistently with limited or no human intervention. Automating frequent and repetitive tasks helps organizations scale up and allows human resources to be used for more complex decision-making.
  - The simplest form of automation involves standardizing and streamlining manual tasks to allow decisions to be made ‘automatically’.

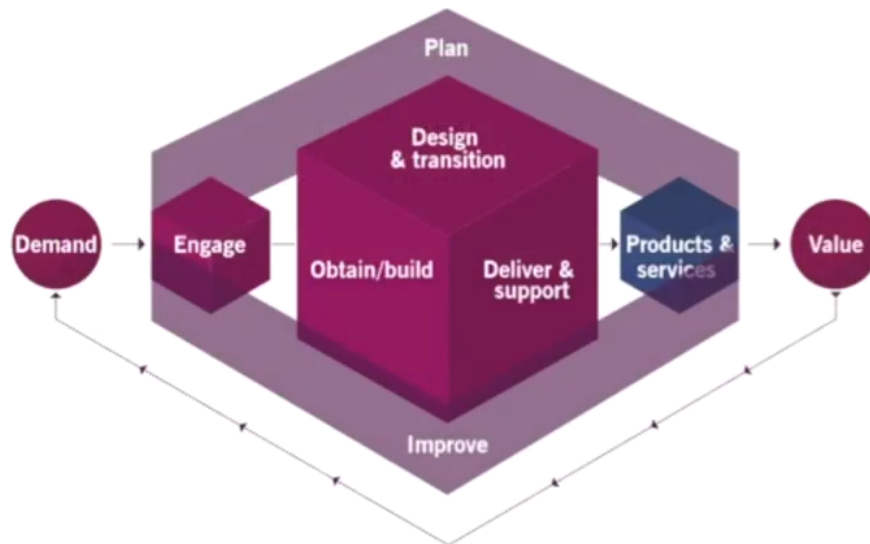




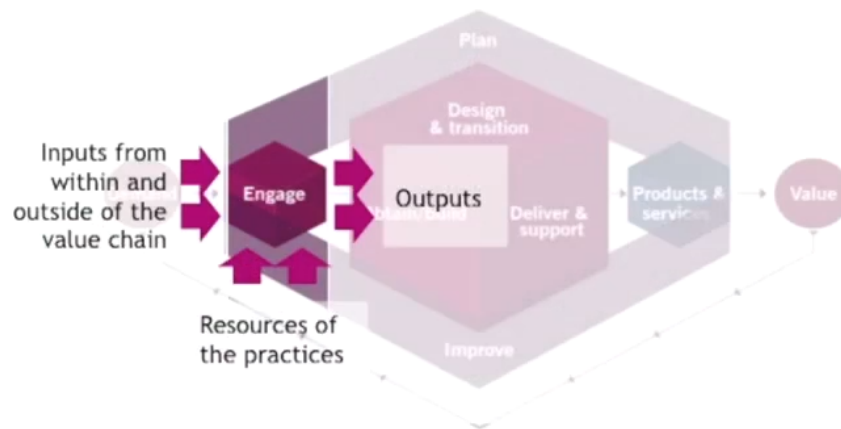
- Application
  - Simplify and/or optimize before automating.
  - Define your metrics.
  - Use the other guiding principles when applying this one.
    - Progress iteratively with feedback
    - Keep it simple and practical
    - Focus on value
    - Start where you are

## Service Value Chain

- What is the Service Value Chain?
  - The central element of the SVS is the service value chain, an operating model which outlines the key activities required to respond to demand and facilitate value creation through the creation and management of products and services.



- Doesn't introduce a linear sequence of actions
  - Usually starts with Engage but not always
  - Central activities depicted in the cube can interact in any order between each other and with other activities
  - Overlaps between Improve and Engage, Improve and central cube, Improve and Products & services illustrate the feedback loops that should be present between each part of the service value chain via the improvement cycle
  - Perceived value drives the demand for the next order, service, product, and iteration of service relationships
  - Perceived value should also be managed and understood
- Value Chain Interactions with Practices
    - Service value chain activities represent the steps an organization takes in the creation of value. Each activity contributes to the value chain by transforming specific inputs into outputs.



