ITIL® 4 Foundation

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Acknowledgements

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ITIL® 4 Foundation

About This Course

ITIL® is the world's leading best practice framework for implementing IT service management. Organizations use ITIL to plan, implement, support, and improve services and create value for their customers. In this course, you will learn the foundational knowledge and skills for adopting and adapting best practices for IT service management (ITSM) in your organization.

This course is accredited by PeopleCert.

Course Description

Target Student

This course is designed for anyone who would like a foundational understanding of IT service management, its key principles and practices, and how it will help you deliver better value to your customers. It is appropriate for all IT staff and management, as well as customers who work closely with IT to support business requirements.

This course is also designed for students who are seeking the ITIL 4 Foundation certification and who want to prepare for the ITIL 4 Foundation exam.

Course Prerequisites

To ensure your success, end-user level computer and networking skills are required. To meet this prerequisite, you can take the following Logical Operations course or any similar introductory course:

- *Using Microsoft® Windows® 10*

Some level of work experience in IT service support or IT service delivery is highly recommended. You may wish to take any one or more courses from the Logical Operations *IT Systems and Support* curriculum library to supplement your professional experience in this area.

Course Objectives

In this course, you will identify, describe, and analyze all components of the ITIL 4 IT service management approach.

You will:

- Define ITIL and its key concepts.
- Identify the components of the ITIL framework.
- Analyze the ITIL guiding principles.

- Identify the components and functions of the ITIL Service Value System (SVS).
- Analyze the key ITIL management practices.
- Define the general, service, and technical management practices of ITIL.

Note: If you are familiar with ITIL version 3, much of the basic terminology will be similar. If there are notable revisions to the content, this icon will appear next to the explanatory text. For example, if the definition of a term has been revised, then this icon will appear along with an explanation of how the definition has changed from the previous version.

The CHOICE Home Screen

Logon and access information for your CHOICE environment will be provided with your class experience. The CHOICE platform is your entry point to the CHOICE learning experience, of which this course manual is only one part.

On the CHOICE Home screen, you can access the CHOICE Course screens for your specific courses. Visit the CHOICE Course screen both during and after class to make use of the world of support and instructional resources that make up the CHOICE experience.

Each CHOICE Course screen will give you access to the following resources:

- **Classroom**: A link to your training provider's classroom environment.
- **eBook**: An interactive electronic version of the printed book for your course.
- **Files**: Any course files available to download.
- **Checklists**: Step-by-step procedures and general guidelines you can use as a reference during and after class.
- **Spotlights**: Brief animated videos that enhance and extend the classroom learning experience.
- **Assessment**: A course assessment for your self-assessment of the course content.
- Social media resources that enable you to collaborate with others in the learning community using professional communications sites such as LinkedIn or microblogging tools such as Twitter.

Depending on the nature of your course and the components chosen by your learning provider, the CHOICE Course screen may also include access to elements such as:

- LogicalLABS, a virtual technical environment for your course.
- Various partner resources related to the courseware.
- Related certifications or credentials.
- A link to your training provider's website.
- Notices from the CHOICE administrator.
- Newsletters and other communications from your learning provider.
- Mentoring services.

Visit your CHOICE Home screen often to connect, communicate, and extend your learning experience!

How to Use This Book

As You Learn

This book is divided into lessons and topics, covering a subject or a set of related subjects. In most cases, lessons are arranged in order of increasing proficiency.

The results-oriented topics include relevant and supporting information you need to master the content. Each topic has various types of activities designed to enable you to solidify your understanding of the informational material presented in the course. Information is provided for reference and reflection to facilitate understanding and practice.

Data files for various activities as well as other supporting files for the course are available by download from the CHOICE Course screen. In addition to sample data for the course exercises, the course files may contain media components to enhance your learning and additional reference materials for use both during and after the course.

Checklists of procedures and guidelines can be used during class and as after-class references when you're back on the job and need to refresh your understanding.

At the back of the book, you will find a glossary of the definitions of the terms and concepts used throughout the course. You will also find an index to assist in locating information within the instructional components of the book. In many electronic versions of the book, you can click links on key words in the content to move to the associated glossary definition, and on page references in the index to move to that term in the content. To return to the previous location in the document after clicking a link, use the appropriate functionality in your PDF viewing software.

As You Review

Any method of instruction is only as effective as the time and effort you, the student, are willing to invest in it. In addition, some of the information that you learn in class may not be important to you immediately, but it may become important later. For this reason, we encourage you to spend some time reviewing the content of the course after your time in the classroom.

As a Reference

The organization and layout of this book make it an easy-to-use resource for future reference. Taking advantage of the glossary, index, and table of contents, you can use this book as a first source of definitions, background information, and summaries.

Course Icons

Watch throughout the material for the following visual cues.

Icon	*Description*
	A **Note** provides additional information, guidance, or hints about a topic or task.
	A **Caution** note makes you aware of places where you need to be particularly careful with your actions, settings, or decisions so that you can be sure to get the desired results of an activity or task.
	**Spotlight** notes show you where an associated Spotlight is particularly relevant to the content. Access Spotlights from your CHOICE Course screen.
	**Checklists** provide job aids you can use after class as a reference to perform skills back on the job. Access checklists from your CHOICE Course screen.
	**Social** notes remind you to check your CHOICE Course screen for opportunities to interact with the CHOICE community using social media.

1 ITIL 4 Overview

Lesson Time: 1 hour, 30 minutes

Lesson Introduction

In order to understand how ITIL® can help you both now and in the future, it is important to understand where it came from, and what its building blocks are. In this lesson, you will become familiar with the key concepts of service management and service relationships, and what it means to create value for your customers.

Lesson Objectives

In this lesson, you will:

- Discuss the basics of ITIL 4.
- Discuss the key concepts of ITIL.

TOPIC A

Introduction to ITIL

By now, you have probably heard of ITIL. But, do you know how it provides guidance for your IT service management practices? In this topic, you will learn about ITIL and how it can benefit your organization.

ITIL's unique history was born in the workplace; although its history might not be familiar to everyone, its application will be. But in order to reach the comfort level where ITIL ideas can be applied, you will need a solid foundation in understanding where ITIL came from, what it does, and how it can benefit your organization.

Note: To view the Spotlight presentations available for this course, you can select the **Spotlight** tile on the CHOICE Course screen.

What is ITIL?

ITIL is a best practice guidance for IT service management that began in England in the late 1980s as a project by the Central Computer and Telecommunications Agency (CCTA). This agency produced a series of books devoted to the systematic delivery of quality IT services in the United Kingdom and the Netherlands, but the library quickly became global. Over time, this library has grown and has been enhanced with the addition of best practices from around the IT service industry. It has become a successful and popular framework that continues to be updated to adapt to the changing world of service management.

In the early days, ITIL stood for "IT Infrastructure Library." However, today ITIL no longer refers to the acronym but is simply a brand name.

Brief History of ITIL Revisions

When first introduced, ITIL consisted of approximately 40 books. During its lifetime, ITIL has been refreshed four times:

- In 1997, the ITIL books were condensed to seven books.
- In 2007, version 3 was released as five core books, one for each stage in what is known as the Service Lifecycle.
- In 2011, the guidance was revised without a version number change.
- In 2019, version 4 was released, and the ITIL framework has been revised as described in this course.

Note: All key examinable terms for the ITIL 4 Foundation exam are defined for you in the Glossary section at the end of this manual. For your convenience, the official ITIL 4 Foundation Glossary from AXELOS is also included in the course files. To access it, you can select the **Files** tile on the CHOICE Course screen.

Organizations Involved in Maintaining ITIL

There is no governing body called ITIL that manages all aspects of the certification and the guidance. ITIL's maintenance is the result of the combined efforts of several different international organizations.

Organization	Role
itSMF	The IT Service Management Forum (itSMF) is a global non-profit organization that supports IT service management, particularly through publications in the ITSM Library series. There are more than 40 national chapters of the itSMF, all under the governance of itSMF International.
AXELOS	AXELOS is the organization responsible for developing and managing a portfolio of best practice methodologies that includes ITIL. AXELOS is responsible for defining the ITIL exams, qualification schemes, and certification systems; publishing the core ITIL books, an ITIL 4 Foundation reference publication, and associated syllabi; and accrediting the Examination Institutes.
PeopleCert	The official Examination Institute (EI); and as of January 1, 2018, the only organization that is accredited by AXELOS for the delivery of the ITIL exams.

ITIL 4 Certification Scheme

Figure 1-1: ITIL 4 Certification scheme.

After ITIL Foundation, you can choose one of two paths to obtain either the ITIL MP designation (complete 4 modules) or ITIL SL designation (complete 2 modules) on the way to becoming an ITIL Master.

The following table describes the ITIL 4 certification scheme.

Certification	Description
ITIL Foundation	Covers the basic knowledge of ITIL 4 key elements, concepts, and terminology. The current training materials will prepare you for this exam and certification scheme. It is governed by the ITIL Foundation syllabus, which aligns with the ITIL 4 Foundation book and provides a competence and skills framework as well as a training path for service management.

Certification	Description
ITIL Managing Professional (MP)	The MP stream provides practical and technical knowledge about running successful IT projects, teams, and workflows. This designation is obtained when the three ITIL Specialist modules and the ITIL Strategist module are completed. • **ITIL Specialist**: Consists of three modules that align to exams named accordingly. As each exam module is completed, it counts toward the ITIL Managing Professional (MP) designation. • **ITIL Strategist**: Consists of one module (Direct, Plan, & Improve) that aligns with an exam of the same name. The completion of this module can be applied to the ITIL Managing Professional (MP) and also the ITIL Strategic Leader (SL) designations.
ITIL Strategic Leader (SL)	The SL stream goes beyond IT operations and recognizes the value of ITIL for all digitally enabled services. This designation is obtained when the ITIL Strategist and the ITIL Leader modules are completed. • **ITIL Strategist**: Same module that can be applied toward the ITIL MP designation. • **ITIL Leader**: Consists of one module (Digital & IT Strategy). The completion of this module counts toward the ITIL Strategic Leader (SL) designation.
Managing Professional (MP) Transition	This module is designed for those ITIL professionals who have obtained either the ITIL Expert designation or 17 credits across the ITIL v3 scheme.
ITIL Master	After receiving both the ITIL MP and ITIL SL designations, you are eligible to work toward becoming an ITIL Master. Successful ITIL Master candidates will have to demonstrate how they applied ITIL concepts in real life experiences and areas. There is no exam for this level, only a review of work while holding a leadership role in an IT organization.

Note: The official ITIL 4 Foundation syllabus can be downloaded from **www.axelos.com**, and is provided with the course files on the CHOICE platform. A document that maps the course content to the ITIL Foundation exam is also provided on the CHOICE platform.

ITIL Today

ITIL today focuses on the key premise that services drive value for both the service providers and for customers. Organizations are in a constant state of change, and this necessitates an urgency to be able to respond to the change. Also, in today's fast paced and ever-changing service management industry, the need for cross-functional collaboration between teams has become more important.

Another impact on the service management industry is the digital transformation happening that is creating new business models. Digital technologies are connecting business in ways that were unprecedented a decade ago, and service management of all types—IT and non-IT—must be able to adopt new practices and adapt them to the changing needs.

Note: An example of the digital transformation of service management is the impact that ride-sharing companies like Uber are having on the taxi industry.

This newly released version of ITIL 4 reflects updates to best practices that can support the customer experience, value streams, and new ways of working that include ***Agile***, ***Lean***, and ***DevOps***. All of these concepts will be addressed in detail as you progress through this course.

ITIL has been revised to reflect the practices and principles that should influence and affect service management. In the past, ITIL focused on the processes involved in service management, but today the approach is a more holistic one.

Benefits of ITIL

The world is continuing to evolve and develop new industry best practices. Therefore, it's important that the service management framework you use be current with what is happening in the industry. ITIL reflects these changes and incorporates lessons learned from industry practices.

The benefits of ITIL can be stated as:

- ITIL contains industry-proven best practices.
- ITIL is updated to reflect newly emerging practices, such as Agile, Lean, and DevOps.
- ITIL reflects business needs that require organizations to balance agility and stability, create new revenue streams and sources of competitive advantage, and support new digital business models.

Overview of the ITIL Service Value System

The ***Service Value System (SVS)*** is the foundation on which the entire ITIL framework is built. It is a model representing how all the components and activities of an organization work together to facilitate value creation.

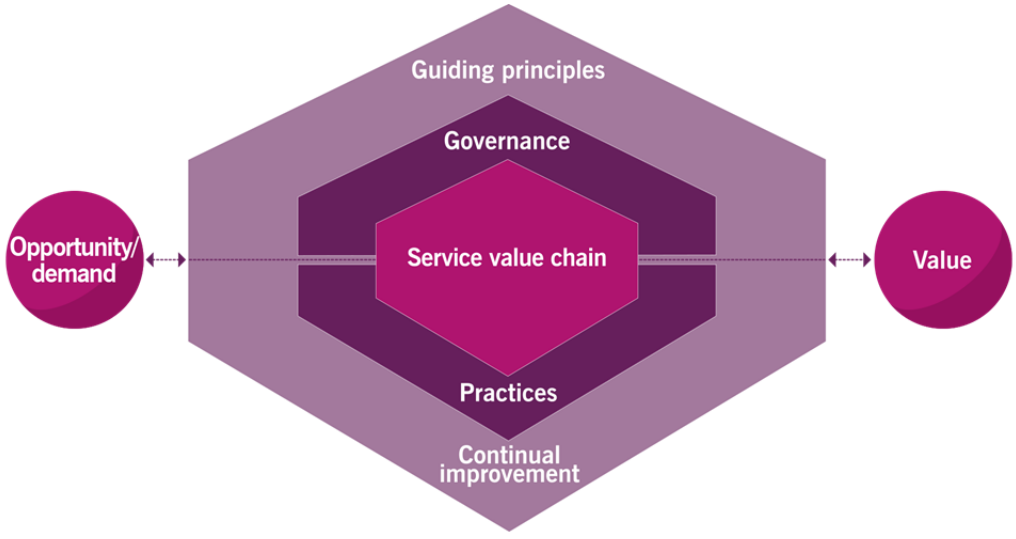

Figure 1-2: The Service Value System.

In previous versions of ITIL, many of these concepts existed; however, in ITIL 4 they have been assembled into the model shown in the figure.

As the course progresses, you will examine each of the components of the SVS in greater detail.

Components of the ITIL Service Value System

The following table describes the core components of the SVS.

Item	*Description (taken from the ITIL® 4 Glossary)*
ITIL service value chain (SVC)	An operating model for service providers that covers all the key activities required to effectively manage products and services.
ITIL practices	Sets of organizational resources designed for performing work or accomplishing an objective.
ITIL guiding principles	Recommendations that can guide an organization in all circumstances, regardless of changes in its goals, strategies, types of work, or management structure.
Governance	The means by which an organization is directed and controlled.
Continual improvement	The practice of aligning an organization's practices and services with changing business needs through the ongoing identification and improvement of all elements involved in the effective management of products and services.

Diagram of the Four Dimensions of Service Management

The ***four dimensions of service management*** are the four perspectives that are critical to the effective and efficient facilitation of value for customers and other stakeholders in the form of products and services.

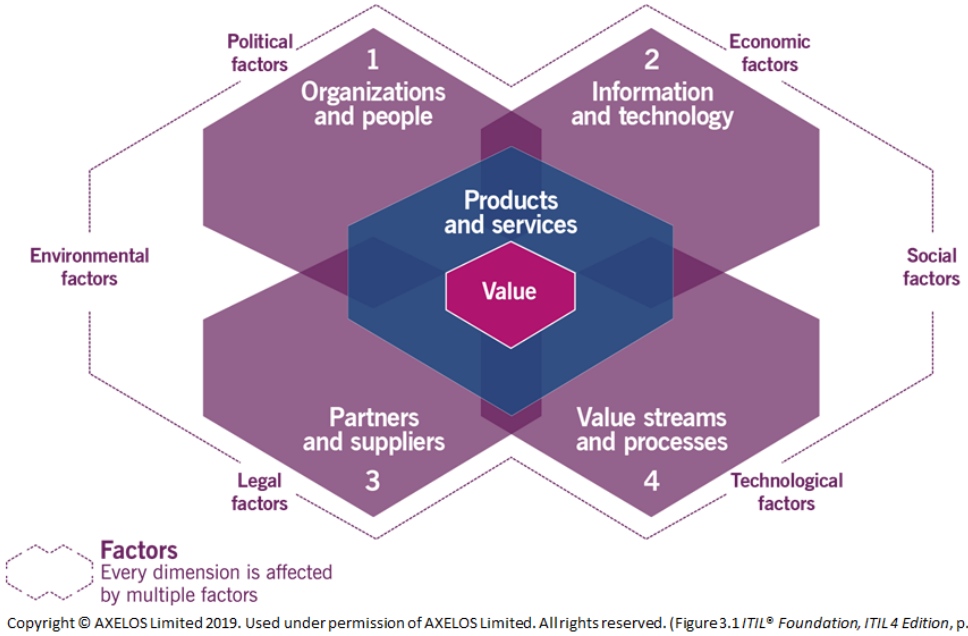

Figure 1-3: The four dimensions of service management.

While new to ITIL 4, the diagram is a combination of concepts that existed in previous versions of ITIL. Elements from the ten service sets (resources and capabilities) have been combined with elements of the Four P's (People, Process, Products, and Partners) to arrive at these four dimensions of service management.

As the course progresses, you will examine the four dimensions in greater detail.

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Descriptions of the Four Dimensions of Service Management

The following table describes the four dimensions of service management.

Dimension	Description (taken from the ITIL® 4 Glossary)
Organizations and people	Ensures that the way an organization is structured and managed, as well as its roles, responsibilities, and systems of authority and communication, is well defined and supports its overall strategy and operating model.
Information and technology	Includes the information and knowledge used to deliver services, and the information and technologies used to manage all aspects of the Service Value System.
Partners and suppliers	Encompasses the relationships an organization has with other organizations that are involved in the design, development, deployment, delivery, support, and/or continual improvement of services.
Value streams and processes	Defines the activities, workflows, controls, and procedures needed to achieve the agreed objectives.

Note: The items outside of the four dimensions such as products and services, value, and the external factors will be addressed in more detail in later lessons.

ACTIVITY 1-1
Discussing ITIL Basics

Scenario

The CEO of your organization has asked you to consider adopting ITIL as the business' service management guidance. Use the following questions to help clarify your thoughts about ITIL and the benefits it can provide.

1. What are the benefits of adopting a best practice framework?

2. Will a best practice framework be the answer to all of your organization's needs? Why or why not?

3. Identify the parts of the ITIL framework and describe the high-level objectives for each.

4. What are your goals for ITIL certification?

TOPIC B

Key Concepts of ITIL

Chances are very good that you already perform service management tasks in your workplace, but you do not call them by the terms ITIL uses. In this topic, you will discuss the key concepts and terminology used in ITIL.

Service Management

Service management is defined as a set of specialized organizational capabilities for enabling value for customers in the form of services.

IT service management (ITSM) is the implementation and management of quality IT services that meet the needs of the business. Service management consists of the practices, activities, governance, and improvement of capabilities that enable customers to co-create value and achieve desired results. Organizations that practice effective service management enable their customers to utilize services and produce successful business outcomes: strategically, tactically, and operationally. Effective services are efficient in their use of resources, effective in delivering results, and sustainable over the long term. Successful, profitable, and scalable IT service management is the fundamental concern of ITIL.

In previous versions, the definition of service management used *deliver* in respect to value. In ITIL 4, the definition has been revised to say that service providers are *enabling value* for their customers.

Products and Services

Two of the most basic terms that you need to understand are products and services. In ITIL, a ***product*** is a configuration of an organization's resources designed to offer value for a consumer and 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.

Organizations own access to resources through:

- People
- Information and technology
- Partners and suppliers
- Value streams and processes

Products configure these resources in ways to create value for customers. Services enable customers to achieve desired outcomes and enable the co-creation of value.

An Example of a Product and Service

Almost everyone today has a mobile phone. The physical phone, its accessories, and the cellular network are all products. The service is how you, as the consumer, use the phone to call others or use the phone to place an online order with a local restaurant. Value is created by the outcome of dinner being delivered to you without having to drive to the restaurant.

Co-Creation of Value

Value is defined as the perceived benefits, usefulness, and importance of something.

- Value is fundamental to the concept of a service.
- Value is co-created by a service provider and a service consumer.
- Service providers should seek to build interactive relationships with their customers.

Value is no longer referred to as something that is delivered. Instead, it is now something that is created or co-created by people who provide the services and people who consume the services.

Organizations

An ***organization*** is defined generically in ITIL as a person or a group of people that has its own functions with responsibilities, authorities, and relationships to achieve its objectives. Organizations can be a single person, a group, or an enterprise. Thus, the size and range authority of an organization can vary widely in scope. Organizations form relationships with the service provider and the service consumer. These relationships can be internal or external, and as they evolve, they drive the context of the service.

Service Providers

Simply stated, a ***service provider*** is any organization providing services. They are able to identify their consumers and also the other stakeholders.

Customers can be internal or external. Services can also be internal or external. Internal services are delivered to individuals, groups, or departments within your organization. External services are delivered to individuals or groups outside of your organization and directly affect business outcomes. Knowing the difference between internal and external services is important when it comes to measuring the return on investment of services. Decisions on how to deliver, improve, change, manage, and balance in relationship to all the other IT services must consider both the internal and external customers.

For example, suppose that IT supports a business intelligence report that displays real time data for the business. The business has decided to display this report for end user customers to view and evaluate on the company's website. Now IT is supporting a service that brings value to their internal customer (the business) and their external customer (the end users).

Additionally, service providers can stand alone or be part of a service alliance.

Service Consumers

In general, service consumers are the ones who utilize a service. In ITIL there are three types of service consumers: customers, users, and sponsors. Depending on the nature of the service relationship, a service consumer can be a combination of any one or more of the three types. A single entity can potentially take all three service consumer roles at once.

Service Consumer Types

The following table describes the three types of service consumers.

Service consumers	Description
Customer	A person who defines the requirements for a service and takes responsibility for the outcomes of service consumption.
User	A person who uses services.
Sponsor	A person who authorizes the budget for service consumption. Can also be used to describe an organization or individual that provides financial or other support for an initiative.

Stakeholders and Value Alignment

Business groups and the customers are stakeholders, but so are those who use the service, those who deliver the service, and all others that are affected by the service, its development, and its operation. Any person with an interest in an organization, project, or IT service, including the activities, targets, resources, or deliverables, may be considered a stakeholder.

The following table provides examples of what different stakeholders might find valuable.

Stakeholder	Example of Stakeholder Value
Service consumers	Benefits achieved, costs and risks optimized.
Service provider	Funding from the consumer; business development; brand and image improvement.
Service provider employees	Financial and non-financial incentives, career and professional development, sense of purpose.
Society and community	Employment, taxes, organizations' contribution to the social and community development.
Charity organizations	Financial and non-financial contributions from other organizations.
Shareholders	Financial benefits, such as dividends; sense of assurance and stability.