- To convert inputs into outputs, the value chain activities use different combinations of ITIL practices. Each activity may draw upon internal or third-party resources, processes, skills and competencies from one of more practices.
- Service Value Chain Activities
  - All incoming and outgoing interactions with parties external to the service provider are performed via engage value chain activity
  - All new resources are obtained through the obtain/build activity
  - Planning at all levels is performed via plan activity
  - Improvements at all levels are initiated and managed via improve activity
  - Creation, modification, delivery, maintenance and support of component, products and services are performed in integrated and coordinated way between design and transition, obtain/build and delivery and support activities
  - Products and services, Demand and Value are NOT value chain activities; they are SVS components
- Value Chain Activity: Plan
  - The purpose of the plan value chain activity is to ensure a shared understanding of the vision, current status and improvement direction for all four dimensions and all products and services across the organization.
  - Inputs:
    - Policies, requirements and constraints provided by the organization's governing body
    - Consolidated demands and opportunities provided by engage
    - Value chain performance information, improvement initiatives and plans provided by improve
    - Improvement status reports from improve
    - Knowledge and information about new and changed products and services from design and transition and obtain/build
    - Knowledge and information about third party service components from engage

- Outputs:
  - Strategic, tactical and operational plans
  - Portfolio decisions for design and transition
  - Architectures and policies for design and transition
  - Improvement opportunities for improve
  - Product and service portfolio for engage
  - Contract and agreement requirements for engage
- Value Chain Activity: Improve
  - The purpose of the improve value chain activity is to ensure continual improvement of products, services and practices across all value chain activities and the four dimensions of service management.
  - Inputs:
    - Product and service performance information provided by deliver and support
    - Stakeholders' feedback provided by engage
    - Performance information and improvement opportunities provided by all value chain activities
    - Knowledge and information about new and changed products and services from design and transition and obtain/build
    - Knowledge and information about third party service components form engage
  - Outputs:
    - Improvement initiatives and plans for all value chain activities
    - Value chain performance information for plan and the governing body
    - Improvement status reports for all value chain activities
    - Contract and agreement requirements for engage
    - Service performance information for design and transition
- Value Chain Activity: Engage
  - The purpose of the engage value chain activity is to provide a good understanding of stakeholder needs, continual engagement with all stakeholders, transparency and good relationships with all stakeholders.
  - Inputs:
    - Product and service portfolio provided by plan
    - High level demand for services and products provided by customers
    - Requests and feedback from customers
    - Incidents, service requests and feedback from users
    - Information on the completion of user support tasks from deliver and support
    - Market opportunities from current and potential customers and users

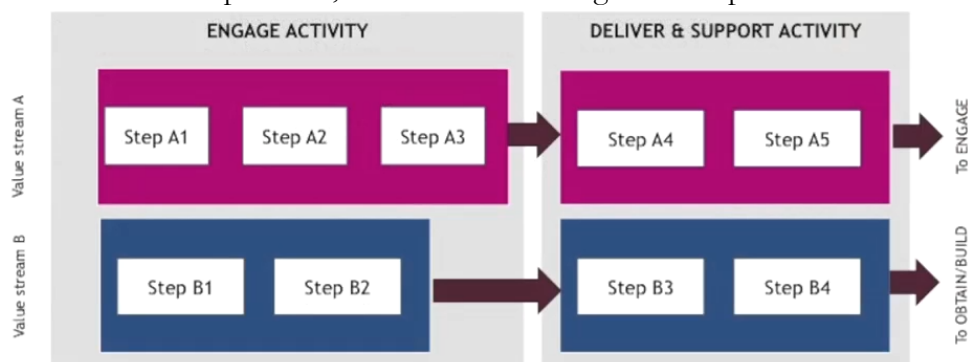
- Cooperation opportunities and feedback provided by partners and suppliers
- Contract and agreement requirements from all value chain activities
- Knowledge and information about new and changed products and services from design and transition and obtain/build
- Knowledge and information about third party service components from suppliers and partners
- Product and service performance information from deliver and support
- Improvements initiatives and plans from improve
- Improvement status reports from improve
- Outputs:
  - Consolidated demands and opportunities for plan
  - Product and service requirements for design and transition
  - User support tasks for deliver and support
  - Improvement opportunities and stakeholders' feedback for improve
  - Change or project initiation requests for obtain/build
  - Contracts and agreements with external and internal suppliers and partners for obtain/build and design and transition
  - Knowledge and information about third party service components for all value chain activities
  - Service performance reports for customers
- Value Chain Activity: Design & Transition
  - The purpose of the design and transition value chain activity is to ensure that products and services continually meet stakeholder expectations for quality, costs and time to market.
  - Inputs:
    - Portfolio decisions provided by plan
    - Architectures and policies provided by plan
    - Product and service requirements provided by engage
    - Improvement initiatives and plans provided by improve
    - Improvement status reports from improve
    - Service performance information provided by deliver and support and improve
      - Are certain targets met?
      - Was transition successful?
    - Service components form obtain/build
    - Knowledge and information about third party service components from engage
    - Knowledge and information about new and changed products and services from obtain/build
      - Product specifications, known errors information
  - Outputs:

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- Requirements and specifications for obtain/build
  - Contract and agreement requirements for engage
  - New and changed products and services to deliver and support
  - Knowledge and information about new and changed products and services to all value chain activities
  - Performance information and improvement opportunities for improve
- Value Chain Activity: Obtain/Build
    - The purpose of the obtain/build value chain activity is to ensure that service components are available when and where they are needed, and meet agreed specifications.
    - Inputs:
      - Architectures and policies provided by plan
      - Contracts and agreements with external and internal suppliers and partners provided by engage
      - Goods and services provided by external and internal suppliers and partners
        - Engage – Information, interaction, and engagement
        - Obtain/Build – components, goods, and services
      - Requirements and specifications provided by design and transition
      - Improvement initiatives and plans provided by improve
      - Improvement status reports from improve
      - Change or project initiation requests provided by engage
      - Change requests provided by deliver and support
      - Knowledge and information about new and changed products and services from design and transition
      - Knowledge and information about third party service components from engage
    - Outputs:
      - Service components for deliver and support
        - Examples:
          - Spare parts, consumables (no need for design and transition)
      - Service components for design and transition
      - Knowledge and information about new and changed service components to all value chain activities
      - Contract and agreement requirements for engage
      - Performance information and improvement opportunities for improve
- Value Chain Activity: Deliver & Support
  - The purpose of the deliver and support value chain activity is to ensure that services are delivered and supported according to agreed specifications and stakeholders' expectations.

- Inputs:
  - New and changed products and services provided by design and transition
  - Contracts and agreements with external and internal suppliers and partners provided by engage
  - Service components provided by obtain/build
  - Improvement initiatives and plans provided by improve
  - Improvement status reports from improve
  - User support tasks provided by engage
  - Knowledge and information about new and changed service components and services from design and transition and obtain/build
  - Knowledge and information about third party service components from engage
- Outputs:
  - Services delivered to customers and users
  - Information on the completion of user support tasks for engage
  - Product and service performance information for engage and improve
  - Improvement opportunities for improve
  - Contract and agreement requirements for engage
  - Change requests for obtain/build
  - Service performance information for design and transition
- Value Streams and the Service Value Chain
  - In order to carry out a certain task, or respond to a particular situation, organizations create service value streams. Service value streams are specific combinations of activities and practices, and each one is designed for a particular scenario.



- As each value stream is made up of a different combination of value chain activities and practices, inputs and outputs must be understood as specific to particular value streams.



# ITIL® 4 Foundation Study Guide



## Continual Improvement

- The purpose of the **continual improvement practice** is to align the organization’s practices and services with changing business needs through the ongoing identification and improvement of services, service components, practices or any element involved in the efficient and effective management of products and services.



## Categories of Practices

- What is Practice?
  - A practice is a set of organizational resources designed for performing work or accomplishing an objective.
  - Each practice:
    - Supports multiple service value chain activities
    - Includes resources based on the 4 dimensions of service management
  
- Introduction to the ITIL Practices
  - General management practices
  - Service management practices
  - Technical management practices

## General Management Practices

- General Management Practices
  - General management practices have been adopted/adapted for service management from general business management domains.
  - There are 15 General Management Practices:
    - \*\* Continual Improvement
    - \* Information Security Management
    - \* Relationship Management
    - \* Supplier Management
    - Architecture Management
    - Knowledge Management
    - Measure and Reporting
    - Portfolio Management
    - Organizational Change Management
    - Project Management
    - Risk Management
    - Service Financial Management
    - Strategy Management
    - Workforce and Talent Management
  - Practices with (\*\*) must be known in-depth for the exam
  - Practices with (\*) are recall only
  - Practices without a (\*\*) or (\*) are not covered by the exam
  
- \*\* Continual Improvement
  - The purpose of the continual improvement practice is to align the organization's practices and services with changing business needs through the ongoing identification and improvement of services, service components, practices or any element involved in the efficient and effective management of products and services.
  - Key activities:
    - Encouraging continual improvement across the organization
    - Securing time and budget for continual improvement
    - Identifying and logging improvement opportunities
    - Assessing and prioritizing improvement opportunities
    - Making business cases for improvement action
    - Planning and implementing improvements
    - Measuring and evaluating improvement results
    - Coordinating improvement activities across the organization



- A continual improvement register (CIR) is a database or structured document to track and manage improvement ideas from identification through to final action.