Service Offerings

A ***service offering*** is a formal 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. Service offerings describe how one or more products or services will meet the needs of a target audience.

Service Offering Components

The following table provides a description and examples of the service offering components.

Component	Description	Examples
Goods	• Supplied to the consumer. • Ownership is transferred to the consumer. • Consumer takes responsibility for future use.	• A mobile phone • A physical server
Access to resources	• Ownership is not transferred to the consumer. • Access is granted or licensed to the consumer under agreed terms and conditions. • The consumer can only access the resources during the agreed consumption period and according to other agreed service terms.	• Access to a mobile network • Access to network storage
Service actions	• Performed by the service provider to address a consumer's needs. • Performed according to agreement with the consumer.	• User support • Replacement of a piece of equipment

Service Relationship

Organizations engage as service providers and service consumers to produce service relationships. A ***service relationship*** is a cooperation between a service provider and service consumer. In a service relationship, an organization can play the role of service provider and then also be a service consumer.

Service relationships include service provision, service consumption, and service relationship management.

Service Provision

Service provision is defined as the activities performed by an organization to provide services. Service provision includes:

- Managing the provider's resources that are configured to deliver the service.
- Providing users access to resources.
- Fulfilling the agreed service actions.
- Performing service level management and continual improvement.
- Supplying goods.

Service Consumption

Service consumption is activities performed by an organization to consume services. Service consumption includes the management of the consumer's resources needed to use the service, and the service-use actions performed by users. These actions include utilizing the provider's resources and requesting service actions to fulfill. Service consumption may also include the receiving, or acquiring, of goods.

Service consumers might have their own resources, use the provider's resources, or acquire goods. The value is co-created when the provider's service is used by the customer's resources to facilitate the outcomes they want to achieve.

Service Relationship Management

Service relationship management is defined as the joint activities performed by a service provider and a service consumer to ensure continual value co-creation based on agreed and available service offerings. This relationship can exist at a distance, or it can be closely managed and tightly regulated.

The service provider provides goods, access to resources, and service actions. The service consumer provides customer resources and the business need for consumption. The relationship may change and evolve over time as needs change; it should always change in such a way as to maximize the value that is co-created with the customer.

The Service Relationship Model

A service provider's services create new customer resources. Some examples might include:

- A training service improves the skills of the consumer's employees.
- A broadband service allows the consumer's computers to communicate.
- A rental car service enables the consumer's staff to visit clients.

As illustrated in the following figure, a service consumer can then take the new resources to offer services downstream and essentially become the service provider to *their* customers. While the figure makes the service relationship look linear, it actually resembles a mesh or network with the organizations interacting directly or indirectly with each other.

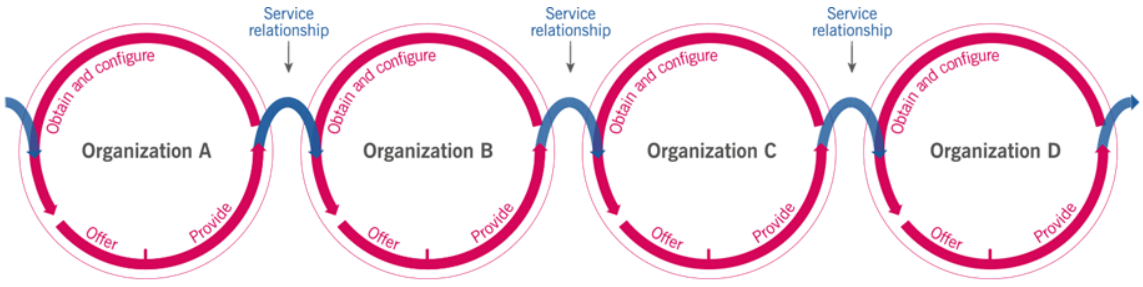

Figure 1-4: The Service Relationship Model.

Value

When you as a customer choose to use a service provider, you are taking on the cost and risks of the service provider. The costs and risks that you take on are outweighed by the benefits of the service you receive, as illustrated on the right side of the figure. If you provide the service yourself, you're still bearing the costs and risks, but without the expertise and capabilities of the service provider, you might not achieve the same desired level of outcome, as illustrated on the left.

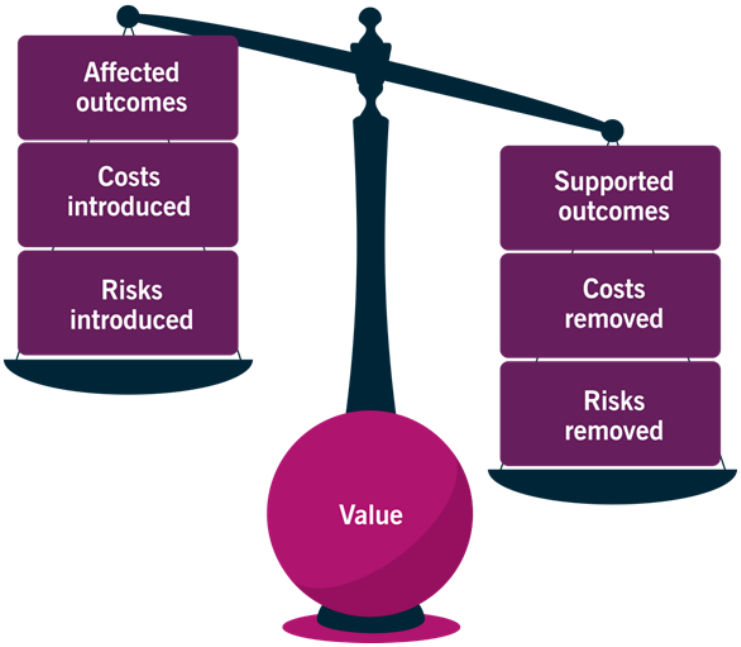

Figure 1-5: Achieving value.

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Outputs and Outcomes

Output is a tangible or intangible deliverable of an activity that produces specific deliverables. Sometimes an output might be referred to as an artifact. For example, an accounts receivable system is an output.

Customers are more interested in the ***outcome***, which is the result for a stakeholder enabled by one or more outputs. These often intangible outputs are the results that the stakeholder wants. For example, the ability to track and manage customer payments is an outcome.

Service providers often focus on the outputs they produce, but the right business context is needed to produce the outcomes a customer desires. At times, the desired outputs and outcomes will be clear to both provider and consumer. At other times, determining the desired outputs and outcomes will require both provider and consumer to work together to figure it out.

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Costs and Risks

Cost is the amount of money spent on a specific activity or resource. There are two types of cost that organizations must consider when assessing value:

- The imposed cost of the product or service.
- The removed cost that the service provider bears, such as the cost of staffing, technology, and other overhead items.

Risk is a possible event that could cause harm or loss, or make it more difficult to achieve objectives. Risk can also be defined as uncertainty of outcome, and can be used in the context of measuring the probability of positive outcomes as well as negative outcomes. There are two types of risks:

- The imposed risk of consuming the service.
- The removed risk that is transferred from the consumer to the service provider.

Services can take ownership of some costs and risks and also impose other costs and risks (such as the cost of provision, the risk that a service provider may go out of business). The organization must fully understand the costs and risks involved in providing and consuming the service.

Utility and Warranty

The perceived value of a product or a service to the customer is based on the effects of both utility and warranty.

Utility is defined as the functionality offered by a product or service to meet a particular need. The utility of a service in ITIL is described as its fitness for purpose, and refers to whether the service or product enhances ***performance*** or reduces constraints.

Warranty is the assurance that a product or service will meet agreed requirements, and is described as its fitness for use. In other words, warranty is "how the service performs." Warranty typically includes a product's or service's availability, capacity, security, and continuity.

It is important to understand that value is defined by the users of the service. Pursuing services with the greatest perceived value should be a top priority for your organization.

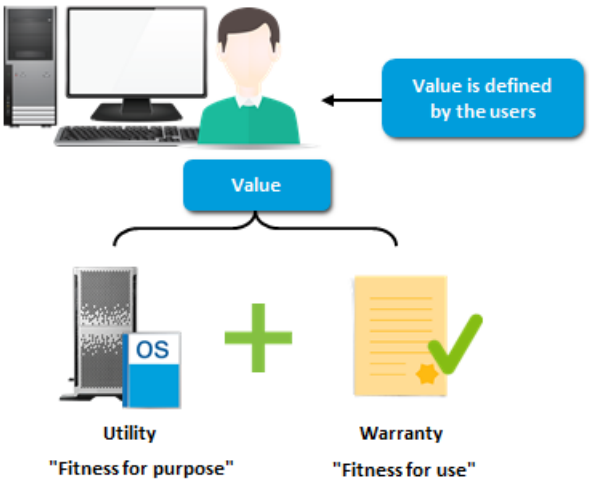

Figure 1-6: Utility and warranty.

ACTIVITY 1-2

Discussing the Key Concepts of ITIL

Scenario

You are part of the IT services team that is responsible for putting ITIL into practice in your organization. Your team is planning a presentation that will introduce the ITIL framework to a group of stakeholders. In preparation, you want to make sure everyone has a good grasp of the principles and can communicate them to others.

1. Think about the organizations that you are a part of at work. How does your organization act as a service provider or a service consumer? What are some of the products and services you provide, and to whom?

2. Who are the downstream consumers of your services? How are relationships managed between organizations? Try to model how one of your service consumers uses your service to produce their own services for their consumers.

3. What are the outputs of one of your services? What outcomes do they enable for your service consumer?

4. What costs and risks do you take on, and what costs and risks do you impose?

5. How does the distribution of costs and risks help you understand your contribution to the co-creation of value?

Summary

In this lesson, you were introduced to a bit of history about ITIL and its benefits today. To obtain an understanding of the ITIL framework, you examined the two major components: the Service Value System and the four dimensions of service management.

To what extent or in what form has your organization adopted ITIL as a practice?

When it comes to the four dimensions of service management, does your organization belong to one specific dimension?

Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

2 The ITIL Framework

Lesson Time: 2 hours

Lesson Introduction

In an earlier lesson, you were introduced to the new ITIL® framework in this revision of ITIL. Now that you have an understanding of the key concepts and terminology of ITIL, you're ready to take a closer look at the components of the framework. In each of the components, today's digital world is taken into consideration. In this lesson, you will examine the four dimensions of service management and the ITIL Service Value System (SVS).

Lesson Objectives

In this lesson, you will:

- Define the four dimensions of service management.
- Define the components of the SVS.

TOPIC A

The Four Dimensions of Service Management

As a service management professional, it is critical that you understand how each of the four dimensions of service management affects, or influences, your approach to managing services in your organization. Each dimension focuses on a different aspect of service management, and when all are considered, you are ensuring a more holistic approach to service management. In this lesson, you will examine each of the four dimensions.

Note: To view the Spotlight presentations available for this course, you can select the **Spotlight** tile on the CHOICE Course screen.

The Four Dimensions of Service Management

Most organizations tend to focus on one particular dimension, which leads to a silo approach to problem solving by viewing things as "tools issues" or "process problems." Almost all challenges should be viewed through all four dimensions; how we establish governance, drive continual improvement, execute the service value chain, and implement practices. By not viewing through each of the four dimensions, you can set yourself up for failure.

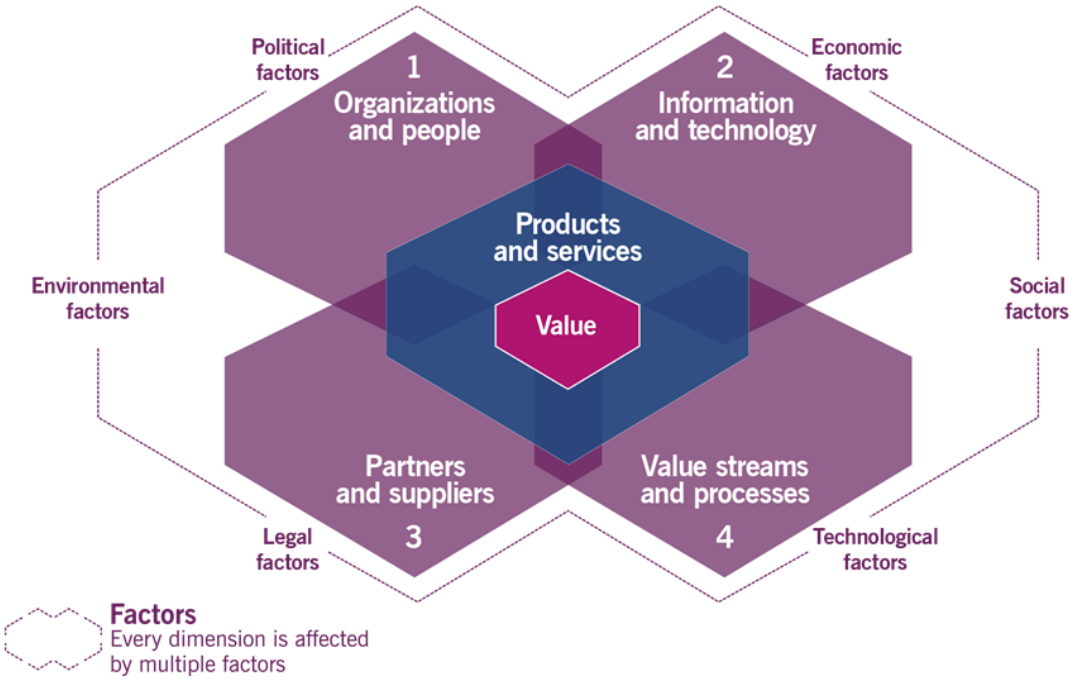

Figure 2–1: The four dimensions of service management.

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A Holistic Approach to Value Delivery

People often approach service delivery focused on one aspect, such as process adoption, tool implementation, supplier identification, and so on. To deliver successful service, attention must be paid to all dimensions.

Holistic refers to the treatment of the whole system and not just the parts. Translated in the service management world, you need to consider how all four dimensions work together to arrive at the successful creation of products, services, and value. Due to the importance of a holistic approach, you will see this term repeated as one of the guiding principles.

Organizations

In the Organizations and People dimension, the service management approach must consider the following:

- Organizational structure—the formal system of authority.
- Workforce requirements—the staffing and skills or competencies that are needed.
- Roles and responsibilities—what needs to be done and which team or person is responsible for it.
- Culture—the intangible way an organization works, including its shared values and attitudes, communication styles, and levels of trust and transparency.

When organizations adopt service management, they need to take into account their organizational structure, the organization's culture, and the workforce requirements. The people at the top levels of an organization often dictate and direct the attitudes, motivation, and shared values about best practices. When organizational leaders demonstrate and model supportive behaviors and attitudes, this helps to develop an organizational culture of cooperation and collaboration rather than competition. How an organization works can drive people's attitudes and define its shared values. For example, a culture of trust and transparency leads to raising and escalating issues, and facilitating corrective actions.

People

People are the key component in the Organizations and People dimension. This includes any stakeholder in the service relationship from customers to service providers. The common objective for everyone on both sides of the relationship is to enable value creation—either providing it or receiving it.

When it comes to people, the following factors can influence the effectiveness of your service management approach.

- Skills and competencies—the right skills are needed as well as the ability for people to update their skills.
- Management and leadership styles—styles that facilitate collaboration and cooperation are desirable.
- Communication and collaboration—clear and transparent communication fosters trust and cooperation.
- Broad knowledge and specialized expertise—provides an overall understanding of other roles in an organization as well as your individual area of specialization.
- Value creation is the objective—each individual understands how they contribute to value creation.
- Break down organizational silos—promote cross-collaboration when people can expand their skill sets to support others.

Information and Technology

In this dimension, Information and Technology applies both to the tools needed to execute effective service management, and to the technical infrastructure and applications of the services being managed. For IT service management, technologies include those that are used to provision the service and also technologies that are the product or service.

An emphasis is placed on the information and knowledge needed in a system, and how it is created, changed, and provisioned to support decision making. Technologies might include specific systems and tools that are needed to support the service being provided, such as workflow management systems, knowledge bases, inventory systems, communication systems, and analytical tools.

Each ITIL practice requires key information among its inputs and outputs, as well as the underpinning technologies to process them. The use of new technologies such as artificial intelligence, machine learning, and other cognitive computing solutions is also included in the Information and Technology dimension.

Some of the tools used in providing IT service management might include mobile platforms, cloud solutions, remote collaboration tools, automated testing, and deployment solutions. For a particular IT service, it includes the information created and managed and a number of different technology platforms (applications, databases, communications, integration).

Information Considerations

The information component of this dimension relates to the information that is collected and used during the provision of the services. You need to consider what information is being collected, how it will be handled and stored, and the type of security that will be required. The security of the information involved in service management is critical to any organization and the consequences of data breaches can be staggering in a service relationship.

When we consider the information in a system, we need to assess how information enters and leaves the system, how information is added or transformed inside the system, what information will be needed to successfully execute and deliver the service, and how the data will be managed. We need to consider data handling, protection, archiving, retention, disposal, and any other aspects of the data's lifecycle.

Technology Questions

You can use the following questions to define the technology requirements:

- Is the technology compatible with the current architecture?
- Are there regulatory or other compliance issues?
- Is the technology viable in the foreseeable future?
- Does the technology align with the strategy of the service provider, or its service consumers?
- Do the right skills across its staff and suppliers exist to support and maintain the technology?
- Is there sufficient automation capabilities to ensure it can be efficiently developed, deployed, and operated?
- Are there additional capabilities that might be leveraged for other products or services?
- Are there new risks or constraints to the organization (e.g., vendor lock-in)?

Partners and Suppliers

The Partners and Suppliers dimension consists of two distinct groups: partners and suppliers. A ***partnership*** is a relationship between two organizations that involves working closely together to achieve common goals and objectives. This can include being involved in the design, development, deployment, delivery, support, or the continual improvement of services. While partners often exist in separate organizational entities, they share the goals and risks involved in the service provision. For example, a publishing company and an online book seller are partners to achieve the common objective of creating and selling books.

Figure 2-2: Partners and suppliers exist on a continuum.

At the other end of the spectrum, the ***suppliers*** are stakeholders who are responsible for providing goods and services that are used by an organization. Your relationship with your suppliers includes contracts and other agreements that define how you work together. When a large number of suppliers are used, an organization might have a service integrator who focuses on managing the integration of internal and external services.

	Note: In the context of ITIL, all partners are suppliers but not all suppliers are partners.

Strategic Factors

Organizations make strategic choices about how widely or narrowly they use partners and suppliers. The factors that go into a sourcing strategy might include the following:

- Strategic focus—the desired level of self-sufficiency when it comes to outsourcing.
- Corporate culture—the historical attitudes around using third-party suppliers.
- Resource scarcity—the existence of the required expertise or goods in an organization.
- Cost concerns—cost is always a factor when deciding to use a third-party supplier.
- Subject matter expertise—the decision to use a supplier when the subject matter expertise does not exist within your organization.
- External constraints—various government, industry, social, political, or legal constraints that influence sourcing decisions.
- Demand patterns—seasonal or cyclical changes in demand can affect the decision to use third-party suppliers.

Finally, this dimension consists of a proliferation of "As a Service" infrastructure and platforms. Organizations are seeing huge benefits from vendor-provided cloud capabilities for infrastructure, platforms, and hosted software solutions. These enable rapid scaling, access to environments, and development tools that speed solutions to market and enable organizations to convert some capital expenditures (where a lot of the money is needed up front) to operating expenses (where we pay as we go).

Value Streams

The Value Streams and Processes dimension combines the two distinct components. Let's look at value streams first.

By definition, a ***value stream*** is a series of steps an organization undertakes to create and deliver products and services to consumers. A value stream defines the activities, workflows, controls, and procedures needed to achieve agreed objectives for products and services, and for the entire Service Value System (SVS).

This dimension focuses on the activities required to enable value creation through products and services, specifically:

- What activities need to happen.
- How the activities are organized.
- How value creation will be ensured for stakeholders.

You can place activities into specific value streams that will enable you to view all of the value streams that are used to get work done. This is known as value stream mapping and enables you to see how the value streams work in an integrated and coordinated way. A closer analysis of your value streams enables you to identify and remove any wasteful activities, which provides continual improvement and productivity.

Processes

A ***process*** is a set of interrelated or interacting activities that transform inputs into outputs. A process takes one or more defined inputs and turns them into defined outputs. Processes define the sequence of actions and their dependencies.

By design, processes describe activities to accomplish an objective, they contain details about the procedures that explain who is involved, and the work instructions to explain how the work is to be carried out.

In previous versions of ITIL, the definition of a process became confusing because a process could include a single process or sometimes multiple processes. Now, in ITIL 4, the definition is stricter to include one process. The ITIL 4 practice removes some of the complexities by enabling multiple processes to be a part of a single practice.

The Value Streams and Processes dimension encourages you to consider the following questions when it comes to the design, delivery, and improvement of your service.

- 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

External factors are not specific to a single dimension of service management because they can influence and affect all the dimensions. As you continue your ITIL service management journey, you will learn about these external factors in greater detail. For now, you should have a general awareness of them.

External factors have an impact on how the four dimensions of service management are applied. The acronym PESTLE is often used to help identify the six external factors.

- **Political**—Governmental policies, a country's or region's political climate, and also internal politics within an organization.
- **Economic**—Different levels of buying-power might affect the type of services offered to different consumer groups.
- **Social**—Attitudes about environment-friendly products and services can affect the resources that an organization decides to use.
- **Technological**—Physical and networking technologies that are available and accessible.
- **Legal**—Laws and regulations, such as the General Data Protection Regulation (GDPR), that impact how customer information is handled.
- **Environmental**—Decisions that are made to minimize an organization's impact on the environment, such as reducing waste or reducing the carbon footprint.

ACTIVITY 2-1

Discussing the Four Dimensions of Service Management

Scenario

Use the following questions to gain an understanding of the four dimensions of service management.

1. Think about a situation you have been in where your team was hyperfocused on a single dimension, such as implementing a tool, or creating a process, or establishing a contractor relationship. What are the implications of not considering the impact on the other dimensions?

2. How does organizational culture affect our practices? How does that help or hinder your ability to co-create value with your customers? What are some potential gaps that might form in this dimension, and what would you need to do to close that gap?

3. IT organizations tend to overfocus on tools to solve problems, yet the old adage "a fool with a tool is still a fool" applies. What are some potential gaps that might form in this dimension, and what would you need to do to close that gap?

4. Many organizations implement practices without fully considering the engagement implications with their suppliers and partners. How does your organization engage partners to ensure alignment? What are some potential gaps that might form in this dimension, and what would you need to do to close that gap?

5. Many organizations implementing ITIL in the past focused on process adoption without full consideration of the other dimensions. What are some potential gaps that might form in this dimension, and what would you need to do to close that gap?