**Example CIR**

Improvement idea	Impact	...
Promote the guiding principles across partners and suppliers	M	
Automate software deployments to reduce manual labour	M	
Update service desk scripts to improve incident response time	H	

Ideas are captured, documented, assessed, prioritized and appropriately acted on.

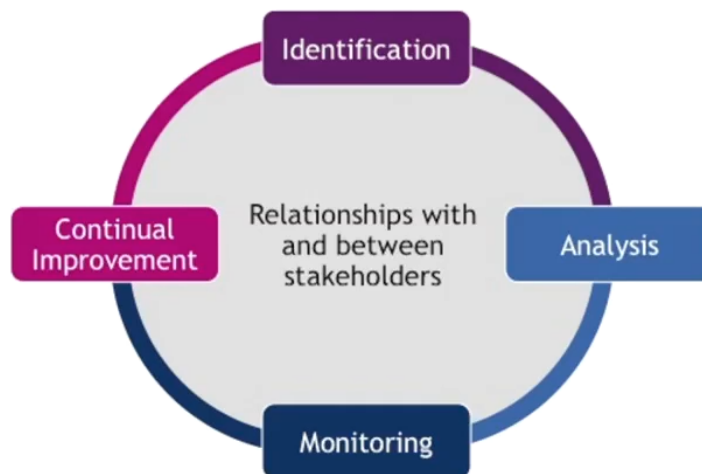


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Value Chain Activity	Contribution
Plan	The continual improvement practice is applied to planning activities, methods and techniques to make sure they are relevant to the organization's current objectives and context.
Improve	The continual improvement practice is key to this value chain activity. It structures resources and activities enabling improvement at all levels of the organization and the SVS.
Engage	Each of these value chain activities are subject to continual improvement, and the continual improvement practice is applied to all of them.
Design and transition	
Obtain/build	
Deliver and support	

- \* Information Security Management
  - The purpose of the information security management practice is to protect the information needed by the organization to conduct its business.
  - Includes understanding and managing risks to:
    - Confidentiality
    - Integrity
    - Availability
    - Authentication
    - Non-repudiation
  
- \* Relationship Management
  - The purpose of the relationship management practice is to establish and nurture the links between the organization and its stakeholders at strategic and tactical levels.



- \* Supplier Management
  - The purpose of the supplier management practice is to ensure the organization's suppliers and their performance are managed appropriately to support the provision of seamless, quality products, services and components.
  - This can include creating closer, more collaborative relationships with key suppliers to uncover and realize new value and reduce risk of failure.

## Service Management Practices

- Service Management Practices
  - Service management practices have been developed in service management and IT service management (ITSM) industries.
  - There are 17 General Management Practices:
    - \*\* Change Control
    - \*\* Incident Management
    - \*\* Problem Management
    - \*\* Service Desk
    - \*\* Service Level Management
    - \*\* Service Request Management
    - \* IT Asset Management
    - \* Monitoring and Event Management
    - \* Release Management
    - \* Service Configuration Management
    - Service Continuity Management
    - Availability Management
    - Business Analysis
    - Capacity and Performance Management
    - Service Catalogue Management
    - Service Design
    - Service Validation and Testing
  - Practices with (\*\*) must be known in-depth for the exam
  - Practices with (\*) are recall only
  - Practices without a (\*\*) or (\*) are not covered by the exam
- Change Control
  - The purpose of the change control practice is to maximize the number of successful IT changes by ensuring that risks have been properly assessed, authorizing changes to proceed, and managing the change schedule.



- The scope of change control is defined by each organization. It will typically include all IT infrastructure, applications, documentation, processes, supplier relationships and anything else that might directly or indirectly impact a product or service.
- A change is the addition, modification, or removal of anything that could have a direct or indirect effect on IT services.
  - Standard
    - Pre-authorized
    - Implement without additional authorization
  - Normal
    - Authorization based on change type
    - Low-risk, someone who can make rapid decisions
    - Very major
  - Emergency
    - Expedited assessment and authority
    - May be separate change authority
- The person or group who authorizes a change is known as a change authority.
  - In high velocity organizations, it is a common practice to decentralize change approval, making the peer review a top predictor of high performance
- The change schedule is used to help plan changes, assist in communication, avoid conflicts and assign resources.