6. Provide some examples of how PESTLE factors have impacted your organization.

TOPIC B

The ITIL Service Value System

Along with the four dimensions of the service management, the Service Value System provides the central element of the ITIL framework. In this topic, you will be introduced to the major components of the SVS, which will be covered in detail in a later lesson.

Opportunity and Demand

Part of your work in service management is to assess alternatives in how you could potentially add value through the provisioning of new services or changes to existing services. At the beginning of the Service Value System, you assess the needs of your different customers and other stakeholders and decide which of these opportunities have demand for the products and services. Then, you prioritize these alternatives and choose which ones to work on satisfying.

As shown in the Service Value System (SVS) diagram, opportunities and demand trigger the Service Value System.

Opportunity is defined as options or possibilities to add value for stakeholders or otherwise improve the organization. There may not be demand for these opportunities yet. You can prioritize new or changed services with opportunities for improvement.

Demand is defined as input to the Service Value System based on opportunities and needs from internal and external stakeholders. In other words, demand is the need or desire for products and services from internal and external customers.

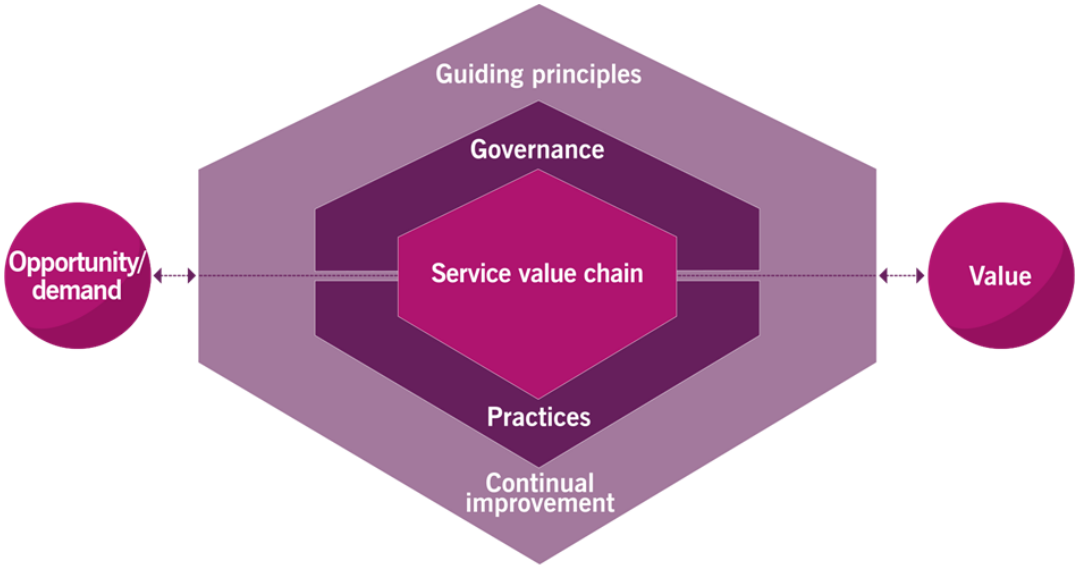

Figure 2-3: Opportunity and demand trigger the Service Value System.

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What is a Guiding Principle?

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.

When developing initiatives to improve your IT services, you can use the following principles to guide you through the planning and implementing stages of your initiatives. It's important to note that these guiding principles are not exclusive to IT service management. Like other frameworks and methodologies, they can be applied to a broad spectrum of industries and situations. The key is that the principles, framework, or methodology won't be valuable until you put it into practice.

Previously, in ITIL Practitioner, nine principles were introduced. In ITIL 4, some of the principles have been combined or slightly modified. Overall, they will be familiar to an ITIL Practitioner credential holder.

Figure 2-4: The seven guiding principles.

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The Seven Guiding Principles

It's important to note that while all of the guiding principles are important, the individual principles might be more appropriate at different times. Additionally, the ITIL guiding principles are complementary to other frameworks and standards, such as Lean Six Sigma, Agile, and DevOps.

- **Focus on Value**—Everything that the organization does needs to map, directly or indirectly, to value for the stakeholders. Follow your customers' lead on what they value and work toward increasing the value of the services you provide.
- **Start Where You Are**—Do not start from scratch and build something new without considering what is already available to be leveraged. Use the existing services, processes, and people as a jumping off point. Avoid re-creating the wheel just to do so.
- **Progress Iteratively with Feedback**—Do not attempt to do everything at once. Divide the project, change, or effort into manageable chunks so you can leverage what you learn, get feedback, and test.
- **Collaborate and Promote Visibility**—Working together across boundaries produces results that have greater buy-in, more relevance to objectives, and better likelihood of long-term success. Make sure that everyone is aware of improvement initiatives and the reasoning behind them.
- **Think and Work Holistically**—No service, or element used to provide a service, stands alone. Consider the entire project, other projects, and all related components as one because they are interrelated and interdependent.
- **Keep It Simple and Practical**—If a process, service, action, or metric provides no value, or produces no useful outcome, eliminate it.

- **Optimize and Automate**—Human intervention should only happen where it really contributes value.

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Governing Bodies

As the means by which an organization is directed and controlled, governance can be applied to an organization as well as one or more units or products. The guiding principles and continual improvement apply to the entire SVS, including governance.

A governing body can adopt the ITIL guiding principles and adapt them, or define its own specific set of principles and communicate them across the organization. Governance ensures visibility of outcomes of continual improvement activities and measurement of value for the organization and its stakeholders.

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Governance Activities

The service value chain and the practices work in line with the direction given by the governing body. The governing body of the organization, either directly or through delegation of authority, maintains oversight of the SVS. Both the governing body and management at all levels maintain alignment through a clear set of shared principles and objectives. The governance and management at all levels are continually improved to meet expectations of the stakeholders.

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The Service Value Chain

The service value chain (SVC) is composed of six activities that provide the operating model for service management that is triggered by demand and results in products and services that provide value. All of the activities are involved in the service value chain at different times depending on what is required by the customer.

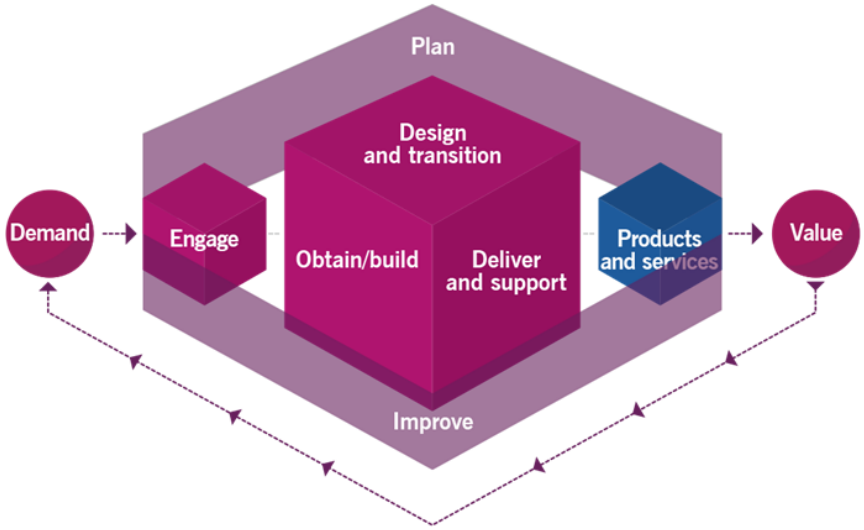

Figure 2-5: The service value chain.

The "Service Lifecycle" that was presented in earlier versions of ITIL has been replaced by the combination of the SVS, the SVC, and the four dimensions of service management in ITIL 4.

The Service Value Chain Activities

The following table describes the activities involved in the service value chain.

Activity	*Description*
Plan	Relevant planning activities at all levels: strategic, architectural, program/ project, and so on.
Improve	Execution of improvement activities and provision of improvement information.
Engage	Interactions with third parties, including users, customers, suppliers, and other stakeholders.
Design and Transition	Creation of new or changed solution designs; management and implementation of change.
Obtain and Build	Acquisition or building of components, whether acquired from a third party or built in-house.
Deliver and Support	Hosting and delivery of solutions; support for user needs related to the services.

Definition of ITIL Practices

In ITIL, ***practices*** can be defined as a set of organizational resources designed for performing work or accomplishing an objective. The practices are divided into three major categories:

- General management practices were created in other management disciplines and adapted for use in IT service management. They reflect sets of good practices that are broadly applicable to many service organizations.
- Service management practices were created in the Service Management discipline to deal with needs that are somewhat distinctive to IT services.
- Technical management practices have been created by IT service provider organizations to manage specific technical practices for creating software, managing infrastructure, and deployment.

In ITIL 4, practices are no longer linked to a single value chain activity like they were in ITIL 3. The 34 practices are organized into the three categories as explained here.

General Management Practices

The following table contains the complete list of the practices in the General Management category. Only the four practices in bold text are examinable in the ITIL Foundation exam.

Practice	Description (taken from the ITIL® 4 Glossary)
Architectural Management	The practice of providing an understanding of all the different elements that make up an organization and how those elements relate to one another.
Continual Improvement	The practice of aligning an organization's practices and services with changing business needs through the ongoing identification and improvement of all elements involved in the effective management of products and services.
Information Security Management	The practice of protecting an organization by understanding and managing risks to the confidentiality, integrity, and availability of information.
Knowledge Management	The practice of maintaining and improving the effective, efficient, and convenient use of information and knowledge across an organization.
Measurement and Reporting	The practice of supporting good decision-making and continual improvement by decreasing levels of uncertainty.
Organizational Change Management	The practice of ensuring that changes in an organization are smoothly and successfully implemented and that lasting benefits are achieved by managing the human aspects of the changes.
Portfolio Management	The practice of ensuring that an organization has the right mix of programs, projects, products, and services to execute its strategy within its funding and resource constraints.
Project Management	The practice of ensuring that all of an organization's projects are successfully delivered.
Relationship Management	The practice of establishing and nurturing links between an organization and its stakeholders at strategic and tactical levels.
Risk Management	The practice of ensuring that an organization understands and effectively handles risk.
Service Financial Management	The practice of supporting an organization's strategies and plans for service management by ensuring that the organization's financial resources and investments are being used effectively.
Strategy Management	The practice of formulating the goals of an organization and adopting the courses of action and allocation of resources necessary for achieving those goals.
Supplier Management	The practice of ensuring that an organization's suppliers and their performance levels are managed appropriately to support the provision of seamless quality products and services.
Workforce and Talent Management	The practice of ensuring that an organization has the right people with the appropriate skills and knowledge and in the correct roles to support its business objectives.

Service Management Practices

The following table contains the complete list of the practices in the Service Management category. Only the ten practices in bold text are examinable in the ITIL Foundation exam.

Practice	Description (taken from the ITIL® 4 Glossary)
Availability Management	The practice of ensuring that services deliver agreed levels of availability to meet the needs of customers and users.
Business Analysis	The practice of analyzing a business or some element of a business, defining its needs and recommending solutions to address these needs and/or solve a business problem, and create value for stakeholders.
Capacity and Performance Management	The practice of ensuring that services achieve agreed and expected performance levels, satisfying current and future demand in a cost-effective way.
Change Control	The practice of ensuring that risks are properly assessed, authorizing changes to proceed and managing a change schedule in order to maximize the number of successful IT changes.
Incident Management	The practice of minimizing the negative impact of incidents by restoring normal service operations as quickly as possible.
IT Asset Management	The practice of planning and managing the full lifecycle of all IT assets.
Monitoring and Event Management	The practice of systematically observing services and service components, and recording selected changes of state identified as events.
Problem Management	The practice of reducing the likelihood and impact of incidents by identifying actual and potential causes of incidents, and managing workarounds and known errors.
Release Management	The practice of making new and changed services and features available for use.
Service Catalogue Management	The practice of providing a single source of consistent information on all services and service offerings, and ensuring that it is available to the relevant audience.
Service Configuration Management	The practice of ensuring that accurate and reliable information about the configuration of services, and the configuration items that support them, is available when and where needed.
Service Continuity Management	The practice of ensuring that service availability and performance are maintained at a sufficient level in the event of a disaster.
Service Design	The practice of designing products and services that are fit for purpose, fit for use, and that can be delivered by the organization and its ecosystem.
Service Desk	The practice of capturing demand for incident resolution and service requests.
Service Level Management	The practice of setting clear business-based targets for service performance so that the delivery of a service can be properly assessed, monitored, and managed against these targets.
Service Request Management	The practice of supporting the agreed quality of a service by handling all pre-defined, user-initiated service requests in an effective and user-friendly manner.
Service Validation and Testing	The practice of ensuring that new or changed products and services meet defined requirements.

Technical Management Practices

The following table contains the complete list of the practices in the Technical Management category. Only the one practice in bold text is examinable in the ITIL Foundation exam.

Practice	*Description (taken from the ITIL® 4 Glossary)*
Deployment Management	The practice of moving new or changed hardware, software, documentation, processes, or any other service components to live environments.
Infrastructure and Platform Management	The practice of overseeing the infrastructure and platforms used by an organization. This enables the monitoring of technology solutions available, including solutions from third parties.
Software Development and Management	The practice of ensuring that applications meet stakeholder needs in terms of functionality, reliability, maintainability, compliance, and auditability.

Continual Improvement

The Continual Improvement model applies to the SVS in its entirety. This includes all of the organization's products, services, service components, and relationships.

Because continual improvement is so fundamental to service management, the ITIL SVS includes:

- The ITIL Continual Improvement model, which provides organizations with a structured approach to implementing improvements.
- The Improve activity of the service value chain, which embeds continual improvement into the value chain.
- The Continual Improvement practice, which supports organizations in their day-to-day improvement efforts.

ACTIVITY 2-2

Discussing the Service Value System

Scenario

Use the following questions to discuss the SVS.

1. When considering the two major components of the SVS, is one of them more important or critical to service management?

2. In the SVS, what is the difference between a practice and a principle?

3. Which guiding principle has the major point of service management incorporated into its name?

4. What are the six activities in the service value chain (SVC)?

5. Why is governance a fundamental part of the SVS?

6. What are the three ways that continual improvement is addressed in ITIL and the SVS?

Summary

In this lesson, you examined the four dimensions of service management and the ITIL Service Value System. This in-depth study provided you with the basic concepts that go into this version of the ITIL framework.

What is your conception of the relationship between the four dimensions and the service value chain?

Are there any practices that are familiar to you from your professional experience or are similar to ones you already have in place in your organization?

Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

3 The ITIL Guiding Principles

Lesson Time: 2 hours

Lesson Introduction

The seven ITIL® guiding principles provide the "how" for organizations who are adopting the ITIL service approach. By keeping these principles in mind, you can benefit from the trial-and-error experience of those who have gone before you. In this lesson, you will learn about each of the principles and how they can be applied to strive to ensure a holistic approach to service management.

Lesson Objectives

In this lesson, you will:

- Define the purpose of Focus on Value.
- Define the purpose of Start Where You Are.
- Define the purpose of Progress Iteratively with Feedback.
- Define the purpose of Collaborate and Promote Visibility.
- Define the purpose of Think and Work Holistically.
- Define the purpose of Keep it Simple and Practical.
- Define the purpose of Optimize and Automate.

TOPIC A

Focus on Value

As a service provider, everything you do for your customer should have a direct relationship to increasing the value of your services for customers. Because the customer is the one who determines what is valued, it is up to you to know what they value and what you can do to increase the value of your service in their eyes. You want to make sure that you are not doing wasteful things. In this topic, you will examine the purpose of the Focus on Value guiding principle.

Note: To view the Spotlight presentations available for this course, you can select the **Spotlight** tile on the CHOICE Course screen.

The Focus on Value Principle

The first activity in Focus on Value is to identify the customer and understand their value proposition. You want to identify other stakeholders and their needs as well. You want to understand how they use the service for value, when and why they use it, and how this helps them to carry out their work. You want to be able to connect the service to organizational goals and objectives and understand both the costs and risks you are taking on (and the value that creates for the customer) as well as the costs and risks you impose as a service provider.

Customer Experience (CX)

The interaction between customer and service provider is known as the ***customer experience (CX)***. The formal definition of CX is the sum of functional and emotional interactions with a service and service provider as perceived by a service consumer.

The customer experience is partly objective and partly subjective.

- The objectivity relates to the actual results of the interaction, or something that can be measured, such as a purchase transaction.
- The subjectivity relates to the customer's feeling and opinion about the interaction.

It's your job to consider both the objective and subjective sides of the customer experience—keeping in mind that the subjective experience can override the objective.

Apply the Principle

To apply the **Focus on Value** principle, you need to:

- Know how service consumers use each service.
- Encourage a focus on value among all staff in your organization.
- Focus on value during normal operational activity as well as during improvement initiatives.
- Be sure to include focus on value in every step of any improvement initiative.

ACTIVITY 3-1

Discussing the Focus on Value Principle

Scenario

Use the following questions to guide a discussion of the Focus on Value principle.

1. How does Focus on Value help you "keep your eyes on the prize" of delivering results for your stakeholders?

2. Can you think of examples where you or your team got so caught up in execution that you lost sight of the value proposition?

3. How can you help your team stay focused on what helps co-create value?

TOPIC B

Start Where You Are

You often hear about learning from your past. It's no different in ITIL. Even though it might be tempting to ignore everything that has been decided on or happened before, it is wiser and more prudent to build on the valuable legacy information. In this topic, you will examine the purpose of the Start Where You Are guiding principle.

The Start Where You Are Principle

This guiding principle focuses on the fact that often there are existing practices and capabilities to be leveraged. As you assess the current capabilities, take the following into consideration:

- Measure or directly observe current practices. Remember that reports can often be misleading and assumptions can lead to poor decisions.
- Ask for clarification, if activities are unclear.
- Metrics and measures will support direct observation.

Note: An important consideration about measuring things is that it often affects people's behavior. People will do what you measure, so be careful! For example, if you make a certain metric the target, people might rearrange their regular work to meet the target, even if this defeats the purpose.

Apply the Principle

To apply the **Start Where You Are** principle, you need to:

- Look at what exists as objectively as possible, using the customer, or the desired outcome, as the starting point.
- When examples of successful practices or services are found in the current state, determine if and how these can be replicated or expanded upon to achieve the desired state.
- Apply your risk management skills.
- Recognize that sometimes nothing from the current state can be reused.

ACTIVITY 3-2

Discussing the Start Where You Are Principle

Scenario

Use the following questions to guide a discussion of the Start Where You Are principle.

1. What's the inherent benefit of starting where you are?

2. Most organizations have many existing practices, technologies, and of course, people. What steps should you take in an improvement initiative to "start where you are?"

3. Are there times you will need to start over?

TOPIC C

Progress Iteratively with Feedback

When turning a daunting task into something manageable, it is often best to divide it into chunks. As you accomplish each chunk, you are able to apply the lessons you learn along the way. In this topic, you will examine the purpose of the Progress Iteratively with Feedback guiding principle.

The Progress Iteratively with Feedback Principle

Based on a fundamental concept of Agile, this guiding principle stresses the importance of dividing an improvement initiative into smaller manageable pieces. Because most major improvements will require you to take multiple actions and may be too difficult to foresee all the possibilities and direction the improvement may go, separating the initiative into projects or segments that can be completed faster enables you to provide value to the customer incrementally and receive pertinent feedback more closely tied to the work and value produced.

Some considerations of the principle:

- Resist the temptation to do everything at once.
- Break work into small, manageable chunks.
- Major initiatives can be decomposed into smaller initiatives. As you progress, use feedback to drive further improvements and continually assess to maintain focus on value.

Feedback

Because business context changes in real time, feedback enables you to assess the value of an iteration, and whether to continue or change direction. A ***feedback loop*** is defined as a technique whereby the outputs of one part of a system are used as inputs to the same part of the system. Feedback loops facilitate understanding, including the following:

- An understanding of end user and customer perception of the value created.
- An improvement in efficiency and effectiveness of value chain activities.
- Increased effectiveness of service governance as well as management controls.
- Ensures an interface between the organization and its partner and supplier network.
- Ensures demand for products and services.

Time-Boxing

Commonly used in project management approaches, a time-box is the maximum period of time that is allocated to a specific activity, such as a conversation or meeting. Time is *the* limited constraint in service management. Time-boxing activities improve focus and drive results.

Some of the benefits include:

- Greater flexibility.
- Faster responses to customer and business needs.
- The ability to discover and respond to failure earlier.
- Overall improvement in quality.

Apply the Principle

To apply the **Progress Iteratively with Feedback** principle, you need to keep the following considerations in mind:

- Comprehend the whole, but do something.
- The ecosystem is constantly changing, so feedback is essential.
- Fast does not mean incomplete.
- Strive for the ***Minimum Viable Product (MVP)***, which is defined as a product with just enough features to satisfy early customers, and to provide feedback for future product development.

ACTIVITY 3-3

Discussing the Progress Iteratively with Feedback Principle

Scenario

Use the following questions to guide a discussion of the Progress Iteratively with Feedback principle.

1. What does it really mean to progress iteratively?

2. Does traditional project management work this way? What are the implications?

3. What are the benefits of progressing iteratively? How will you create the feedback mechanisms you need?

4. What are some potential pitfalls if you don't get feedback in a timely way?

TOPIC D

Collaborate and Promote Visibility

In the age of cloud computing, the term collaboration has become a popular buzzword. Popularity aside, the need to collaborate and work together is no less important when talking about IT service management. In this topic, you will examine the purpose of the Collaborate and Promote Visibility guiding principle.

The Collaborate and Promote Visibility Principle

This guiding principle strives to achieve the best result in terms of effectiveness and efficiency by ensuring that all the right people are involved at the right stage of the improvement process.

Considerations for successful collaboration:

- It is important to have the right people in the right roles with access to the right information to ensure better outcomes.
- Break the silo way of doing things that pigeon-holes people and activities in restrictive roles. Silo behavior can happen for many reasons, but it impedes collaboration and productive communication.
- Working together requires information, understanding, and trust. Considerations to work toward that end:
  - Make work visible.
  - Avoid hidden agendas.
  - Share information.

4 This revised principle is a combination of the two previous principles: Collaborate and Be Transparent.

Stakeholder Identification

One of the fundamental challenges of good collaboration is understanding who our stakeholders actually are, and what their specific needs or "stakes" are. Each stakeholder will benefit if we have clarity about their need to provide information, and their need to consume it.

Creating regular customer collaboration leads to better outcomes and faster feedback. Better collaboration between developers and operations will set expectations for delivery efficiency and effectiveness, help the teams identify and investigate defects, and help identify workarounds or permanent fixes to incidents and problems.

You need to work with your suppliers (and have your suppliers work together) to find innovative solutions to problems and identify efficiencies across shared practices, including opportunities for automation. Relationship managers need to work closely with customers and executive management to understand strategic goals and objectives, assess service consumer needs, and identify opportunities to enable service value. Importantly, you need to facilitate customers collaborating with one another to better understand business issues and the potential value of solutions.

Communications

Good communication provides clarity, direction, and motivation around and in service management. It's nearly impossible to overstate the importance of effective communication. Like anything that involves human interaction, the world of service management depends on people who can communicate efficiently and effectively.

Service improvements often originate from feedback that you receive from numerous stakeholders with different perspectives, including external customers, internal customers, and other stakeholders. For each type of customer and stakeholder, different levels of engagement are appropriate; for example, how frequently you need to communicate with an external customer and the best way to do so (i.e., email or phone call). You will need to figure it out and agree with the stakeholder on the frequency and method of communication.

Some examples of different levels of engagement might be:

- **Operational**—Day-to-day communications with users about operational needs and issues, often handled at the service desk.
- **Tactical**—Regular communications with the customer about service, service performance, and potential service improvement that is often handled by service level management.
- **Strategic**—Assessment of strategic needs, potentially identifying new services or changes to existing ones that are needed to meet organizational strategic objectives that are often handled by relationship management.

The benefits of good communication range from the mutual understanding of the objectives to increased efficiency and a positive work environment.

Make Work Visible

It is critical to successful service delivery and improvement practices to be able to successfully prioritize work in order to demonstrate commitment to your customers and other stakeholders. An important way you can help facilitate this is to use tools to make work visible so that any stakeholder can see and track progress. This helps you create more effective workflow, limit the amount of work-in-progress so the work can be successfully executed and completed, and helps you identify inefficiencies in your processes, such as bottlenecks or areas with excess capacity. These are sources of waste and can be streamlined to improve the overall performance of the workflow.

An important part of any workflow is providing the right information in the right way to the relevant stakeholders. Taking the time to understand stakeholder information needs and how we can make work more visible to the team and the stakeholders will improve performance and facilitate awareness.

When improvements lack communications, people guess and often make poor guesses at that. You might consider providing facilitators who can keep a group focused and committed to the principle of being transparent. Consider the use of tools that make information readily visible to stakeholders that need them. Agile teams often use tools like Kanban boards and burndown charts to make information easily visible across the team and any other stakeholders. In Agile, these are called "information radiators."

Note: Derived from the Japanese word meaning signboard or billboard, ***Kanban*** is defined as a method for visualizing work, identifying potential blockages and resource conflicts, and managing work in progress.

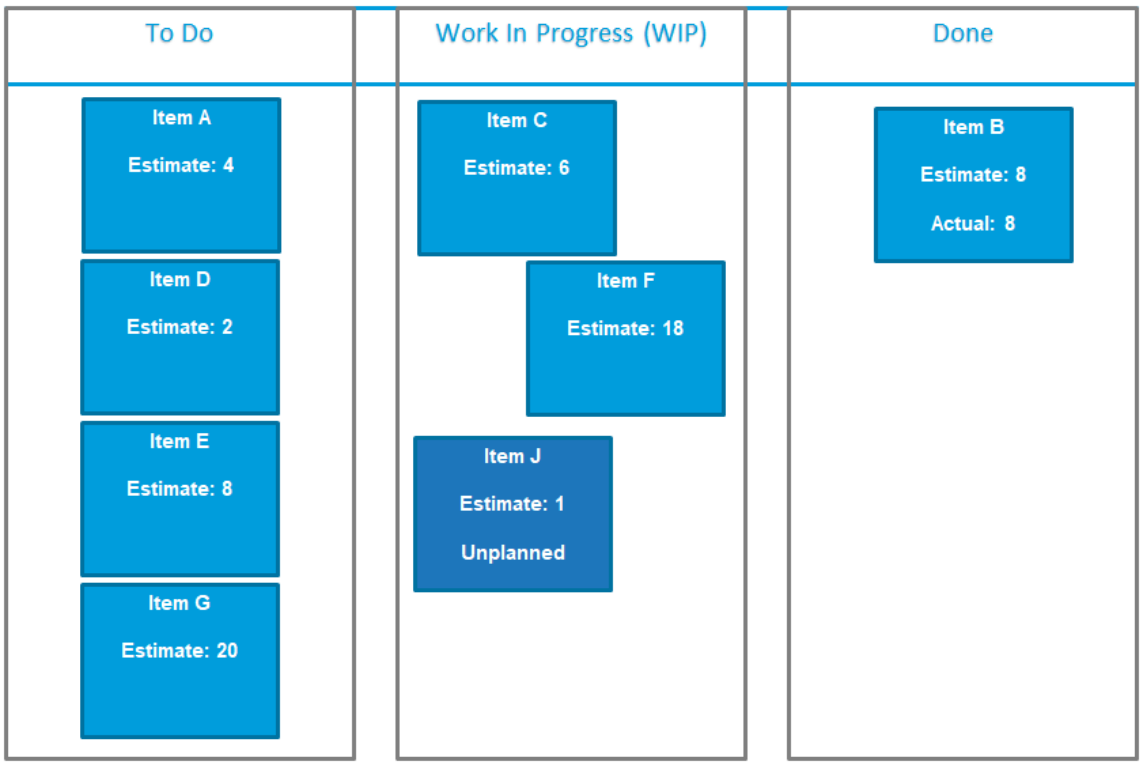

Figure 3-1: An example of a Kanban Board.

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Apply the Principle

To apply the **Collaborate and Promote Visibility** principle, you need to keep the following considerations in mind:

- Collaboration does not mean consensus. You can engage stakeholders, but then you must act!
- Communicate in a way that the audience can hear. This includes having the right stakeholder, the right message, and the right medium.
- Decisions can only be made on visible data. Therefore, consider the following:
  - Decisions driven by quality and availability of data.
  - What data is needed?
  - How much does it cost to get the data?
  - Balance cost of data against potential costs of not having it.

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ACTIVITY 3-4

Discussing the Collaborate and Promote Visibility Principle

Scenario

Use the following questions to guide a discussion of the Collaborate and Promote Visibility principle.

1. What is the value of the Collaborate and Promote Visibility principle?

2. Who are the members of your service teams? How do your teams collaborate with one another?

3. What tools or "information radiators" do you use so that work is visible to all?

TOPIC E

Think and Work Holistically

While the components and factors involved in service management might appear to be separate and not related, you would be wise to consider the entire service as a whole and not the sum of its parts. In this topic, you will examine the purpose of the Think and Work Holistically guiding principle.

The Think and Work Holistically Principle

This principle focuses on the fact that everything in IT service management is interrelated and interdependent. Consider how process components are dependent on each other and strive to create a balance. ***Holistic*** refers to the treatment of the whole system and not just the parts. Translated to the IT service world, you need to consider how the processes, people, products and technology, and partners and suppliers, work together to accomplish the objective.

The balance between specialization and coordination is important when striving to work holistically. As the name implies, specialists have a very deep knowledge of their subject matter. In an organization, teams or groups are divided by their particular skill set or responsibilities that are identified as their specialization. In ITIL terminology, these are referred to as functions. Although specialization enables people to focus on what they do best, they must collaborate across functions and coordinate their work processes to achieve the desired results. This collaboration requires cooperation among functional groups and shared processes, and emphasizes the interrelatedness and interconnectedness within an organization.

This guiding principle introduces ***systems thinking*** as the act of considering the whole and not just the subset of parts. You need to consider all four dimensions of the service management in order to improve the whole.

To ensure that you are thinking holistically, consider how value is created from demand. Finding the answers to the following questions can help:

- Who are the Organizations and People?
- Who are the Suppliers and Partners?
- What are the Processes and Value Streams?
- What are the Information and Technologies?

Apply the Principle

To apply the **Think and Work Holistically** principle, you need to keep the following considerations in mind:

- Recognize the complexity of the systems.
- Collaboration is key.
- Look for patterns in the needs of and interactions between system elements.
- Automation can facilitate working holistically.

ACTIVITY 3-5

Discussing the Think and Work Holistically Principle

Scenario

Use the following questions to guide a discussion of the Think and Work Holistically principle.

1. What does the Think and Work Holistically principle mean?

2. What happens if you focus on a local improvement, but don't consider the broader implications on the system as a whole?

TOPIC F

Keep It Simple and Practical

In service management, simple is best. You should strive to eliminate unnecessary processes and components that complicate matters without providing value. In this topic, you will examine the purpose of the Keep it Simple and Practical guiding principle.

The Keep It Simple and Practical Principle

Keep It Simple is the need to simplify improvement initiatives and eliminate anything that is cluttering up the process, such as actions, processes, metrics, and more that don't add value. The first step in keeping it simple is to decide what can be eliminated by using the question, "Does this create value for the customer?" To arrive at the answer to this question, consider asking yourself the opposing question.

If anything that is used in the provision and consumption of an IT service does not provide any value—especially business value—then why does it exist? Why are energy and resources used on it or because of it? Anything not of value is considered waste. Waste means inefficiencies and ineffectiveness. Reducing layers or performing only value-added efforts to deliver the intended result typically requires fewer resources and capabilities. By keeping the ITIL guiding principle of Keep It Simple and Practical in mind, an IT service provider may be more effective with its service assets while still delivering business value.

In this guiding principle, you should assess practices for value by:

- Always using the minimum number of steps needed to accomplish an objective.
- If a process, service, action, or metric provides no useful outcome, then eliminate it.

As you are designing a process or a service, it's tempting to address each exception that might arise. In doing so, you could end up with an overly complex work method, especially if you ignore the Keep it Simple and Practical principle. While it is important to be aware of potential exceptions to your rule (or processes), you should design rules to handle exceptions generally.

In ITIL Practitioner, this principle was known as "Keep It Simple." In ITIL 4, practical has been added. The point of this new combined principle is to create practical solutions that consist of the minimum number of steps needed to deliver valuable outcomes.

Manage Conflicting Objectives

It's common for different stakeholders to have competing objectives; for example, one may want more data and another may want much less. The key is to focus on value and consider what will aid the decision-making process the most. You should strive to simplify and streamline the process and then automate where possible.

Apply the Principle

To apply the **Keep It Simple and Practical** principle, you need to keep the following considerations in mind:

- Activities should create 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.

ACTIVITY 3-6

Discussing the Keep It Simple and Practical Principle

Scenario

Use the following questions to guide a discussion of the Keep It Simple and Practical principle.

1. How do organizations benefit from keeping it simple and practical?

2. What steps could you take to ensure you are keeping your solutions simple and practical?

3. What is wrong with the following statement? "You should prepare a solution in advance for every potential exception."

TOPIC G

Optimize and Automate

Once you have fine-tuned or perfected a particular service management process or activity, you can combine technical resources to reduce the amount of work and effort that is required by the people. In this topic, you will examine the purpose of the Optimize and Automate guiding principle.

The Optimize and Automate Principle

With this guiding principle, you can maximize the value of technical and human resources. Automation can help technology take up frequent, repetitive tasks that liberates human resources for higher-value work.

Systems should be optimized before they are automated with the following considerations:

- Financial limitations
- Compliance requirements
- Time constraints
- Resource availability

This is the only new principle in ITIL 4. Some might believe that this principle is more applicable to IT services; however, it can be universally applied to all types of activities.

Optimization Steps

The optimization steps can be summarized as follows:

- Optimization Vision—Create and agree upon the overall vision for the optimization, and ensure it aligns with the objectives of the organization.
- Current State—Assess the current state of the service to determine what optimization steps will produce the greatest impact and value.
- Desired Future State—Discuss and agree on what the future state and priorities of the organization should be. The targeted future state should focus on:
  - Simplification and value
  - Standardization of practices and services
- Stakeholder Engagement—Create a plan to establish the appropriate level of stakeholder engagement and commitment.
- Execution—Execute the improvements in an iterative way.
- Monitoring Feedback—Ensure that you continually monitor the impact of optimization to gather information about future opportunities for improved work methods.

Automation

Automation typically involves technology carrying out activities with little or no human intervention. It can simply be predefining rules to follow to "automate" responses by humans, or it can be using technology to automate standard and repeating tasks. Some of the advantages of automation can be saving costs, reducing human error, and improving the employee experience.

Apply the Principle

To apply the **Optimize and Automate** principle, you need to keep the following considerations in mind:

- Simplify and/or optimize before automating.
- Define your metrics.
  - Outcome-based
  - Focused on value
- Use the following guiding principles when applying this one.
  - Progress Iteratively with Feedback
  - Keep It Simple and Practical
  - Focus on Value
  - Start Where You Are

ACTIVITY 3-7

Discussing the Optimize and Automate Principle

Scenario

Use the following questions to guide a discussion of the Optimize and Automate principle.

1. How would you describe the value of the Optimize and Automate principle?

2. Many organizations focus on automation using their tools, but don't take the time to optimize their processes, or consider implications for other dimensions. What are the risk factors of automation for its own sake?

3. What steps could you take to ensure your automation helps produce higher value solutions?

Interaction Between the Principles

The guiding principles naturally interact with one another. For example, when progressing iteratively with feedback, the principle of Think and Work Holistically is applied to ensure that each iteration delivers real results. Feedback is key to collaboration. Focusing on what will truly be valuable to the customer makes it easier to keep things simple and practical.

Don't use just one or two of the principles; rather, consider the relevance of each and how they apply together. However, not all principles will be critical in every situation; you will need to review each situation and determine a principle's relevance.

ACTIVITY 3-8

Discussing the Interaction Between the Principles

Scenario

Use the following questions to guide a discussion of the interaction between the principles.

1. What is the key consideration when choosing which ITIL guiding principle to apply?

2. Identify a few examples of how the principles can work together.

Summary

In this lesson, you learned that applying the ITIL guiding principles encourages a holistic approach to service management. Each of the seven principles can be applied individually and also in concert with one another.

What is the value of having guiding principles? How do they help in prioritizing the things that are the most important?

Pick one of the guiding principles. What would it mean if an organization followed this principle, and what would it mean if it did not? Do you feel your own organization follows this principle today?

Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

4 The ITIL Service Value System

Lesson Time: 2 hours

Lesson Introduction

The four dimensions of service management and the Service Value System are the major components of the ITIL® framework. Previously, you were introduced to the SVS as a whole. Now, you will take a look at each component.

Lesson Objectives

In this lesson, you will:

- Define the role of governance in the SVS.
- Define the purpose, inputs, and outputs of the service value chain.
- Define the Continual Improvement model.

TOPIC A

Governance

The first component of the ITIL Service Value System is governance. In this topic, you will define governance and its role in the SVS.

Note: To view the Spotlight presentations available for this course, you can select the **Spotlight** tile on the CHOICE Course screen.

Governing Bodies

All organizations are directed by a governing body. This can be a person or a group accountable at the highest level, including organizational performance and compliance of the organization.

All sizes and types of organizations perform governance activities as demonstrated by a Board of Directors, executive managers when they are performing governance activities, and compliance to policies and external regulations.

Governance and management are important related activities but with different areas of focus. Governance describes the overall assessment of strategic options, direction of strategies and policies, and monitoring of organizational conformance as the organization executes. The management of the organization is responsible to plan, build, run, and improve as they execute the strategy through the production and delivery of valuable products and services for their customers.

Governance Activities

Each of the three governance activities is explained in the next sections. The three activities are:

- Evaluate
- Direct
- Monitor

The Evaluate Activity

This governance activity is when the governing body evaluates the organization, including its strategy, portfolios, and relationships with other parties. They are reviewed on a regular basis as stakeholders needs and external circumstances evolve.

For example, an organization is considering two large potential strategic initiatives; one requires building out an entirely new organization, the other an acquisition of an existing service provider. A governing body such as a Board of Directors might be engaged to evaluate the relative merits of changing the organization's overall strategy and objectives and assessing different alternatives. While the management team may present the business cases and be responsible for execution of the decision, the Board would evaluate the options.

The Direct Activity

This governance activity defines organizational strategies. This includes setting the direction and prioritization through organizational activity and future investment.

Policies establish the boundaries for behavior and define the following:

- What is permitted.
- What is not permitted.
- Behavior requirements across the organization.
- Behavior requirements with suppliers, partners, and other stakeholders.

Organizations then are responsible to execute the strategy and comply with the policies. To continue the previous example, based on the business cases and management recommendations, the Board has approved the decision to acquire the service provider. They will direct that the acquisition proceed, and management then is expected to execute the strategic decision.

The Monitor Activity

This governance activity includes monitoring the organizational performance in regards to practices, products, and services to execute the strategy and also compliance with policies. You can use monitoring data as feedback to subsequent evaluation and direction.

To finish our example, once the Board has approved the acquisition of the service provider, they will want to monitor the work of the management team as they execute the strategy to ensure it conforms to the organization's overall goals and objectives.

The Role of Governance in the Service Value System

Governance begins at the top, but may have parts delegated (e.g., IT governance). Governance is fundamental to the SVS, and subject to continual improvement. You can use ITIL guiding principles or tailor them as needed to meet organization needs. You need to have visibility into improvement activities and value delivery.

Guidelines for Establishing Governance in the Service Value System

Note: All of the Guidelines for this lesson are available as checklists from the **Checklist** tile on the CHOICE Course screen.

Establish Governance in the SVS

You can use these guidelines to establish governance in the SVS.

- The service value chain and the practices must work in line with the direction given by the governing body.
- The governing body of the organization, either directly or through delegation of authority, maintains oversight of the SVS.
- The governing body and management at all levels maintain alignment through a clear set of shared principles and objectives.

- Governance and management at all levels are continually improved to meet expectations of the stakeholders.

ACTIVITY 4-1

Discussing Governance in the Service Value System

Scenario

Use the following questions to discuss governance in the SVS.

1. Why is governance a fundamental part of the SVS?

2. Who is the governing body for your organization? For IT?

3. How is authority delegated from your organization's governing body to your IT governing body?

4. What are the key deliverables a governing body provides to an organization? When a governing body evaluates, what are they evaluating? What are the implications for the organization's strategies and policies?

5. What is the role of a governing body?

6. How does governance differ from management?

TOPIC B

The Service Value Chain

At the heart of the SVS is the service value chain model that illustrates the activities that your organization performs to create products and services that ultimately create value for your customers. In this topic, you will define the purpose, inputs, and outputs of the service value chain.

The Service Value Chain

The value streams describe activities an organization takes in the creation of value. Each activity has a defined set of inputs that are converted into outputs with the purpose of creating value for the customer. While the service value chain might appear to happen in a linear fashion, a service's progression through the service value chain activities might not necessarily be linear; in fact, activities might trigger other activities.

Value chain activities can use different combinations of ITIL practices, internal or third party resources, processes, and skills and competencies to achieve the desired outputs.

Each of the service value chain activities is addressed in this topic.

- Plan
- Improve
- Engage
- Design and Transition
- Obtain/Build
- Deliver and Support

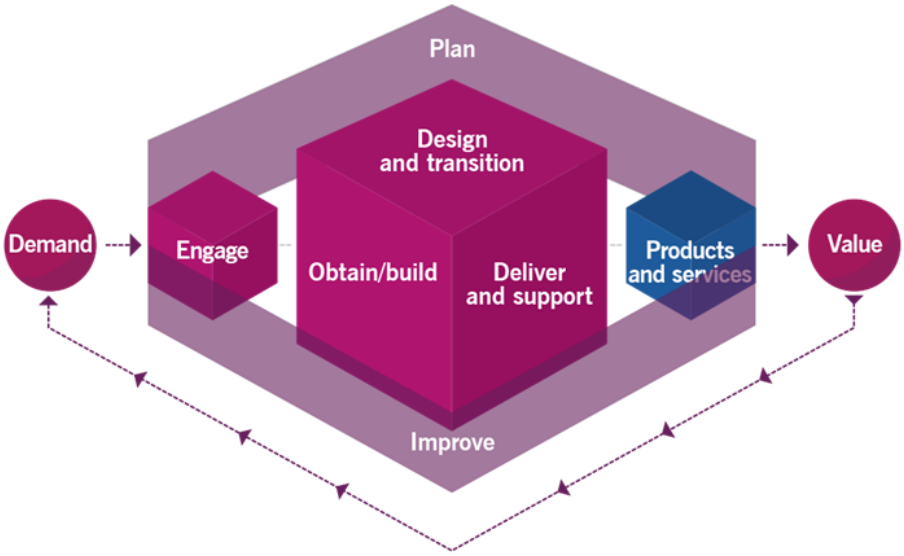

Figure 4-1: The service value chain.

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Inputs and Outputs

Every component of the service value chain receives inputs of various types from other components of the chain, and produces outputs that are used elsewhere in the chain. The input/output relationships are not linear and are not one-to-one; rather, they are interconnected in a complex and dense manner that supports appropriate interactions among all the activities in the chain.

The Plan Activity

The purpose of the Plan activity is to ensure a shared understanding of the vision, current status, and the improvement direction. A fundamental part of planning is prioritizing different alternatives and making decisions.

During this activity, you will be creating strategic plans, project plans, and service plans, to name a few. It is important that you consider the four dimensions of service management to ensure a holistic approach to planning. Additionally, all other service value chain activities will apply the plans from this activity to their specific activities.

Inputs

The following are inputs of the Plan activity:

- 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

The outputs of the Plan activity are:

- 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*.

The Improve Activity

The purpose of the Improve activity is to ensure continual improvement of products and services and also practices. This includes all value chain activities and all four dimensions of service management.

Because all of your service management activities are subject to improvement, this activity requires performance information from all aspects of the service value chain. In turn, the Improve activity provides improvement plans and improvement status information to all other value chain activities.

Inputs

The following are inputs of the Improve activity:

- 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 from *engage*.

Outputs

The outputs of the Improve activity are:

- 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*.

The Engage Activity

The purpose of the Engage activity is to provide a good understanding of stakeholder needs, facilitate transparency, and provide continual engagement and good relationships with all stakeholders.

You need to engage with different stakeholders and use different practices to do it. For example, operational day-to-day collaboration with users may occur in your Service Desk practice. Tactical engagement with customers may happen through your Service Level Management practice, and strategic (and some tactical) engagement will come from your Relationship Management practice. These practices are addressed later in the course.

Inputs

The following are inputs of the Engage activity.

- Product and service portfolio provided by *plan*.
- High level demand for services and products provided by internal and external customers.
- Detailed requirements 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.
- Improvement initiatives and plans from *improve*.
- Improvement status reports from *improve*.

Outputs

The outputs of the Engage activity are:

- 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.

The Design and Transition Activity

The purpose of the Design and Transition activity is to ensure that products and services meet stakeholder expectations for quality, costs, and time-to-market. As the customer needs change, the activities involved are adjusted accordingly.

Specifically, in this activity, you start with the plan, the architecture information, customer requirements, and other information from the Engage activity. You will also need component information from Obtain/Build. All of this information helps to design the product or service. Then, the transition part of the activity requires the knowledge transfer of the improved product or service to the other SVC activities.

Inputs

The following are the inputs of the Design and Transition activity:

- 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*.
- Service components from *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*.