Value Chain Activity	Contribution
Plan	Changes to product and service portfolios, policies and practices all require a certain level of control, and the change control practice is used to provide it.
Improve	Many improvements will require changes to be made, and these should be assessed and authorized in the same way as all other changes.
Engage	Customers and users may need to be consulted or informed about changes, depending on the nature of the change.
Design and transition	Many changes are initiated as a result of new or changed services. Change control activity is a major contributor to transition.
Obtain/build	Changes to components are subject to change control, whether they are built in-house or obtained from suppliers.
Deliver and support	Changes may have an impact on delivery and support, and information about changes must be communicated to personnel who carry out this value chain activity. These people may also play a part in assessing and authorizing changes.

- Incident Management
  - The purpose of the incident management practice is to minimize the negative impact of incidents by restoring normal service operation as quickly as possible.
    - An incident is an unplanned interruption to a service, or reduction in the quality of service.



- Incidents should be logged.
- Incidents should be managed to meet agreed target resolution times.
- Incidents should be prioritized.
- Design the incident management practice appropriately for different types of incidents
  - Incidents based on different impact
  - Major incidents
  - Information security incidents
- Prioritize incidents
  - Based on agreed classification
  - Ensure incidents with highest business impact are resolved first
- Use a robust tool to log and manage incidents
  - Link to configuration items, changes, problems, known errors and other knowledge
  - Provide incident matching to other incidents, problems or known errors
- Incidents may be escalated to a support team for resolution. The routing is typically based on the incident category. Anyone working on an incident should provide quality, timely updates. Incident management requires a high level of collaboration within and between teams.

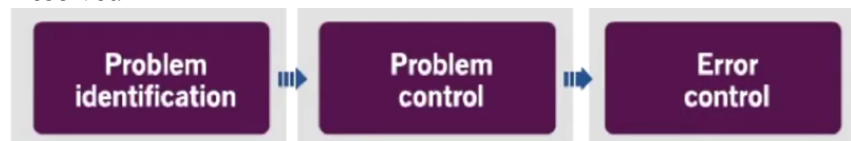


- Some organizations use a technique called swarming to help manage incidents. This involves many different stakeholders working together initially, until it becomes very clear which of them is best placed to continue and which can move on to other tasks.
  - Collaboration can facilitate information sharing and learning as well as helping to solve the incident more efficiently and effectively.

Value Chain Activity	Contribution
Improve	Incident records are a key input to improvement activities, and are prioritized both in terms of incident frequency and severity.
Engage	Incidents are visible to users, and significant incidents are also visible to customers.
Design and transition	Incidents may occur in test environments, as well as during service release and deployment. Incident management practice ensures these incidents are resolved in a timely and controlled manner.
Obtain/build	Incidents may occur in development environments. Incident management practice ensures these incidents are resolved in timely and controlled manner.
Deliver and support	Incident management makes a significant contribution to support. Deliver and support value chain activity includes resolving incidents and problems.

- Problem Management

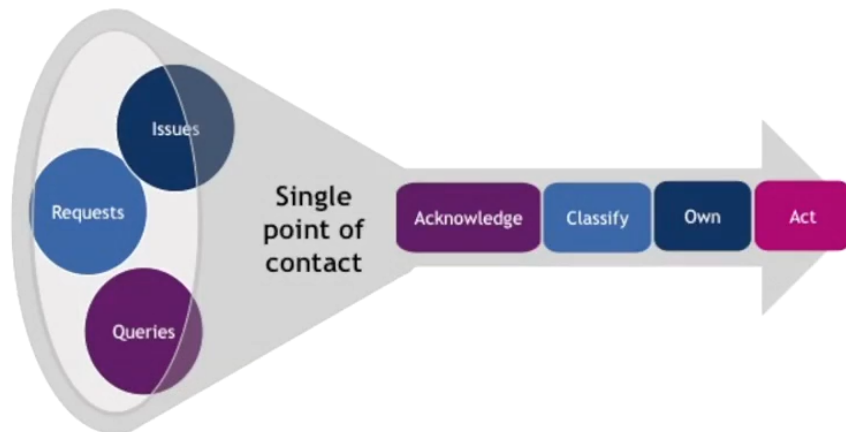
- The purpose of the problem management practice is to reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents, and managing workarounds and known errors.
  - A problem is a cause, or potential cause, of one or more incidents
  - A known error is a problem that has been analyzed and has not been resolved.