Outputs

The outputs of the Design and Transition activity are:

- 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*.

The Obtain/Build Activity

The purpose of the Obtain/Build activity is to ensure that service components are available when and where they are needed and that they meet the agreed specifications.

A large part of this activity is determining whether to obtain or build. To help in the decision making, you need to consider if the capacity to build is readily available, and whether it is strategic to

your organization's competitiveness. If a third party has the economies of scale that make it more cost effective to buy rather than build, then you should buy.

Some of the resulting components will be provided to Design and Transition to help build new and changed services, while others will go straight to Deliver and Support to support standard service requests.

Note: Any time components need to be built or acquired, they are acquired through the Obtain/Build activity.

Inputs

The following are the inputs of the Obtain/Build activity:

- 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.
- 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

The outputs of the Obtain/Build activity are:

- Service components for *deliver and support*.
- 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*.

The Deliver and Support Activity

The purpose of the Deliver and Support activity is to ensure that services are delivered and supported according to the agreed specifications and the stakeholders' expectations.

Deliver and Support creates data about incidents, service requests, events, and a myriad of other performance data that can be used to identify potential service improvements. The Improve, Engage, and Plan activities will all make extensive use of this data.

Inputs

The following are the inputs of the Deliver and Support activity:

- 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

The outputs of the Deliver and Support activity are:

- 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*.

ACTIVITY 4-2

Discussing the Service Value Chain

Scenario

Use the following questions to discuss the individual activities of the service value chain.

1. What kinds of plans get created in a service provider organization? How do they help organizations manage tradeoffs and prioritize?

2. Which of the six service value chain activities require information from all other activities and in turn informs all other parts of the value chain?

3. Do you engage with different sets of stakeholders at different levels? What's the difference between engaging at an operational level, a tactical level, and a strategic level?

4. Which service chain activity starts with plans and architecture information and finishes with an end product that is transferred to the customer?

5. What considerations do you use when trying to decide whether to build or buy?

6. What types of information are created as part of Deliver and Support?

TOPIC C

Continual Improvement

You have been introduced to the guiding principles, governance, and the service value chain (SVC) model. In this topic, you will be introduced to another component of the SVS—the Continual Improvement model.

Relationships of Continual Improvement Model, Value Chain, and Practice

Continual improvement takes place in all areas of the organization and at all levels, from strategic to operational. Each person who contributes to the provision of a service should keep continual improvement in mind, and should always be looking for opportunities to improve.

The Continual Improvement model applies to the following:

- SVS
- Products and services
- Service components
- Relationships

Throughout ITIL, continual improvement exists in a variety of ways. First, as the Continual Improvement model in the ITIL SVS, it provides a structured approach to implementing improvements. In the Improve activity of the service value chain, continual improvement is embedded into the value chain. And finally, as the Continual Improvement practice, it drives the day-to-day improvement efforts.

The Continual Improvement Model

The following figure illustrates the steps of the Continual Improvement model starting with "What is the vision?" and flowing down to the next step. Listed to the right of each step is the organizational "task" that corresponds to the model.

In previous versions of ITIL, the Continual Improvement model was known as the CSI model. In ITIL 4, the model is similar except for the addition of the Take Action step.

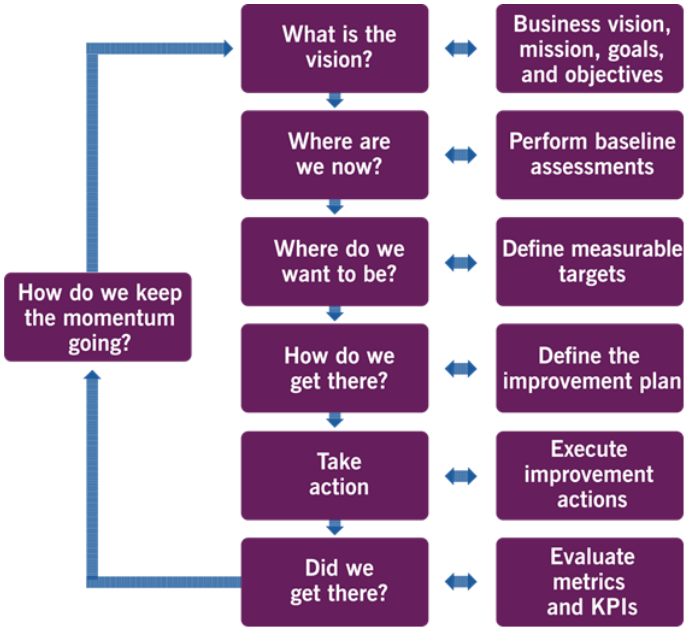

Figure 4–2: The Continual Improvement model.

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What Is the Vision?

In this first step, the organization's vision and objectives need to be translated for the specific business unit, department, team, and/or the individual. Context, objectives, and boundaries for any improvement initiative are understood. High-level vision for the planned improvement needs to be created.

What Is the Vision ensures the following:

- High-level direction has been understood
- Planned improvement initiative is described and understood in that context
- Stakeholders and their roles have been understood
- Expected value to be realized is understood and agreed
- Role of the person or team responsible for carrying out the improvement is clear in relation to achieving the organization's vision

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Where Are We Now?

Now that you understand the vision, you need to determine where you are. You can accomplish this by performing a current state assessment, which examines existing services, the perception of value received, people's competencies and skills, processes and procedures, and technical capabilities.

An organization's culture will affect the level of organizational change management that might be required.

Objective measures should be used whenever possible, and establishing a baseline enables later comparison.

Where Do We Want to Be?

In this step, knowing that the initial vision may be aspirational, you need to determine where you want to be. To start, identify the next step of the improvement journey by walking through the following:

1. Perform a Gap Analysis—In this analysis approach, you identify the gaps in performance between the initial baseline and the desired targets. If the gap is small enough, then you might be able to close it in one improvement effort. However, you might need to break it up into separate, smaller improvements in order to stay on track to reach the desired objective. Remember to progress iteratively with feedback!
2. Identify and prioritize improvement opportunities.
3. Set objectives.
4. Establish critical success factors (CSFs) and key performance indicators (KPIs). The definitions for CSFs and KPIs are as follows:
    - A ***critical success factor (CSF)*** is a necessary precondition for the achievement of intended results. In other words, it is something that must happen if an IT service, process, plan, project, or other activity is to succeed. For example, a CSF might be to quickly resolve incidents.
    - A ***key performance indicator (KPI)*** is an important metric used to evaluate the success in meeting an objective. KPIs describe how the achievement of the CSF will be measured. For example, a KPI might be to achieve a 10 percent reduction in average resolution time within 60 days.

SMART

When it comes to defining useful KPIs, it's important to remember the SMART acronym. To be valuable measurement tools, KPIs need to satisfy the SMART criteria: specific, measurable, achievable, relevant, and time-bound.

Although there are varying interpretations of the SMART acronym, within the context of the ITIL:

- **Specific** means the goal is appropriately focused and targeted, not overly general or vague. The target must be specific to the objective at hand; many targets that are too general could be affected by dozens of factors not associated with the improvement.
- **Measurable** means the change can be quantified and assessed on that basis. You must be able to measure the target; this means figuring out how to get accurate data to assess current and future performance.
- **Achievable** means that it is plausible and realistic. Ensure the target is a realistic one; you need to be able to achieve it within the size and scope of proposed improvement.
- **Relevant** ensures that the KPI is meaningfully related to its associated CSF. The target needs to be relevant in the context of the larger objectives and critical success factors.
- **Time-bound** means the goal is not open-ended, but can be assigned a specific target duration. The timescale used needs to assess whether the improvement has achieved the desired results.

How Do We Get There?

In this step, you need to plan the improvement that will get you there. Consider the following:

- Can be simple or complex
- Do in iterations with feedback
- Check progress and re-evaluate as needed

Keep in mind that you may need to experiment with different alternatives.

Take Action

In this step, you will execute the improvement. You could use either a waterfall or Agile methodology. The key is to remain open to feedback and course correction as needed.

You will need a continual focus on measuring progress towards the vision, managing risks, and ensuring visibility and overall awareness.

For those familiar with ITIL version 3, Take Action is the only new step to the Continual Improvement model.

Did We Get There?

In this step, you determine if the improvement or change was successful. Organizations often assume the expected has been achieved. However, success must be validated. For example, have the original objectives been achieved? Are those objectives still relevant? It's common for people to be afraid to perform this step, but you need to know the answer—however difficult it may be to hear—so you can move to the next step.

If the desired result has not been achieved, additional actions to complete the work will need to be selected and undertaken—commonly resulting in a new iteration.

How Do We Keep the Momentum Going?

If the improvement has delivered the expected value, then you should market the success and reinforce any new methods introduced.

If the expected results of the improvement were not achieved, then you might need to inform stakeholders of the reasons for the failure, and document and communicate lessons learned. It will be important to ask, "What can be done differently in the next iteration?" Transparency is important for future efforts.

How Continual Improvement Maps to the Guiding Principles

The darker characters in the following table indicate where the Continual Improvement model maps most strongly to each of the seven guiding principles, but remember that all the principles are always relevant to all components of the Continual Improvement model to some extent.

	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
What is the vision?	**X**	X	X	**X**	**X**	X	X
Where are we now?	X	**X**	X	**X**	X	X	X
Where do we want to be?	X	X	**X**	X	**X**	**X**	**X**
How do we get there?	X	X	**X**	**X**	**X**	**X**	X
Take action	**X**	X	**X**	**X**	X	X	X
Did we get there?	**X**	X	X	**X**	**X**	X	X
How do we keep the momentum going?	**X**	X	X	**X**	**X**	X	**X**

Figure 4–3: Mapping the Continual Improvement model to the Guiding Principles.

Theory of Constraints

How do you focus on the work that is the highest priority? The ***Theory of Constraints (TOC)*** was created by Dr. Goldratt in 1984 to help describe the most important aspect of a system. He found that the weakest link in the value chain determines the flow and throughput of the system. Therefore, any improvement that does not improve the weakest link does not improve the overall throughput of the system. The weakest link must be understood, and the rest of the work in the value chain organized around it. The bottleneck is elevated as much as possible until it is no longer the weakest link. Naturally, this sometimes reveals a new weakest link. Then, as improvements are executed, a new weakest link forms, and new improvements can begin.

The Lean practice of Value Stream Mapping is used to identify the weakest link. By examining the value stream and identifying the waste, the weakest link is identified.

ACTIVITY 4-3
Discussing the Continual Improvement Model

Scenario
Use the following questions to discuss the Continual Improvement model of the SVS.

1. What happens in each step of the Continual Improvement model?

2. What might be the result of skipping one of the steps?

3. How does following the guiding principles drive a focus on improvement? How does a continual improvement culture drive interest in the use of the guiding principles?

4. How does the Theory of Constraints reinforce the guiding principle to Think and Work Holistically? Does it have implications for any of the other guiding principles?

Summary

In this lesson, you examined the SVS by discussing the role that governance plays, identifying the purpose of each of the service value chain activities, and finally examining the Continual Improvement model. When you add the components in this lesson to the guiding principles and the practices, you're on your way to having a complete picture of the ITIL Service Value System.

Identify a set of common activities that you perform and consider how it applies across the different activities of the service value chain. How might each of the four dimensions be engaged?

Which step of the Continual Improvement model does your organization do best? Which step causes the most trouble?

Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

5 Key ITIL Practices

Lesson Time: 2 hours, 30 minutes

Lesson Introduction

In the previous lessons, you have learned about all the other components of the ITIL® Service Value System. Now, you are ready to examine the final component called practices, which are designed specifically for service management professionals. In this lesson, you will examine the seven key practices and how they fit within the service value chain.

Lesson Objectives

In this lesson, you will:

- Define Continual Improvement.
- Define Service Level Management.
- Define Change Control.
- Define Incident Management
- Define Service Request Management
- Define Service Desk.
- Define Problem Management.

TOPIC A

Continual Improvement

Previously, you discussed continual improvement as a component of the SVS and as a model that provides a structural approach to service improvements. In this topic, you will define the Continual Improvement practice.

Note: To view the Spotlight presentations available for this course, you can select the **Spotlight** tile on the CHOICE Course screen.

ITIL Practices Redefined

Recall that the definition of an ITIL practice is a set of organizational resources designed for performing work or accomplishing an objective. ITIL practices are a major focus of the ITIL 4 Foundation exam. While there are 34 ITIL practices in total, in the categories of General Management, Service Management, and Technical Management, only 15 are examinable at the ITIL Foundation level. Of those, only 7 are covered in detail.

The 7 key practices are:

- Continual Improvement
- Service Level Management
- Change Control
- Incident Management
- Service Request Management
- Service Desk
- Problem Management

The other examinable practices are:

- Relationship Management
- Information Security Management
- Supplier Management
- Service Configuration Management
- IT Asset Management
- Monitoring and Event Management
- Release Management
- Deployment Management

Purpose of Continual Improvement

The purpose of the Continual Improvement practice is to align the organization's practices and services with changing business needs through the identification and improvement of services, service components, practices, and any element involved in the efficient and effective management of products and services.

You can develop improvement-related methods and techniques with a continual improvement culture across the organization. The commitment to and practice of continual improvement must be embedded into the organization. Without an ingrained cultural commitment to continual improvement, the daily operational concerns and major project work will eclipse continual improvement efforts.

Key Activities

The key activities of the Continual Improvement practice are:

- Encourage continual improvement across the organization.
- Secure time and budget for continual improvement.
- Identify and log improvement opportunities.
- Assess and prioritize improvement opportunities.
- Make business cases for improvement action.
- Plan and implement improvements.
- Measure and evaluate improvement results.
- Coordinate improvement activities across the organization.

Continual Improvement Methods and Techniques

Improvements can be executed using the Continual Improvement model that was introduced earlier in the SVS lesson. While it is important to identify a small team to lead this practice, continual improvement is everyone's responsibility and should be integrated into their job roles and these expectations clearly set. Continual improvement should not be limited to just members of the organization, but should also engage customers, suppliers, partners, and other stakeholders as appropriate. Obtaining and using accurate and timely data is critical to driving effective improvements and measuring their efficacy.

While there are many methods and techniques available, organizations should focus on a few methods as appropriate. Many methods and techniques are available, including:

- Lean methods focus on waste reduction.
- Agile methods focus on iterative improvement and retrospectives.
- DevOps methods focus on working holistically and successful implementation.
- Balanced Scorecard technique focuses on aligning improvements with the organization's overall strategy.
- SWOT Analysis technique evaluates improvements from the perspective of strengths, weaknesses, opportunities, and threats. Based on a desired end state, you can identify and analyze those conditions that may affect the success of the improvement.

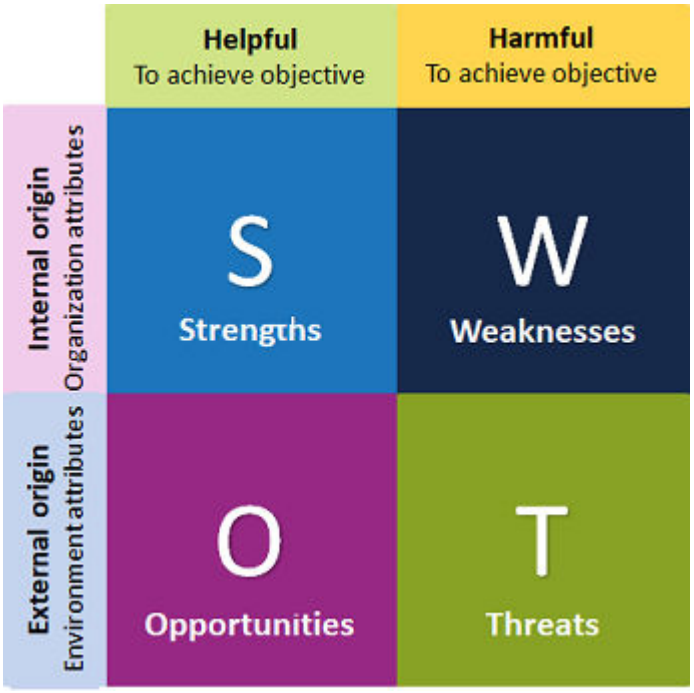

Figure 5-1: A sample of a SWOT Analysis.

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Continual Improvement Register

The ***Continual Improvement Register (CIR)*** is a structured document that is used to track and manage improvement opportunities. There can be more than one CIR in an organization and can be structured in many ways. Multiple CIRs can be maintained on individual, team, departmental, business unit, and organizational levels. Improvement ideas can also initially be captured in other places; however, the ideas should eventually be stored in the CIR. As new ideas are documented, CIRs are used to constantly re-prioritize improvement opportunities.

In addition, CIRs help to make things visible and keep the following in mind:

- What is currently being done.
- What is already complete.
- What has been set aside for further consideration at a later date.

Most importantly, the CIR guarantees that continual improvement opportunities are captured, documented, assessed, prioritized, and acted on.

4 The acronym CIR is new to ITIL 4. Previously, this was known as the CSI Register.

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Continual Improvement Heat Map and Value Chain

In the following heat map diagram, you can see that the Continual Improvement practice has a strong relationship to all aspects, or activities, of the service value chain. The items that are shown in gray (Demand, Products and services, and Value) are not included because they are not part of the service value chain.

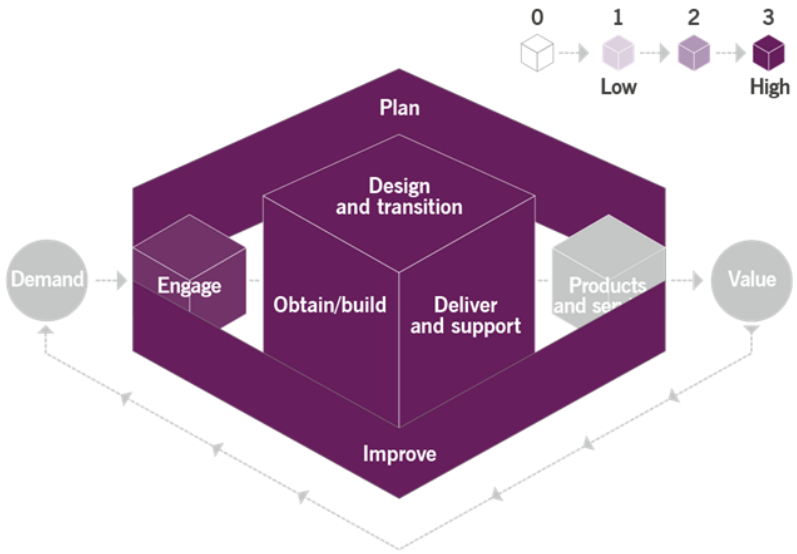

Figure 5-2: The heat map and value chain of the Continual Improvement practice.

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ACTIVITY 5-1

Analyzing the Continual Improvement Practice

Scenario

Answer the following questions to analyze the Continual Improvement practice.

1. Why is it essential to have a specific Continual Improvement practice?

2. How do you reconcile *improvement is everybody's job* with *identify a small team to focus on driving improvement activities*?

3. How do you conceive of the relationships between continual improvement as a principle, as an activity, and as a model?

TOPIC B

Service Level Management

In order to set targets for your organization's service performance, the service provider and consumer need to agree on the expected level of service and have a way to measure whether or not the expectations were met. In this topic, you will define the Service Level Management practice.

Purpose of 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. The objective is end-to-end visibility that accomplishes the following:

- Establishes a shared view of the services and target service levels with customers.
- Ensures the organization meets the defined service levels through the collection, analysis, storage, and reporting of the relevant metrics for the identified services.
- Performs service reviews to ensure the current set of services continues to meet the needs of the organization and its customers.
- Captures and reports on service issues including performance against defined service levels.

Service Level Agreements

Service Level Agreements (SLAs) are defined as a documented agreement between a service provider and a customer that identifies both services required and the expected level of service. SLAs are used to measure the performance of services from the customer's point of view. However, SLAs must reflect business context.

An SLA is an agreement and not an assumption. SLAs help to document both the quality and the quantity of a service.

Using SLAs may present many challenges because often they do not fully reflect the wider service performance or the user experiences. For example, when the service reports appear acceptable because the indicators are green but the users are not satisfied or are experiencing problems, this is known as a "watermelon" SLA.

Service Level Agreement Requirements

To be effective and successful, SLA requirements are as follows:

- SLAs must relate to a defined "service" in the ***service catalog***, which is defined as structured information about all the services and service offerings for a service provider, relevant for a specific target audience.
- SLAs must relate to defined outcomes such as customer satisfaction and key business outcomes.
- SLAs must be an agreement between the service provider and the service consumer that involves all stakeholders, including partners, sponsors, users, and customers.
- SLAs must be simply written and easy to understand and use for all parties.

Customer Engagement and Feedback

Because the customer is the person specifying the service requirements, customer engagement is necessary in understanding and confirming the actual ongoing needs and requirements. Your ability to listen is an important relationship-building and trust-building skill. When you are soliciting feedback from your customers, you must be sure to actively listen to what they have to say. In addition to contacting customers personally, two other methods to obtain customer feedback include conducting satisfaction surveys and tracking relevant business metrics.

To help engage your customers, you might want to ask them questions that are similar to the following:

- What does your work involve?
- How does technology help you?
- What are your key business times, areas, people, and activities?
- What differentiates a good day from a bad day for you?
- Which of these activities is most important to you?
- What are your goals, objectives, and measurements for this year?
- What is the best measure of your success?
- How do you base your opinion and evaluation of a service or IT/technology?
- How can we help you more?

Metrics

The following table defines two types of metrics. In general, a ***metric*** is defined as a measurement or calculation that is monitored or reported for management and improvement.

The IT department tends to focus on operational metrics while customers care more about business metrics.

Metrics	*Description*
Operational metrics	Low-level indicators of various operational activities. Common operational metrics include: • System availability • Incident response and fix times • Change and request processing times • System response times
Business metrics	Any business activity that is deemed useful or valuable by the customer. For example, the successful completion of a business activity.

Service Level Management Heat Map and Value Chain

In the following heat map diagram, you can see that the Service Level Management practice has a strong relationship to the Engage and Plan activities and a moderate relationship to the remaining four activities of the service value chain.

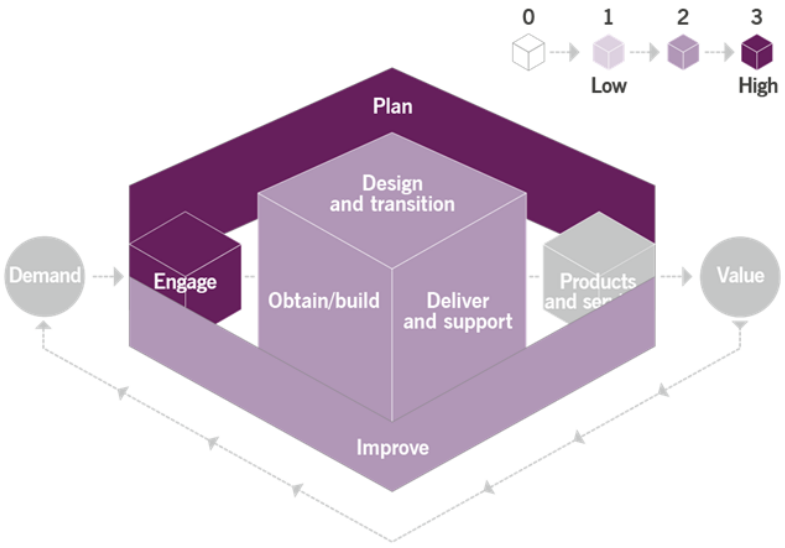

Figure 5-3: The heat map and value chain of the Service Level Management practice.

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ACTIVITY 5-2

Analyzing the Service Level Management Practice

Scenario

Answer the following questions to analyze the Service Level Management practice.

1. How does service level management help understand and set customer expectations?

2. What is the role of a service review?

TOPIC C

Change Control

In service management, change is an ongoing, continual, and expected part of doing business. You want to ensure that you are properly handling any changes that affect your services. In this topic, you will define the Change Control practice.

Purpose of Change Control

The purpose of the Change Control practice is to maximize the number of successful IT changes by assessing risks properly, authorizing changes to proceed, and then managing a change schedule. You need to balance the need to make beneficial changes that will deliver additional value with the need to protect customers and users from the adverse effect of changes.

4 In ITIL 4, the name of this practice has been changed. Previously, it was known as the Change Management practice and now it is the Change Control practice. The change to the practice name reflects that the Change Control practice is applied at the point of the change rather than the end-to-end timing in version 3.

A ***change authority*** is the person or group who authorizes a change. It's important that the right change authority is assigned to each type of change. Often, the change authority is decentralized in high velocity organizations, and uses peer reviews to ensure that the benefit of a change outweighs the potential negative effects.

Changes

Change is the addition, modification, or removal of anything that could have a direct or indirect effect on services. While the scope of a change is defined by each organization, generally, changes are made to IT infrastructure, applications, documentation, processes, supplier relationships, and anything else that might directly or indirectly impact a product or service.

Types of Changes

The following table describes the three types of changes.

Change Types	*Description*
Standard changes	• Low-risk, pre-authorized, routine changes. • Well-understood and fully documented. • Implemented without needing additional authorization. • Risk assessment repeated only if there is a modification to the way it is carried out.

Change Types	Description
Normal changes	• Using a standard process, these changes are scheduled, assessed, and authorized. • Change models determine the roles for assessment and authorization. • Initiation of a normal change is triggered by the creation of a change request. • Organizations that have an automated pipeline for continuous integration and continuous deployment (CI/CD) often automate most steps of the change control process.
Emergency changes	• Changes that must be implemented as soon as possible. • Not typically included in a change schedule. • Assessment and authorization is expedited. • May be acceptable to defer some documentation and reduce the amount of testing. • May also require a separate change authority.

Change Schedule

A change schedule is used to plan changes, assist in communication, avoid conflicts, and assign resources. It provides information about changes as needed for the Incident Management, Problem Management, and Continual Improvement practices. The change schedule supports risk assessment to gather input from stakeholders, raises awareness, and facilitates readiness.

Change Control Heat Map and Value Chain

In the following heat map diagram, you can see that the Change Control practice has a strong relationship with the Design and transition, Obtain/build, Deliver and support, and Improve activities and a low relationship to the Plan and Engage activities of the service value chain.

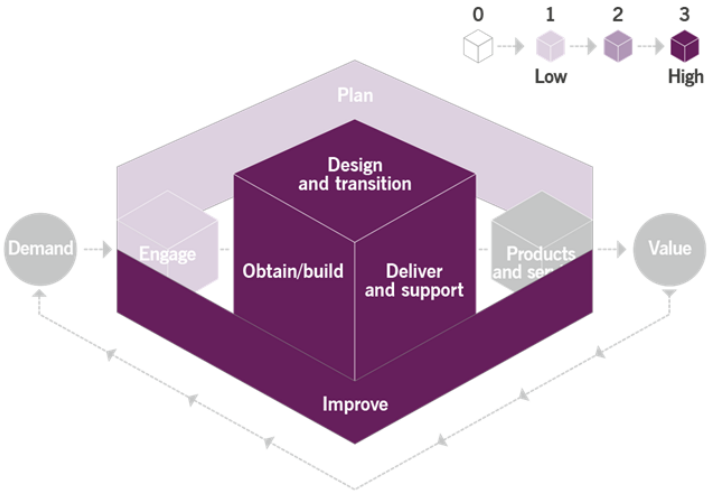

Figure 5-4: The heat map and value chain of the Change Control practice.

ACTIVITY 5-3
Analyzing the Change Control Practice

Scenario
Answer the following questions to analyze the Change Control practice.

1. How does change control help you Focus on Value?

2. What is the role of the Change Schedule in Collaborate and Promote Visibility?

3. What are some tradeoffs in balancing change benefits against potential risks?

4. What types of mitigation activities could you do?

TOPIC D

Incident Management

As the name implies, unplanned interruptions are difficult to anticipate; however, interruptions to services will happen and your organization needs to be ready to handle them. In this topic, you will define the Incident Management practice.

Purpose of 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.

Incidents can have an enormous impact on customer and user satisfaction and the perception of the service provider. Every incident should be logged and managed to ensure that it is resolved in a time that meets the expectations of the customer and user. Target resolution times are agreed on, documented, and communicated for all involved parties. Incidents are prioritized, based on agreed classification, to ensure that incidents with the highest business impact are resolved first.

Incidents

An ***incident*** is an unplanned interruption to a service, or reduction in the quality of a service. Incidents reflect a user experience, such as when they say "I can't [*fill in the blank*]." These interruptions to a service can impact your business workflow, and your objective is to minimize that impact.

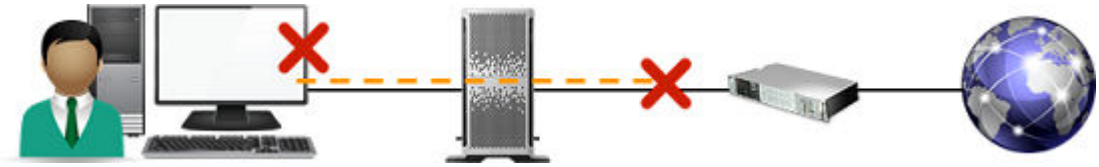

Figure 5-5: An incident.

4 In ITIL 4, the definition of an incident has been revised to remove any ambiguity about what is, or is not, an incident. If the service is not impacted, then it is not an incident. Previous versions treated any component failure as an incident, but if there is no customer impact, it is no longer treated as one.

Resources should be allocated based on the impact the incident has. For example, some incidents with extreme impact may be called major incidents and require specialized, separate procedures for handling them. Information security incidents may require separate procedures as well.

Information about incidents should be tracked and stored in a suitable tool, and also contain links to configuration data, problems, changes, known errors, and other knowledge that can facilitate diagnosis and recovery. In today's digital environment, there are tools that automate matching incidents to other incidents or other information to reduce the amount of time you need to spend sifting through incident records.

Incident Management Activities

The activities involved in Incident Management are listed here. Keep in mind that all activities should be timestamped and tracked.

- Identification and Logging
- Categorization
- Prioritization
- Diagnosis
- Escalation
- Resolution
- Closure

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Incident Diagnosis and Resolution

Incidents can be diagnosed and resolved by people in many different groups. Collaboration within and among teams is essential.

- **User self-help**—Some incidents will be resolved by the users themselves. Use of specific self-help records should be captured for measurement and improvement.
- **Service desk**—Some incidents will be resolved by the service desk.
- **Support team**—Complex incidents will usually be escalated to a support team for resolution. Typically, the routing is based on the incident category, which should help to identify the correct team.
- **Suppliers or partners**—Incidents can be escalated to suppliers or partners, who offer support for the products and services they supply.
- **Temporary team**—The most complex incidents, and all major incidents, often require a temporary team to work together to identify the resolution. This team may include representatives of many stakeholders.
- **Disaster Recovery Plans**—In some extreme cases, disaster recovery plans may be invoked to resolve an incident.

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Incident Management

Incident management is the formal process for logging and managing incidents. Generally, it doesn't include detailed procedures for how to diagnose, investigate, and resolve incidents. However, it provides techniques for making investigation and diagnosis more efficient. For example, scripts for collecting information from users during initial contact may lead directly to diagnosis and resolution of simple incidents.

Investigation of more complicated incidents often requires knowledge and expertise, rather than procedural steps.

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Incident Management and Suppliers

Supplier support agreements must align to service provider commitments. The management of incidents may require frequent interaction with these suppliers. Suppliers can also act as a service desk, logging and managing all incidents and escalating to relevant subject matter experts or other parties as required.

Swarming

Swarming is a popular Agile technique for managing incidents that begins with multiple stakeholders working together to manage an incident. As work continues, the better-suited stakeholder will be revealed and the others will be released to work on other things. Swarming is commonly used in work teams to attack incidents quickly and restore service and keep the team and the other stakeholders on track.

Incident Management Heat Map and Value Chain

In the following heat map diagram, you can see that the Incident Management practice has a strong relationship with the Engage and the Deliver and support activities, and a moderate relationship to the Design and transition, Obtain/build, and the Improve activities. There is no relationship to the Plan activity of the service value chain.

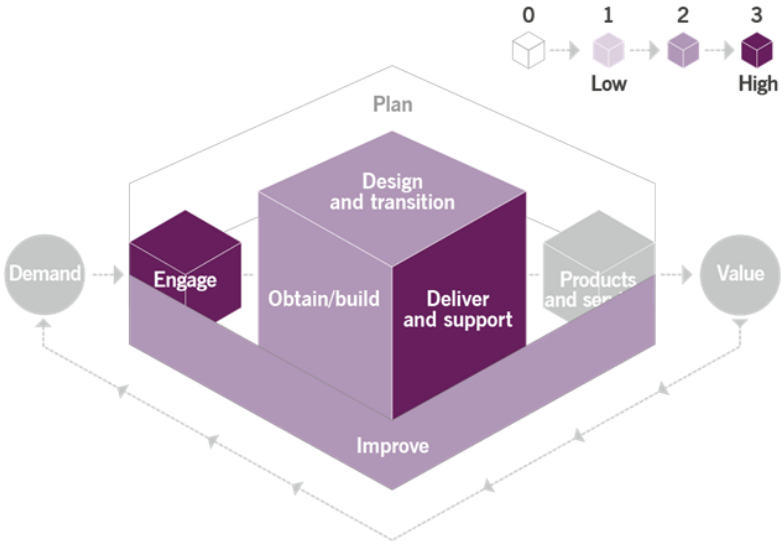

Figure 5-6: The heat map and value chain of the Incident Management practice.

ACTIVITY 5-4

Analyzing the Incident Management Practice

Scenario

Answer the following questions to analyze the Incident Management practice.

1. What is the overall purpose of Incident Management?

2. Why are categorization and prioritization important?

3. How do techniques such as swarming promote better incident management?

4. What role can effective tools play in supporting our practice?

TOPIC E

Service Request Management

A normal part of service management is receiving service requests from consumers. As the service provider, your organization will need to have a way to handle service requests. In this topic, you will define the Service Request Management practice.

Purpose of Service Request Management

The purpose of the Service Request Management practice is to support the agreed quality of a service by handling all pre-defined, user-initiated service requests in an effective and user-friendly manner. The goal of this practice should be to complete the requests in as efficient and streamlined a manner as possible.

Service requests are a normal part of service delivery and not an incident. Other characteristics include:

- Pre-defined and pre-agreed.
- Clear, standard procedure for initiation, approval, fulfillment, and management.
- Steps to fulfill the request should be well-known and proven.
- Set expectation times for fulfillment.
- Provide clear communication of the status of the request to users.

Note: Service requests follow the words, "I want" as in "I want *[standard request]*." An incident follows the words "I can't" as in "I can't *[log in to the server]*." You can use this simple statement to distinguish between service requests and incidents.

Definition of Service Request

A ***service request*** is a request from a user or user's authorized representative that initiates a service action that has been agreed as a normal part of service delivery.

Each service request may include one or more of the following:

- A request for a service delivery action (for example, providing a report or replacing a toner cartridge).
- A request for information (for example, how to create a document or what the hours of the office are).
- A request for provision of a resource or service (for example, providing a phone or laptop to a user, or providing a virtual server for a development team).
- A request for access to a resource or service (for example, providing access to a file or folder).
- Feedback, compliments, and complaints (for example, complaints about a new interface or compliments to a support team).

Guidelines for Handling Service Requests

Note: All of the Guidelines for this lesson are available as checklists from the **Checklist** tile on the CHOICE Course screen.

Handle Service Requests

You can use the following guidelines to deal with service requests:

- Service requests and their fulfillment should be standardized and automated to the greatest degree possible.
- Policies should be established regarding what service requests will be fulfilled with limited or even no additional approvals so that fulfillment can be streamlined.
- Set realistic expectations of users regarding fulfillment times.
- Opportunities for improvement should be identified and implemented to produce faster fulfillment times and take additional advantage of automation.
- Policies and workflows should be included for the documenting and redirecting of any requests that are submitted as service requests, but which should actually be managed as incidents or changes.

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Service Request Management Heat Map and Value Chain

In the following heat map diagram, you can see that the Service Request Management practice has a strong relationship with the Engage and the Deliver and support activities, and a moderate relationship to the Design and transition and the Obtain/build activities of the service value chain. The Improve activity is low and there's no relationship to the Plan activity in the service value chain.

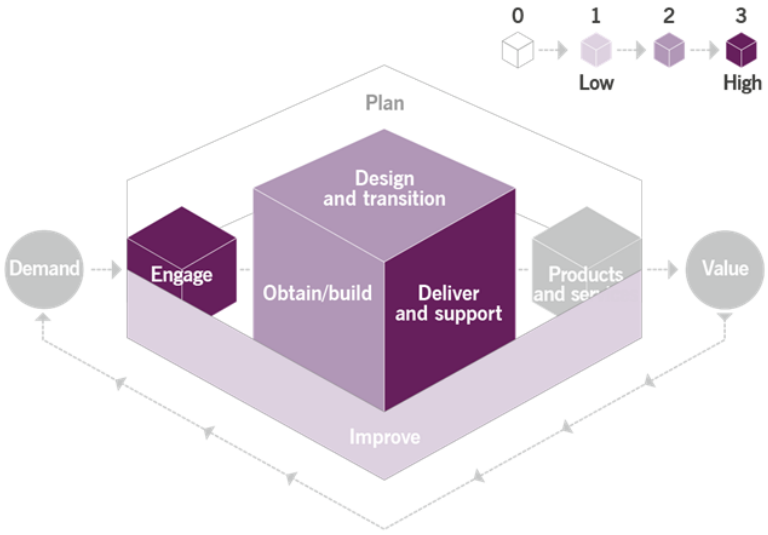

Figure 5-7: The heat map and value chain of the Service Request Management practice.

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ACTIVITY 5-5

Analyzing the Service Request Management Practice

Scenario

Answer the following questions to analyze the Service Request Management practice.

1. Where do service requests come from?

2. How should an organization establish standard services and the fulfillment procedures to deliver them?

3. How would you reassign requests that turn out to be incidents or changes?

TOPIC F

Service Desk

In service management, the service desk is where service providers and users meet—either in person or virtually. In this topic, you will define the Service Desk practice.

Purpose of Service Desk

The purpose of the Service Desk practice is to capture demand for incident resolution and service requests. It is the point of communication for the service provider with all of its users.

The focus of the service desk is to provide support for "people and business" and not simply technical issues. In addition to solving technical problems, people use service desks to get matters arranged, explained, and coordinated. However, service desks will continue to require help from other support teams, which may be technical in nature or not.

Service desks have a major influence on the user's experience and their perception of the service provider. It's extremely important that service desks understand the business context of the solutions that they are supporting.

Service Desk

A ***service desk*** is defined as the point of communication between the service provider and all of its users.

The service desk is the entry point/single point of contact for the IT or service organization.

- Report issues, queries, and requests.
- Have them acknowledged, classified, owned, and actioned.
- Many different models.


In ITIL 4, there are only two types of service desks: local and virtual.

Access Channels

The following table describes the various channels for accessing the service desk.

Channel	*Description*
Phone calls	Includes specialized technology, such as IVR, conference calls, voice recognition, and others.
Service portals and mobile applications	Supported by service and request catalogues and knowledge bases
Chat	Includes chatting live with a person or a chatbot.
Email	Includes logging and updating communication occurrences as well as conducting follow-up surveys and confirmations.
Walk-in service desks	Staffed and supported by service personnel, such as the Apple store.

Channel	Description
Text and social media messaging	Provides a way to contact stakeholders and also notify them of major incidents as well as providing users with a way to request support.
Public and corporate discussion forums	Provides a way to contact the service provider and also obtain peer-to-peer support.

Training and Competencies

Service desk personnel need to diagnose incidents in terms of business priority and take the appropriate action to get them resolved using available skills, knowledge, people, and processes. Service desk personnel must also possess and demonstrate a variety of personal, technical, and business skills, such as:

- Excellent customer service skills
- Empathy
- Effective communication skills
- Emotional intelligence
- Incident analysis skills to diagnose and prioritize incidents to get them resolved
- Understanding of business priority

Supporting Tools

In general, service desks might use a variety of the tools listed here.

- Intelligent telephony systems, incorporating computer-telephony integration, interactive voice response, and automatic call distribution
- Workflow systems for routing and escalation
- Workforce management and resource planning systems
- Knowledge base
- Call recording and quality control
- Remote access tools
- Dashboard and monitoring tools
- Configuration management systems
- Virtual service desks might require more sophisticated access, routing, and escalation tools.

Service Desk Heat Map and Value Chain

In the following heat map diagram, you can see that the Service Desk practice has a strong relationship with the Engage and the Deliver and Support activities, and a moderate relationship to the Design and Transition and the Improve activities of the service value chain. The Obtain/build activity is low and there's no relationship to the Plan activity in the service value chain.

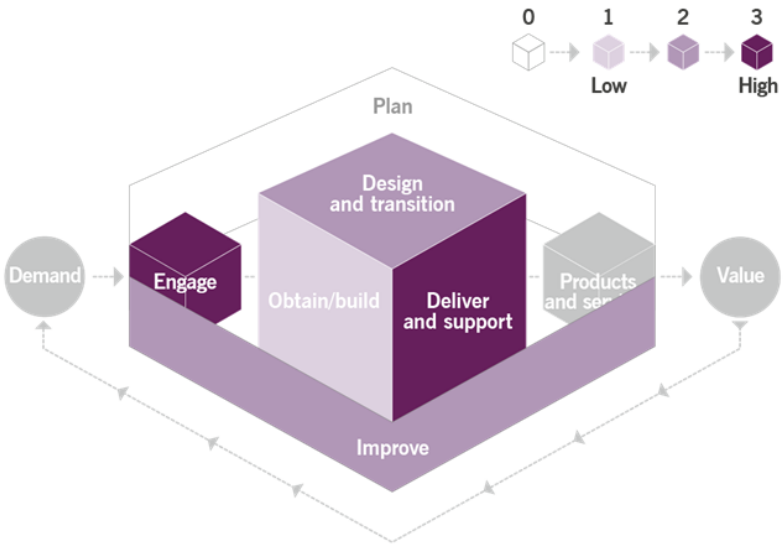

Figure 5-8: The heat map and value chain of the Service Desk practice.

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ACTIVITY 5-6

Analyzing the Service Desk Practice

Scenario

Answer the following questions to analyze the Service Desk practice.

1. What is the purpose of the Service Desk practice?

2. What are some of the key competencies that service desk staff need to have?

3. What types of tools might help service desk staff perform their work more effectively?

TOPIC G

Problem Management

In service management as in life, your challenge is to identify problems and resolve them before they escalate and negatively impact your normal workflow. In this topic, you will define the Problem Management practice.

Purpose of 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. Every service has errors, flaws, or vulnerabilities that may cause incidents. Many errors are identified and resolved before a service goes live and some remain unidentified, or unresolved, and may be a risk to live services.

4 The purpose of the Problem Management practice has changed from ITIL 3 to include all four dimensions, not just technical problems.

Problems 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.

Problems are unknown root causes of incidents. Known errors are diagnosed root causes of incidents, but which have not yet been resolved.

Distinguishing Incidents from Problems

Even though problems are related to incidents, they are different and should be managed differently. To start, incidents impact users or business processes, and must be resolved to keep normal business activity going. The Incident Management practice is designed to deal with incidents.

Resolving incidents often involves applying workarounds, such as rebooting a computer. However, this doesn't help you understand the root cause—what happened that caused the need to reboot the computer? You need to investigate problems and analyze them to identify their causes, develop or improve workarounds, and recommend longer-term resolutions. By reducing or eliminating problems, you reduce the number of future incidents, and by definition, the impact they might have on your services.

Keep in mind that the ultimate goal is to improve service quality and stability by removing the errors where it is cost-justifiable, or create workarounds for errors that can't be removed.

Phases of Problem Management

The three phases of Problem Management will be explored in the following sections.

- Problem identification

- Problem control
- Error control

Figure 5-9: The phases of Problem Management.

Problem Identification

In the Problem Identification phase, you need to identify and log problems. This can include performing trend analysis of incident records and reviewing recurring issues by users, service desk, and technical support staff.

Problems can be identified from a number of different sources, including major incident management, information from suppliers and partners, or information received from our own developers and testers.

Problem Control

Problem control includes analyzing the problems and documenting workarounds and known errors. It is not essential, or viable, to analyze every problem. In fact, you should prioritize problems based on the risk. That way, you can spend your time effectively by analyzing the high-priority problems and not worry about the minor ones.

Most incidents don't have an unknown root cause. They are routine, and you resolve them and that's it. Some incidents have unknown causes, which may be related to a single issue or have many interrelated causes. It is the work of problem control to assess potential root causes and attempt to identify them, along with potential workarounds and permanent fixes. Problem control should consider all contributory causes, including the duration and impact of incidents and analyzing problems from the perspective of all four dimensions of service management.

Workarounds

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.

4 The wording of the workaround definition has changed from ITIL 3, but the intent is the same.

Workarounds can become a permanent way of dealing with some problems, such as when resolving the problem is not viable or a resolution is not cost-effective. If a workaround has been found for a problem, then the problem remains in the known error status so that the documented workaround can be applied whenever a related incident occurs. Some workarounds can be automated and applied automatically when certain incidents occur, minimizing customer impact and speeding up resolution.

Error Control

In the final phase of the Problem Management practice, error control manages known errors. Based on your work in the Problem Control phase, faulty components have been identified. Error control includes the identification of potential permanent solutions. This may result in a change request for implementation of a solution if this can be justified in terms of cost, risks, and benefits.

When considering actions for known errors, you want to assess some key factors.