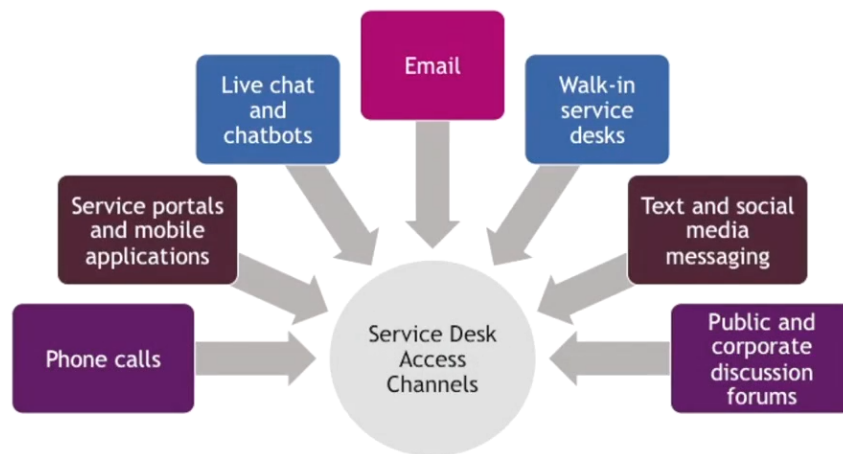
- A workaround is a solution that reduces or eliminates the impact of an incident or problem for which a full resolution is not yet available. Some workarounds reduce the likelihood of incidents.
  - Workarounds are documented in problem records
  - Workarounds can be done at any stage, it doesn't need to wait for analysis to be complete
  - If a workaround has been documented early in problem control, then this should be reviewed and improved after problem analysis is complete
- Problem Management interacts with:
  - Incident management
  - Risk management
  - Change control
  - Knowledge management
  - Continual improvement

Value Chain Activity	Contribution
Improve	Effective problem management provides the understanding needed to reduce the number of incidents, and the impact of incidents that can't be prevented.
Engage	Problems that have a significant impact on services will be visible to customers and users.
Design and transition	Problem management provides information that helps to improve testing and knowledge transfer.
Obtain/build	Problem management activities may identify product defects that are then managed as part of this value chain activity.
Deliver and support	Problem management makes a significant contribution by preventing incident repetition and supporting timely incident resolution.

- Service Desk
  - The purpose of the service desk practice is to capture demand for incident resolution and service requests. It should also be the entry point/single point of contact for the service provider with all of its users.



- With increased automation and the gradual removal of technical debt, the focus of the service desk is to provide support for 'people and business' rather than simple technical issues.
  - Major influence on user experience and how the service provider is perceived by users
  - Practical understanding of the wider organization – the empathetic link between the service provider and users
  - The service desk can focus on excellent customer experience when personal contact is needed
  - Support and development teams need to work in close collaboration with the service desk



- Supporting technologies for a centralized service desk
  - Intelligent telephony systems
  - Workflow systems
  - Workforce management/resource planning systems
  - Knowledge base
  - Call recording and quality control
  - Remote access tools
  - Dashboard and monitoring tools
  - Configuration management systems
- A virtual service desk allows agents to work from multiple, geographically-dispersed locations. It requires more sophisticated technology, allowing access from multiple locations and complex routing and escalation.



- The service desk may not need to be highly technical, although some are.

Value Chain Activity	Contribution
Improve	Service desk activities are constantly monitored and evaluated to support continual improvement, alignment and value creation. Feedback from users is collected by the service desk to support continual improvement.
Engage	The service desk is the main channel for tactical and operational engagement with users.
Design and transition	The service desk provides a channel for communicating with users about new and changed services. Service desk staff participate in release planning, testing and early life support.
Obtain/build	Service desk staff can be involved in acquiring service components used to fulfil service requests and resolve incidents.
Deliver and support	The service desk is the coordination point for managing incidents and service requests.