- Impact on customers.
- Availability and cost of permanent resolutions.
- Effectiveness of workarounds.

In addition, each time a workaround is applied, the workaround's effectiveness should be evaluated and any potential improvements identified.

Practice Interactions

Problem Management interacts with other practices in several ways.

- Problem Management is very closely related to Incident Management.
  - The two practices need to be designed to work together within the value chain.
  - Activities from these two practices may complement each other but they may also conflict.
- There are also interfaces between Problem Management, Risk Management, Change Control, Knowledge Management, and Continual Improvement.
  - Problem Management activities can be organized as a specific case of Risk Management.
  - Implementation of problem resolution is often outside the scope of Problem Management and may instead come under the scope of Change Control.
  - Output from Problem Management includes information concerning workarounds and known errors that should be captured in a Knowledge Management system. In addition, Problem Management may utilize information in a Knowledge Management system to investigate, diagnose, and resolve problems.
  - Problem Management may reveal continual improvement opportunities in all four dimensions of service management. In the continual improvement context, problem solutions may be included in a continual improvement register (CIR). You would then use continual improvement techniques to prioritize and manage them, sometimes as part of a product backlog.

Problem Management Heat Map and Value Chain

In the following heat map diagram, you can see that the Problem Management practice has a strong relationship to the Deliver and support and Improve activities, and a moderate relationship to the Design and transition activity of the service value chain. The Engage and the Obtain/build activities are low and there's no relationship to the Plan activity in the service value chain.

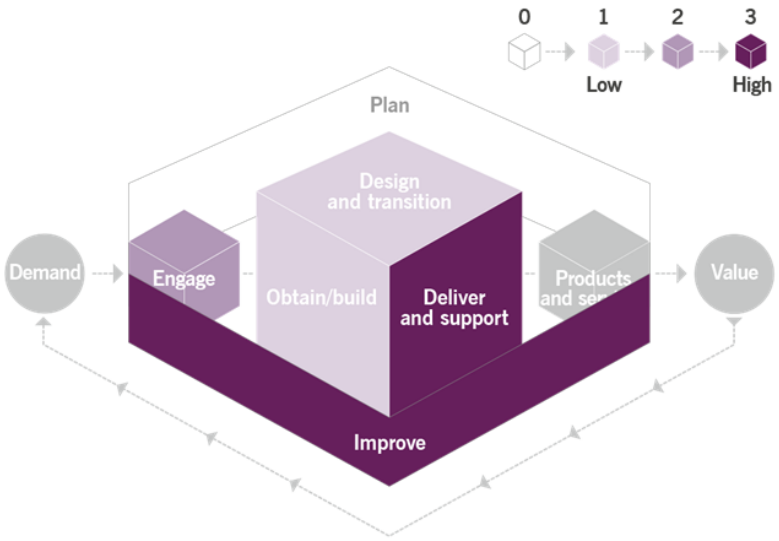

Figure 5-10: The heat map and value chain of the Problem Management practice.

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ACTIVITY 5-7

Analyzing the Problem Management Practice

Scenario

Answer the following questions to analyze the Problem Management practice.

1. What happens in the three phases of Problem Management?

2. What is the difference between an incident and a problem? A problem and a known error? Why are the distinctions important?

Summary

In this lesson, you examined the seven ITIL practices that are essential to service management. By understanding the purpose and activities that are involved in the practices of Continual Improvement, Service Level Management, Change Control, Incident Management, Service Request Management, Service Desk, and Problem Management, you have a beginning of a foundation as a service management professional.

Does your organization have separate practices for problem and incident management? What are the potential risks of treating problems and incidents as part of a traditional troubleshooting model?

How do you think having a specific Continual Improvement practice in your organization would contribute to driving continual improvement through the SVS?

Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

6 Other ITIL Practices

Lesson Time: 1 hour, 30 minutes

Lesson Introduction

To complete your introduction to the ITIL® practices, this lesson covers eight more practices. If you are planning to obtain the ITIL Foundation certification, you will need to know the purpose of the practices contained in this lesson.

Lesson Objectives

In this lesson, you will:

- Identify and define General Management practices.
- Identify and define Service Management practices.
- Identify and define Technical Management practices.

TOPIC A

General Management Practices

Understanding general business practices that involve relationships, information security, and suppliers can give you a broader picture of how these practices relate to service management. In this topic, you will identify and define three General Management practices.

Note: To view the Spotlight presentations available for this course, you can select the **Spotlight** tile on the CHOICE Course screen.

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. It includes the identification, analysis, monitoring, and continual improvement of relationships that you have with stakeholders.

An effective Relationship Management practice works toward understanding stakeholders' needs and drivers so that you can prioritize products and services accordingly. All of this activity is focused on ensuring that the stakeholders' satisfaction with your products and services is high, and a constructive relationship between the organization and stakeholders is established and maintained.

Additionally, this practice helps to ensure new or changed products and services are effectively established and articulated, and their prioritization aligns with the desired business outcomes. You want to make sure that products and services facilitate value creation for consumers and the organization.

Relationship management is also concerned with stakeholders' complaints and, when required, escalations are handled well. When conflicting stakeholder requirements exist, they should be mediated appropriately.

The ultimate goal of the Relationship Management practice is to foster and maintain positive relationships with and between stakeholders in order to facilitate value creation for all stakeholders.

Information Security Management

The purpose of the Information Security Management practice is to protect the information needed by the organization to conduct its business in a reliable and secure way. This includes understanding and managing risks to the confidentiality, integrity, and availability of information. This also includes authentication and non-repudiation. Authentication is used to prove that a person is who they say they are. Non-repudiation is the assurance that someone's actions cannot be denied.

Due to the importance of information security, you undoubtedly have heard of entire courses and certifications that are developed around information security. When it comes to ITIL, it's vital that information security is adopted and driven by the organization's senior management and is based on governance requirements and organizational policies.

Information security must establish policies, processes, behaviors, risk management, and controls, which maintain a balance between:

- **Prevention**: Ensuring that security incidents don't occur.
- **Detection**: Rapidly and reliably detecting incidents that can't be prevented.
- **Correction**: Recovering from incidents after they are detected.

Information Security interacts with every other ITIL practice, and must balance the needs for security controls with the needs for innovation. It's important to realize that Information Security Management is very dependent on the behavior of people!

Supplier Management

The purpose of the Supplier Management practice is to ensure that the organization's suppliers and their performance are managed appropriately to support the provision of seamless, quality products and services. This might include the creation of closer, more collaborative relationships with suppliers to discover and realize new value and also reduce the risk of failure.

Key activities of Supplier Management include:

- Creating a single point of visibility and control to ensure consistency.
- Maintaining a supplier strategy, policy, and contract management information.
- Negotiating and agreeing on contracts and arrangements.
- Managing relationships and contracts with internal and external suppliers.
- Managing supplier performance.

Every organization should have a strategy for how suppliers can be used to maximize the value creation in the Service Management strategy. This is known as the supplier strategy or the sourcing strategy. There are a variety of supplier relationship models that might be used, including:

- **Insourcing**—Developing the products and services in-house, or within the organization.
- **Outsourcing**—Procuring products and services that used to be developed internally from external suppliers.
- **Single-source or partnership**—Procuring products and services from one external supplier. This could also be a single supplier or an external supplier integrator who acts as a coordinator for all of the external suppliers that the organization uses.
- **Multi-sourcing**—Procuring products and services from multiple suppliers.

ACTIVITY 6-1

Discussing the General Management Practices

Scenario

Use the following questions to discuss the other examinable general management practices.

1. Why is Relationship Management separated from Service Level Management? What are some of the key differences?

2. Why is it important that Information Security Management be a general management practice and not just an ITSM practice? Who is on the hook for organization-wide security?

3. How does Supplier Management help organizations streamline costs and improve the quality of supplier performance?

TOPIC B

Service Management Practices

The Service Management category contains the practices designed to deal with needs distinctive to IT services. In this topic, you will identify and define four Service Management practices.

Service Configuration Management

The purpose of the Service Configuration Management practice is to ensure that accurate and reliable information about the configuration of services, and the configuration items (CI) that support them, is available when and where it is needed. This includes information on how CIs are configured and the relationships between them.

A ***configuration item (CI)*** is any component that needs to be managed in order to deliver an IT service. The Service Configuration Management practice collects and manages information about a wide variety of CIs, such as hardware, software, networks, buildings, people, suppliers, and documentation. Services themselves can also be treated as CIs.

In ITIL 3, there was a process known as Service Asset and Configuration Management. In ITIL 4, these are treated as two separate practices: IT Asset Management and Service Configuration Management.

Often, numerous types of CIs (such as the local server, local application, client device, client app, and so on) are mapped to demonstrate the relationships among the components and how they work together to deliver the service. The image shown in the following figure illustrates this simplified service map. The Service Configuration Management practice is responsible for maintaining the information about all of the CIs and providing that information to other practices and relevant stakeholders to support their activities.

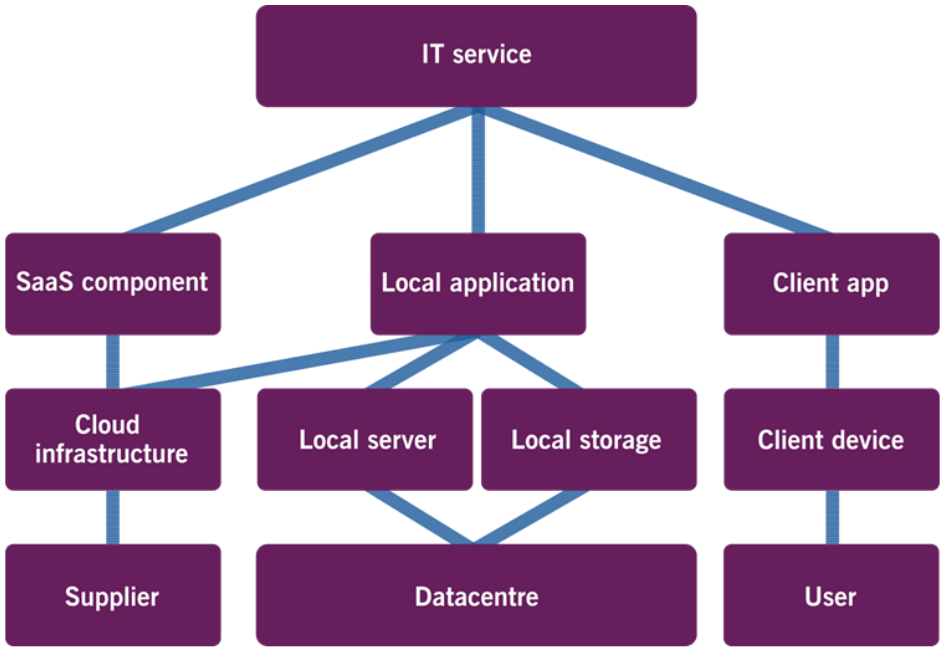

Figure 6-1: Simplified service model for a typical IT service.

IT Asset Management

The purpose of the IT Asset Management practice is to plan and manage the full lifecycle of all IT assets, which helps the organization maximize value, control costs, manage risks, support decision-making about purchase, reuse, and retirement of assets, and meet regulatory and contractual requirements.

Note: IT Asset Management answers the questions: "What do we own, and where is it?"

An ***IT asset*** is any financially valuable component that can contribute to the delivery of an IT product or service. Different types of IT assets, such as hardware, software, cloud-based, and client assets, have different requirements and needs. The IT Asset Management practice is responsible for handing all types of IT assets.

4 The definition of an IT asset is now any financially valuable component that contributes to the delivery of a product or service.

While not exhaustive, the following list of IT Asset Management practice activities might include:

- Define, populate, and maintain the asset register.
- Control the asset lifecycle in collaboration with other practices.
- Provide current and historical data, reports, and support to other practices.
- Audit assets, related media, and conformity to regulations.
- Drive corrective improvements for defects.

Monitoring and Event Management

The purpose of the Monitoring and Event Management practice is to systematically observe services and service components, and record and report selected changes of state identified as events. An ***event*** is any change of state that has significance for the management of an IT service or other configuration item (CI). Events are typically recognized through notifications created by a service, CI, or monitoring tool.

4 In ITIL 3, there was a process known as Event Management. In ITIL 4, the practice name has expanded to the Monitoring and Event Management practice, but the intent is essentially the same.

Events can come from many sources. Event data may come from infrastructure components, services, business processes, information security monitoring tools, or even HVAC or fire suppression systems. The practice begins with establishing a clear approach to identifying and prioritizing events. For each component or service you want to establish the monitoring strategy; how, what, and how often certain monitoring is done; and how event data will be generated, captured, and analyzed. Monitoring tools and capabilities need to be implemented, and people trained in how to interpret event data and trigger appropriate responses. Technical and application management teams will establish key thresholds and policies for appropriate event handling. Once the core practices are established, automation can streamline responses as required.

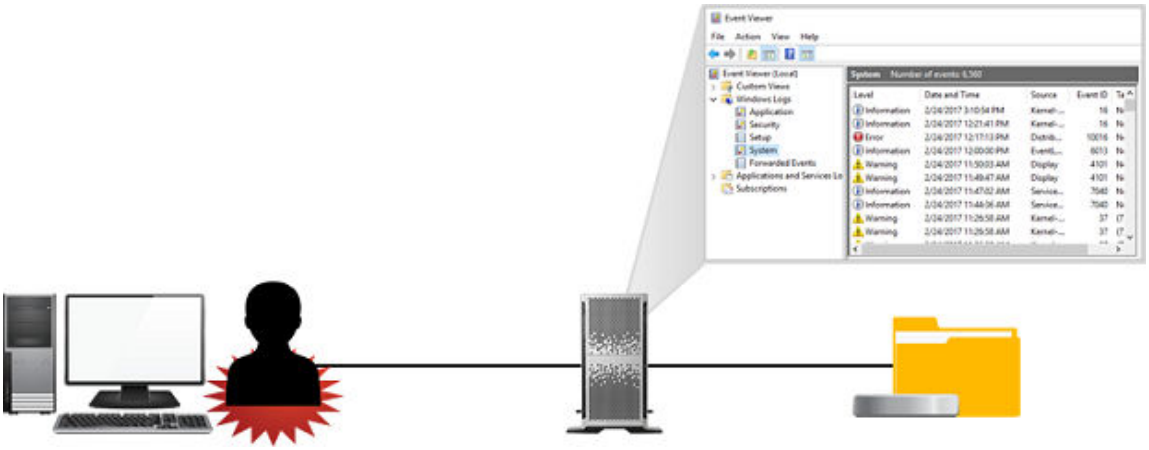

Figure 6-2: An event.

Note: Most events are routine notifications that the system is functioning correctly.

Release Management

The purpose of the Release Management practice is to make new and changed services and features available for use. A ***release*** is a version of a service or other configuration item, or a collection of configuration items, that is made available for use. Release components could include any of the following:

- Infrastructure and application components
- Documentation
- Training (for users or IT staff)
- Updated processes or tools
- Any other needed components

Release Management is responsible for establishing agreed release plans and release schedules with the relevant stakeholders, including users, customers, operations, and other stakeholders. A large part of their job is to establish the methods by which the capabilities will be released, and to ensure that the appropriate knowledge transfer, training, testing, and other preparatory work is completed. This might include working with suppliers and partners to enable certain capabilities, and ensuring readiness.

In ITIL 3, there was a process known as Release and Deployment Management. In ITIL 4, this is treated as two separate practices: Release Management and Deployment Management.

Release Management in Different Environments

Release Management in traditional waterfall environments was done prior to the deployment of hardware, software, and other components. The following figure illustrates Release Management in a traditional/waterfall environment.

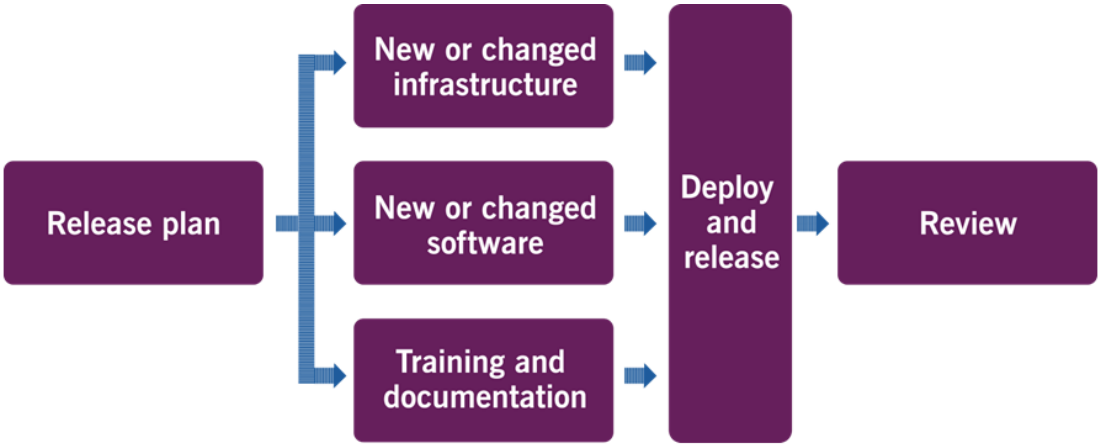

Figure 6–3: Release Management in traditional/waterfall environments.

In many Agile/DevOps approaches, the opposite is true. Deployment is automated and simplified, but features may not be enabled right away—hidden behind feature flags or in a separate production environment. This enables confirmation of a successful technical deployment prior to enabling the capability for the users, which may help minimize risk, reduce impact and downtime, and increase agility. The following figure illustrates Release Management in an Agile/DevOps environment.

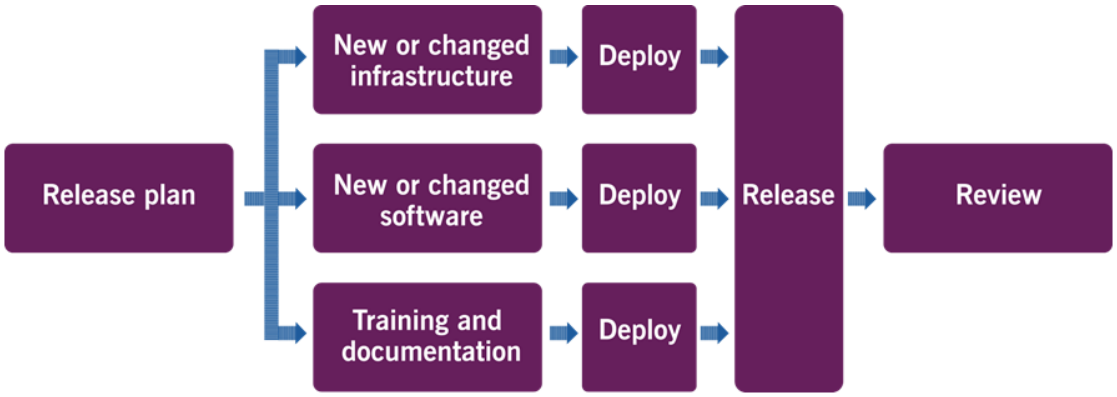

Figure 6–4: Release Management in an Agile/DevOps environment.

ACTIVITY 6-2

Discussing the Service Management Practices

Scenario

Use the following questions to discuss the other examinable service management practices.

1. How does Service Configuration Management support the broader needs for organizational control? How does it support practices like Incident Management or Problem Management?

2. How does IT Asset Management differ from Service Configuration Management? What are some of the implications of the objective to maximize the value of the IT asset, and not just to track it?

3. How might Monitoring and Event Management trigger other practices?

4. What are some of the responsibilities of Release Management?

TOPIC C

Technical Management Practices

This category focuses on practices designed to manage specific technical practices for creating software, managing infrastructure, and deployment. In this topic, you will identify and define one of the Technical Management practices.

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.

4 As previously mentioned, Deployment Management has been separated from Release Management and is now grouped in the Technical Management practice category.

Deployment Management collaborates closely with the Release Management and the Change Control practices. Even though the term deployment is often used specifically in the context of implementing software, ITIL uses the term deployment to encompass hardware provisioning and software deployment.

Some of the available deployment approaches that exist are listed here, and organizations might use a combination of approaches.

- **Phased deployment**—new or changed components are deployed partially to the production environment over a period of time.
- **Continuous delivery**—new or changed components are deployed when they are ready, which provides a continuous stream of feedback.
- **Big bang deployment**—new or changed components are deployed to all at the same time.
- **Pull deployment**—new or changed software is made available in a controlled repository for users to download when they need it.

Secured Locations for Deployment

In order to maintain control of the configuration items to be deployed into an environment, ITIL establishes secured locations. The location for copies of all software code, gold disks, and licenses is called the Definitive Media Library. A location for definitive copies of spare hardware is called the Definitive Hardware Store.

Deployment has traditionally been a high-risk activity with extensive planning and infrequent deployments. This approach is maturing into a much more frequent and lower risk practice in Agile/DevOps environments, often highly automated and even self-service.

How Deployment is Evolving

Traditionally, deployment has been a high-risk event and, indeed, change errors are a major cause of incidents. New practices such as Agile and DevOps attempt to make deployment practices dramatically safer and more routine so deployments can occur frequently and with far less drama. They succeed at this through a number of additional technical practices including automation of the deployment pipeline, an emphasis on high quality, automated testing, small batch sizes, and rigorous

version control of their applications and environments. The overall objective is to streamline these practices, heavily leverage automation, and make deployment a routine technical activity as opposed to making it a "fear factor" event.

ACTIVITY 6-3

Discussing the Technical Management Practices

Scenario

Use the following questions to discuss the other examinable technical management practices.

1. How does Deployment Management differ from Release Management? Change Control? Why is each one needed to effectively introduce new services and changes?

2. How does the work of Release and Deployment change when an organization is working in an Agile/DevOps environment compared to a traditional one? What opportunities does this create?

Summary

In this lesson, you examined eight more ITIL practices that are essential to successful service management. With the understanding of these practices and their purposes, you continue to build on your foundational knowledge of the ITIL approach to service management.

How does your organization manage deployment, release, and change control?

How does your organization implement service configuration and IT asset management? How do you use the information you generate?

Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

Course Follow-Up

Congratulations! You have completed the *ITIL® 4 Foundation* course. You have successfully defined the key concepts of ITIL and identified the components, the seven guiding principles, and the service management practices of ITIL. Using this best practice framework, it can help you to plan, implement, support, and improve services that strive to create value for your customers.

In this course, you described the fundamental concepts of ITIL, including basic terminology and the certification development path. This foundation is important whether you need a basic understanding of ITIL, if you need a general awareness of what others are doing with ITIL within your organization, or should you wish to move on to other ITIL certifications in your ITSM career.

What's Next?