- Service Level Management
  - The purpose of the service level management practice is to set clear business-based targets for service performance, so that the delivery of a service can be properly assessed, monitored and managed against these targets.
  - Provides the end to end visibility of the organization’s services:
    - Establishes a shared view of the services and target service levels with customers
    - Collects, analyzes, stores and reports relevant metrics to ensure service levels are met
    - Performs service reviews to ensure the current services continue to meet the organization and its customers’ needs
    - Captures and reports on service issues including performance against defined service levels
  - A service level agreement (SLA) is a documented agreement between a service provider and a customer that identifies services required and the expected level of service.
    - SLA is a tool to measure the performance of services from the customer’s point of view.
    - Key requirements for successful SLAs:
      - Related to a defined service
      - Should relate to defined outcomes, not just operational metrics
      - Should reflect an agreement between the service provider and the service consumer
      - Must be simply written and easy to understand for all parties
  - Interacts with:
    - Relationship management
    - Business liaison
    - Supplier management

- Business analysis
- Skills and competencies
- Information Sources:
  - Customer engagement
    - Initial listening
    - Discovery and information capture
    - Measurement and ongoing process discussions
    - Asking simple open-ended questions
  - Customer feedback
    - Surveys
    - Key business-related measures
  - Operational metrics
  - Business metrics

Value Chain Activity	Contribution
Plan	Service level management supports planning of product and service portfolio and service offerings with information about the actual service performance and trends.
Improve	Service level management can be a driving force for service improvement.
Engage	Service level management ensures ongoing engagement with customers and users through feedback processing and continual service review.
Design and transition	Service level management provides an input to the design and development of new and changed services.
Obtain/build	Service level management provides objectives for components and service performance, as well as for measurement and reporting capabilities of the products and services.
Deliver and support	Service level management communicates service performance objectives to the operations and support teams and collects their feedback as an input for service improvement.

- Service Request Management
  - The purpose of the service request management practice is to support the agreed quality of a service by handling all agreed user-initiated service requests in an effective and user-friendly manner.
  - Service requests are pre-defined and pre-agreed and can usually be formalized with clear, standard procedures.



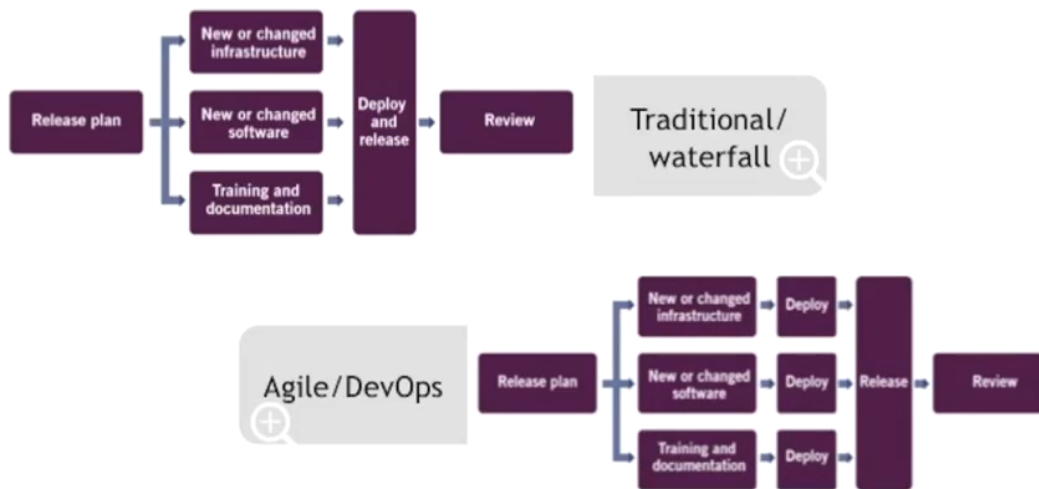
- Service requests are a normal part of service delivery, not a failure or degradation of service, which are handled as incidents.
- A service request is a request from a user or a user's authorized representative that initiates a service action that has been agreed as a normal part of service delivery.
  - Fulfilment of service requests may include changes to services or their components; usually these are standard changes.
- Some examples of a service request:
  - Request for a service delivery action
  - Request for information
  - Request for provision of a resource or service
  - Request access to a resource or service
  - Feedback, compliments and complaints
- Service requests and their fulfilment should be standardized and automated to the greatest degree possible,
- Opportunities for improvement should be identified and implemented to produce faster fulfilment times and take additional advantage of automation.
- Policies should be established regarding what service requests will be fulfilled with limited or even no additional approvals so that fulfilment can be streamlined.
- The expectations of users regarding fulfilment times should be clearly set, based on what the organization can realistically deliver.
- Policies and workflows are needed to redirect service requests that should actually be managed as incidents or changes.
- Some service requests require authorization according to financial, information security or other policies.
- Service request management depends on well-designed processes and procedures, which are operationalized through tracking and automation tools.
- Service requests may have simple workflows or quite complex workflows
- Steps to fulfill requests should be well-known and proven
- The service provider can agree to fulfillment times and provide clear status communication to users
- Some service requests can provide a self-service experience – completely fulfilled with automation
- Leverage existing workflow models whenever possible to improve efficiency and maintainability.



Value Chain Activity	Contribution
Improve	Service request management can provide a channel for improvement initiatives, compliments and complaints from users. It also contributes to improvement by providing trend, quality and feedback information about fulfilment of requests.
Engage	Service request management includes regular communication to collect user-specific requirements, set expectations, and to provide status updates.
Design and transition	Standard changes to services can be initiated and fulfilled as service requests.
Obtain/build	The fulfillment of service requests may require acquisition of pre-approved service components.
Deliver and support	Service request management makes a significant contribution to normal service delivery. This activity of the value chain is mostly concerned with ensuring users continue to be productive, and sometimes heavily depends on fulfilment of their requests.

- IT Asset Management
  - The purpose of the IT asset management practice is to plan and manage the full lifecycle of all IT assets, to help the organization
    - Maximize value
    - Control costs
    - Manage risks
    - Support decision-making about purchase, reuse and retirement of assets
    - Meet regulatory and contractual requirements
  - An IT asset is any valuable component that can contribute to delivery of an IT product or service
  
- Monitoring and Event Management
  - The purpose of the monitoring and event management practice is to systematically observe a service or service component, and record and report selected changes of state identified as events.
  - This practice identifies and prioritizes infrastructure, services, business processes and information security events, and establishes the appropriate response to those events, including responding to conditions that could lead to potential faults or incidents.
  - An event is any change of state that has significance for the management of a configuration item (CI) or IT service.
  
- Release Management
  - The purpose of the release management practice is to make new and changed services and features available for use.





- Service Configuration Management
  - The purpose of service configuration management practice is to ensure that accurate and reliable information about the configuration of services, and the CIs that support them, is available when and where it is needed.
  - A configuration item (CI) is any component that needs to be managed in order to deliver an IT service.

## Technical Practices

- Technical Management Practices
  - Technical management practices have been adapted from technology management domains for service management purposes by expanding or shifting their focus from technology solutions to IT services.
  - There are 3 Technical Management Practices:
    - \* Deployment Management
    - Infrastructure and Platform Management
    - Software Development and Management
  - Practices with (\*) is recall only
  - Practices without a (\*) is not covered by the exam
  
- Deployment Management
  - The purpose of the deployment management practice is to move new or changed hardware, software, documentation, processes, or any other component to live environments. It may also be involved in deploying components to other environments for testing or staging.

## What Should I Do Now?

- Take practice exams
  - There are 2 full-length practice exams included in this course for free
  - You should aim to score a 75% or higher on your practice exams
    - The real certification only requires a 65% or higher to pass
    - Aim higher to ensure a pass on exam day!
  - If you need additional practice exams, check Udemy, DionTraining.com, or other reputable sources.
- Order your exam voucher
  - When you feel confident, order your exam voucher at DionTraining.com to save \$50 off the retail price.
  - These vouchers will let you take the exam from any location worldwide
  - You will take the exam at PeopleCert.org using the “Web Proctoring Service”
    - You will need a webcam and microphone to take the exam
- Schedule your exam
  - Once you have your voucher, use the directions included with your voucher to create your free PeopleCert and schedule your exam
- Take the exam
  - On exam day, your desk must be clean of all materials
  - You may have a single piece of clean white paper to use on the exam and a pen/pencil to take notes during the exam
  - You will need a Photo ID to prove to the proctor who you are before starting the exam
  - Good luck!
- Come back and celebrate!
  - Once you pass the exam, let us know in our Facebook Group (Dion Training) or the course’s Q&A section.
  - You did it!
    - Add “ITIL 4 Foundation certified” to your resume or CV

## Where Do I Go From Here?

- ITIL 4 Foundation is just the first certification in the ITIL path to becoming an ITIL Master
- When you are ready to move up the certification path, choose either the Managing Professional or Strategic Leader path to begin.
- Come back and join us in our courses dedicated to passing each of the ITIL Specialist, ITIL Strategist, or ITIL Leader certification exams!