If you plan to pursue the ITIL 4 Foundation certification, your first step after completing the instructional material in this course should be to download the official ITIL 4 Foundation sample papers from the **Files** tile on your CHOICE course screen. These are an important part of this accredited training course, as well as a key element of your certification preparation. Your instructor may guide you through completing the mock exams, or you may complete them on your own. As supplemental preparation, you also may want to complete the Mastery Builder activities at the end of this courseware manual. These provide additional review questions in a format that is similar to the items you may see on the sample papers and the ITIL 4 certification exam. And of course, you will want to plan for when and how you will take the ITIL 4 certification exam itself.

A natural next step after ITIL Foundation is to pursue either the ITIL Managing Professional or ITIL Strategic Leader designation by continuing to the ITIL Specialist, ITIL Strategist, or ITIL Leader courses, which will be available from Logical Operations.

Whether or not you continue further into the ITIL 4 certification scheme, you may be interested in furthering your management skills through a Logical Operations course pertaining to project management, business skills, or communication skills.

You are also encouraged to explore the concepts related to ITIL 4 further by actively participating in any of the social media forums set up by your instructor or training administrator through the **Social Media** tile on the CHOICE Course screen.

A Mapping Course Content to ITIL® 4 Foundation Syllabus

Obtaining ITIL 4 Foundation certification requires candidates to pass the ITIL 4 Foundation exam.

To assist you in your preparation for the exam, Logical Operations has provided a reference document that indicates where the exam objectives are covered in the Logical Operations *ITIL® 4 Foundation* courseware.

The exam-mapping document is available from the **Course** page on CHOICE. Log on to your CHOICE account, select the tile for this course, select the **Files** tile, and download and unzip the course files. The mapping reference will be in a subfolder named **Mappings**.

Best of luck in your exam preparation!

Mastery Builders

Mastery Builders are provided for certain lessons as additional learning resources for this course. Mastery Builders are developed for selected lessons within a course in cases when they seem most instructionally useful as well as technically feasible. In general, Mastery Builders are supplemental, optional unguided practice and may or may not be performed as part of the classroom activities. Your instructor will consider setup requirements, classroom timing, and instructional needs to determine which Mastery Builders are appropriate for you to perform, and at what point during the class. If you do not perform the Mastery Builders in class, your instructor can tell you if you can perform them independently as self-study, and if there are any special setup requirements.

Mastery Builder 6-1
Reviewing ITIL Foundation I

Activity Time: 30 minutes

Scenario

This Mastery Builder activity provides exam-like questions to evaluate your understanding of the ITIL materials. These Mastery Builders are additional preparation and are not intended to replace the official AXELOS sample papers. You can download the official sample papers along with the answer key and rationale from the **Files** tile on the course page on the CHOICE platform.

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1. How does prioritization of incidents assist incident management?
   - ○ It helps direct the incident to the correct support area.
   - ○ It determines the resource assigned to the incident.
   - ○ It ensures that incidents are resolved as quickly as possible.
   - ○ It determines how the service provider is perceived.

2. Which value chain activity provides information about service improvements to all value chain activities?
   - ○ Improve
   - ○ Engage
   - ○ Obtain/build
   - ○ Deliver and support

3. Which value chain activity uses service components to fulfill service requests?
   - ○ Improve
   - ○ Engage
   - ○ Obtain/build
   - ○ Deliver and support

4. What is the definition of utility?
   - ○ A tangible or intangible deliverable that is produced by carrying out an activity.
   - ○ The assurance that a product or service will meet agreed requirements.
   - ○ A possible event that could cause harm or loss, or make it more difficult to achieve objectives.
   - ○ The functionality offered by a product or service to meet a particular need.

5. What is defined as "perceived benefits, usefulness, and importance of something"?
   - Outputs
   - Outcomes
   - Value
   - Warranty

6. Identify the missing word(s) in the following sentence: An organization is a person or a group of people that has its own functions with _____ to achieve its objectives.
   - responsibilities, authorities, and relationships
   - products and services
   - utility
   - outputs and outcomes

7. Which value chain activity includes communications with customers and users?
   - Engage
   - Design and transition
   - Obtain/build
   - Deliver and support

8. Which is a purpose of the "problem management" practice?
   - To reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents.
   - To maximize the number of successful IT changes by ensuring risks are properly assessed.
   - To capture demand for incident resolution and service requests.
   - To set clear business-based targets for service performance.

9. How does "service level management" contribute to "obtain/build" value chain activity?
   - It analyzes data to identify opportunities to provide new service request options.
   - It ensures users continue to be productive when they need assistance from the service provider.
   - It acquires pre-approved service components to help fulfill service requests.
   - It collects user-specific requirements, sets expectations, and provides status updates.

10. A service provider describes a package that includes a mobile phone, with network access and 24/7 phone support. What is this an example of?
    - Value
    - An outcome
    - Warranty of a service
    - A service offering

11. A service provider suggests that their service guarantees 99.9% availability. What is this an example of?

- Value
- An outcome
- Warranty of a service
- A service offering

12. What should be included in every service level agreement?

- Details of the process-based metrics used.
- Technical description of the service components and how they are operated.
- Expectations of both parties.
- Legal language.

13. What is a normal change?

- A change that doesn't need risk assessment because the procedure has been pre-authorized.
- A change that needs to be assessed, authorized, and scheduled by a change authority.
- A change that doesn't need risk assessment because it is required to resolve an incident.
- A change that is assessed, authorized, and scheduled as part of "continual improvement."

14. Which practice provides service actions, general information, and fulfillment of standard services?

- Incident management
- Change control
- Service desk
- Service request management

15. Which guiding principle recommends investigation of existing capabilities before starting a practice over?

- Focus on value
- Start where you are
- Progress iteratively with feedback
- Collaborate and promote visibility

16. What is the purpose of "continual improvement"?

- To ensure that the organization's suppliers and their performance are managed appropriately to support the provision of seamless, quality products and services.
- To align the organization's practices and services with changing business needs through the ongoing identification and improvement of services.
- To ensure that the organization's suppliers and their performance are managed appropriately at strategic and tactical levels through coordinated marketing, selling, and delivery activities.
- To ensure that accurate and reliable information about the configuration of supplier's services is available when and where it is needed.

17. Which is a key focus of the "organizations and people" dimension?
- Security and compliance
- Activity workflows
- Knowledge sharing with partners
- Roles and responsibilities

18. Which statement about an emergency change is CORRECT?
- Emergency changes should be pre-approved and defined with change models.
- Emergency changes will be reviewed at the next scheduled CAB meeting.
- Emergency changes require expedited handling and may reduce testing.
- Emergency changes can be implemented without authorization from a change authority.

19. Which describes outputs?
- Tangible or intangible deliverables
- Functionality offered by a product or service
- Results for a stakeholder
- Configuration of an organization's resources

20. Which is NOT a recommendation of the "continual improvement" practice?
- There should be a small team dedicated to leading continual improvement efforts.
- All improvements should be managed as multi-phase projects.
- Continual improvement should be integrated with other practices.
- External suppliers should be included in improvement initiatives.

21. Which describes products?
- Tangible or intangible deliverables.
- Functionality offered by a product or service.
- Results for a stakeholder.
- Configuration of an organization's resources.

22. Which service management dimension is focused on third parties and how they are managed?
- Organizations and people
- Information and technology
- Partners and suppliers
- Value streams and processes

23. Which is NOT a recommendation of the "service desk" practice?
- Service desks can use technologies such as SMS and chat functions.
- Service desks can be highly technical functions depending on the organization's need.
- Service desks should have a practical understanding of the wider business.
- Service desks should always be a physical team in a single fixed location.

24. Which value chain activity includes reviewing service performance with customers?
- ○ Plan
- ○ Improve
- ○ Engage
- ○ Obtain/build

25. Which value chain activity includes establishing enterprise architecture?
- ○ Plan
- ○ Improve
- ○ Engage
- ○ Obtain/build

26. Which value chain activity includes the introduction of new or changed services?
- ○ Plan
- ○ Design and Transition
- ○ Engage
- ○ Obtain/build

27. Which practice has the purpose of maximizing the number of successful changes?
- ○ Change control
- ○ Service request management
- ○ Release management
- ○ Deployment management

28. How does "service request management" contribute to "obtain and build" activity?
- ○ By collecting user-specific request requirements
- ○ By acquiring pre-approved service components
- ○ By providing service request trend and quality information
- ○ By initiating standard changes to fulfill service requests

29. How does "service request management" contribute to "engage" activity?
- ○ By collecting user-specific request requirements
- ○ By acquiring pre-approved service components
- ○ By providing service request trend and quality information
- ○ By initiating standard changes to fulfill service requests

30. "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." What is this the ITIL definition of?

- Products
- Service
- Service Management
- Outputs

31. Which describes the principle "start where you are"?

- Conducting a review of existing service management practices and deciding what to keep and what to discard.
- Reviewing how an improvement initiative can be organized into smaller, manageable sections that can be completed in a timely manner.
- Reviewing service management practices and removing any unnecessary complexity.
- Using the four dimensions of service management to ensure coordination of all aspects of an improvement initiative.

32. Identify the missing word(s) in the following sentence: The purpose of the Release Management practice is to make new and changed _____ available for use.

- objectives
- services and features
- deployments
- outcomes

33. Which describes the "focus on value" principle?

- Conducting a review of existing service management practices and deciding what to keep and what to discard.
- Reviewing how an improvement initiative can be organized into smaller, manageable sections that can be completed in a timely manner.
- Reviewing service management practices and removing any unnecessary complexity.
- Investigating why the customer uses the services and how the services help them meet their goals.

34. Which is a key focus of the "value streams and processes" dimension?

- Security and compliance
- Activity workflows
- Knowledge sharing with partners
- Roles and responsibilities

35. Which is a purpose of the "service desk" practice?

- To reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents.
- To maximize the number of successful IT changes by ensuring risks are properly assessed.
- To capture demand for incident resolution and service requests.
- To set clear business-based targets for service performance.

36. Which is a purpose of the "relationship management" practice?

- ○ To make new and changed services and features available for use.
- ○ To plan and manage the full lifecycle of all IT assets.
- ○ To establish and nurture the links between the organization and its stakeholders at strategic and tactical levels.
- ○ Properly assess, monitor, and manage the delivery of a service.

37. What is the definition of an IT asset?

- ○ Any change of state that has significance for the management of a configuration item or IT service.
- ○ Any component that needs to be managed in order to deliver an IT service.
- ○ The ability of an IT service or other configuration item to perform its agreed function when required.
- ○ Any financially valuable component that can contribute to delivery of an IT product or service.

38. Which value chain activity includes providing components?

- ○ Plan
- ○ Improve
- ○ Engage
- ○ Obtain/build

39. Which value chain activity provides stakeholder feedback for improvements?

- ○ Engage
- ○ Design and transition
- ○ Obtain/build
- ○ Deliver and support

40. Which value chain activity produces requirements and specifications?

- ○ Engage
- ○ Design and transition
- ○ Obtain/build
- ○ Deliver and support

Mastery Builder 6-2

Reviewing ITIL Foundation II

Activity Time: 30 minutes

Scenario

This Mastery Builder activity provides exam-like questions to evaluate your understanding of the ITIL materials. These Mastery Builders are additional preparation and are not intended to replace the official AXELOS sample papers. You can download the official sample papers along with the answer key and rationale from the **Files** tile on the CHOICE platform.

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1. **Which is a purpose of the "information security" practice?**
   - ○ Ensure that the organization's suppliers and their performance are managed appropriately.
   - ○ Protect the information needed by the organization to conduct its business.
   - ○ Establish and nurture the links between the organization and its stakeholders.
   - ○ Systematically observe services and service components.

2. Which are the key activities of governance?
   1. Plan
   2. Evaluate
   3. Direct
   4. Monitor

   Select the correct answer.
   - ○ 1, 2, 3
   - ○ 1, 2, 4
   - ○ 1, 3, 4
   - ○ 2, 3, 4

3. **Which is NOT one of the steps of the Continual Improvement model?**
   - ○ Take Action
   - ○ How Do We Keep the Momentum Going?
   - ○ What Improvement Method Will We Use?
   - ○ Where Are We Now?

4. **What is the utility of a service?**
   - ○ Service functionality.
   - ○ Reliability of the components.
   - ○ End-to-end service performance.
   - ○ Assurance that the service will meet security requirements.

5. What is the definition of an output?

○ Joint activities performed by a service provider and a service consumer to ensure continual value co-creation based on agreed and available service offerings.

○ A result for a stakeholder enabled by one or more outputs.

○ A tangible or intangible deliverable of an activity.

○ Activities performed by an organization to consume services.

6. Which of the following could be parts of a service offering?

1. Goods
2. Policies
3. Access to resources
4. Service actions

Select the correct answer.

○ 1, 2, 3

○ 1, 2, 4

○ 1, 3, 4

○ 2, 3, 4

7. Which is the best definition of a customer?

○ A person who defines the requirements for a service and takes responsibility for the outcomes of service consumption.

○ A person who uses services.

○ A person who authorizes budget for service consumption. Can also be used to describe an organization or individual that provides financial or other support for an initiative.

○ A person who is willing to provide a service.

8. The ultimate value of a service is determined by?

○ The service provider

○ The customer

○ The supplier

○ The service relationship manager

9. Which of these are dimensions of service management?

1. Organizations and People
2. Hardware and Software
3. Information and Technology
4. Value Streams and Processes

Select the correct answer.

○ 1, 2, 3

○ 1, 2, 4

○ 1, 3, 4

○ 2, 3, 4

10. Which Guiding Principle begins with assessing who the customer and stakeholders are?
    - Optimize and Automate
    - Progress Iteratively with Feedback
    - Keep It Simple and Practical
    - Focus on Value

11. Which of the following is a tool for Collaborating and Promoting Visibility?
    - Kanban Board
    - SWOT Analysis
    - Balanced Scorecard
    - Continual Improvement Model

12. Which of the Guiding Principles is highlighted in the Theory of Constraints?
    - Focus on Value
    - Start Where You Are
    - Think and Work Holistically
    - Optimize and Automate

13. Which is not one of the Optimization Steps in Optimize and Automate?
    - Desired Future State
    - Stakeholder Engagement
    - Customer Preparation
    - Monitoring Feedback

14. Which of the following is true of a value chain?
    - Supports a single ITIL practice.
    - Converts inputs into outputs.
    - Does not consider needed skills and competencies.
    - Defines a single sequence of activities and are not combined in different ways.

15. In which step of the Continual Improvement model do we define a high-level organizational objective of the improvement?
    - Where Are We Now?
    - How Do We Get There?
    - What is the Vision?
    - How Do We Keep the Momentum Going?

16. Which of the steps of the Continual Improvement model has the strongest relationship to the guiding principle Start Where You Are?
    - What is the Vision?
    - Where Are We Now?
    - How Do We Get There?
    - Take Action

17. Which of the following are subject to continual improvement?

1. Products and services
2. Practices
3. Service components
4. The entire Service Value System

Select the correct answer.

- ○ 1, 2, 3 only
- ○ 2, 3, 4 only
- ○ 1, 2, 4 only
- ○ 1, 2, 3, and 4

18. Fill in the missing word(s): The Continual Improvement Register (CIR) is a structured database or document used to track and manage _____.

- ○ Changes
- ○ Incidents
- ○ Improvement Opportunities
- ○ Service Requests

19. Fill in the missing word(s): The Service Level Management practice's purpose is to set clear _____ targets for service performance, so that the delivery of a service can be properly assessed, monitored, and managed.

- ○ service-based
- ○ system-based
- ○ technology-based
- ○ business-based

20. Which of the following reflects ITIL guidance about SLA Requirements?

- ○ Sets stretch targets to motivate service providers
- ○ Related to key customer outcomes and customer satisfaction
- ○ Written in technical detail
- ○ Specifies system performance reporting

21. Which of the following is true for a Change Authority?

- ○ Different Change Authorities may be identified for different types of changes.
- ○ A single Change Authority should be identified for all changes.
- ○ Changes in high-velocity organizations should be reviewed by a Change Advisory Board.
- ○ Should allow changes only when there are no risks.

22. "The addition, modification, or removal of anything that could have a direct or indirect effect on services" is the ITIL definition of a?

- ○ Release
- ○ Deployment
- ○ Package
- ○ Change

23. Which of the following are types of change described in the ITIL guidance?

1. Standard
2. Urgent
3. Emergency
4. Normal

Select the correct answer.

- ○ 1, 2, 3 only
- ○ 1, 2, 4 only
- ○ 1, 3, 4 only
- ○ 2, 3, 4 only

24. Which of the following practices would be MOST LIKELY to use information from the Change Schedule?

- ○ Monitoring and Event Management
- ○ Relationship Management
- ○ Incident Management
- ○ IT Asset Management

25. Which features would NOT be part of a suitable Incident Management tool?

- ○ Automated Incident Matching
- ○ Detailed procedures for resolving complex incidents
- ○ Timestamping and tracking
- ○ Links to problem, known error, and knowledge information

26. Which is NOT a benefit of using swarming as an incident management technique?

- ○ Faster resolution.
- ○ Quicker identification of the right teams to work an incident.
- ○ Maintaining focus on optimizing resources used to respond to an incident.
- ○ Reduced need for service desk support.

27. Which of the following "initiates a service action that has been agreed as a normal part of service delivery"?

- ○ Incident
- ○ Problem
- ○ Service Request
- ○ Change

28. Which of the following has the purpose to "capture demand for incident resolution and service requests"?

- ○ Technical Management
- ○ Service Desk
- ○ Service Request Management
- ○ Relationship Management

29. Which of the following are potential access channels for a service desk practice?

1. Walk-in
2. Email
3. Chatbot
4. Text messaging

Select the correct answer.

- ○ 1, 2, 3
- ○ 1, 2, 4
- ○ 2, 3, 4
- ○ 1, 2, 3, 4

30. Which are some of the most critical skills a service desk analyst should possess?

1. Empathy and emotional intelligence
2. Effective communications skills
3. Detailed knowledge of infrastructure components
4. Understanding of business priority

Select the correct answer.

- ○ 1, 2, 3
- ○ 1, 2, 4
- ○ 2, 3, 4
- ○ 1, 2, 3, and 4

31. "Any financially valuable component that can contribute to delivery of an IT product or service" is the ITIL definition of?

- ○ IT Asset
- ○ Configuration Item
- ○ Component
- ○ Service

32. Which of the following must information security management establish controls to do?

1. Prevention
2. Detection
3. Correction
4. Recovery

Select the correct answer.

- ○ 1, 2, 3
- ○ 1, 2, 4
- ○ 2, 3, 4
- ○ 1, 2, 3, 4

33. Which of the following is the purpose of supplier management?

- ○ Reduce the likelihood and impact of incidents.
- ○ Maximize the number of successful changes.
- ○ Set clear business-based targets for service performance so that the delivery of a service can be properly assessed, monitored, and managed.
- ○ Ensure that the organization's suppliers and their performance are managed appropriately to support the provision of seamless, quality products and services.

34. "Any component that needs to be managed in order to deliver an IT service" is the ITIL definition of?

- ○ IT Asset
- ○ Service
- ○ Output
- ○ Configuration Item

35. ITIL Practices are grouped in which main categories?

1. General Management
2. Service Management
3. Component Management
4. Technical Management

Select the correct answer.

- ○ 1, 2, 3
- ○ 1, 2, 4
- ○ 2, 3, 4
- ○ 1, 2, 3, and 4

36. A service provider suggests that their service guarantees recovery in 24 hours in the event of a disaster. What is this an example of?

- ○ Value
- ○ An outcome
- ○ Warranty of a service
- ○ A service offering

37. How does categorization of incidents assist incident management?

- ○ It helps direct the incident to the correct support area.
- ○ It determines the resource assigned to the incident.
- ○ It ensures that incidents are resolved as quickly as possible.
- ○ It determines how the service provider is perceived.

38. Which is a key focus of the "suppliers and partners" dimension?

- ○ Security and compliance
- ○ Activity workflows
- ○ Knowledge sharing
- ○ Roles and responsibilities

39. Which is NOT a benefit of adopting ITIL practices?

- ○ Balance agility and stability.
- ○ Create new revenue streams and sources of competitive advantage.
- ○ Support new digital business models.
- ○ Demonstrate compliance with a standard.

40. "A set of specialized organizational capabilities for enabling value for customers in the form of services" is the ITIL definition of?

- ○ Products
- ○ Services
- ○ Service Management
- ○ Outcomes

Solutions

ACTIVITY 1-1: Discussing ITIL Basics

1. **What are the benefits of adopting a best practice framework?**

   A: Best practice frameworks describe well-structured practices that have been proven to work over many organizations over a long period of time.

2. **Will a best practice framework be the answer to all of your organization's needs? Why or why not?**

   A: Of course not! All aspects of service management need to be adapted to meet the needs of any particular organization. Your challenge is to determine the scope of the framework that applies to your organization.

3. **Identify the parts of the ITIL framework and describe the high-level objectives for each.**

   A: The two main parts of the framework are the Service Value System and the Four Dimensions. The SVS provides a high level architecture of the necessary components for converting Demand to Value, and the Four Dimensions describe the scope of the key areas of consideration in how an organization executes its activities to produce value.

4. **What are your goals for ITIL certification?**

   A: Answers will vary depending on what students need from ITIL. Some might only need a basic understanding of the foundations, while others might have plans to go all the way to becoming an ITIL Master.

ACTIVITY 1-2: Discussing the Key Concepts of ITIL

1. **Think about the organizations that you are a part of at work. How does your organization act as a service provider or a service consumer? What are some of the products and services you provide, and to whom?**

   A: Answers will differ; in a private class, these may be much more consistent than in a public class. It is useful for you to consider the different organizations that you are part of—departments, division, enterprise. Then, also consider how changing the scope of view changes who the customer is, what the services are, and where value is delivered.

2. **Who are the downstream consumers of your services? How are relationships managed between organizations? Try to model how one of your service consumers uses your service to produce their own services for their consumers.**

   A: Again, it is useful for you to think about the organization holistically; think about what your department, your IT organization, or your enterprise deliver. Then, consider how the services you provide get converted into services that your customers provide downstream to their customers.

3. **What are the outputs of one of your services? What outcomes do they enable for your service consumer?**

   A: To answer the question, pick one service. Connect the service to your desired business outcome.

4. **What costs and risks do you take on, and what costs and risks do you impose?**

   A: Answers will vary depending on the service. For example, as the service provider, the cost of providing a cable repair service is the technology, the labor cost, and maybe the cost of keeping service vehicles ready. The main cost that you impose on your consumers would be paying for your services.

5. **How does the distribution of costs and risks help you understand your contribution to the co-creation of value?**

   A: The key is to remember that value is created when the outcomes you receive outweigh the costs and risks that you have taken on.

ACTIVITY 2-1: Discussing the Four Dimensions of Service Management

1. **Think about a situation you have been in where your team was hyperfocused on a single dimension, such as implementing a tool, or creating a process, or establishing a contractor relationship. What are the implications of not considering the impact on the other dimensions?**

   A: There are many examples. One might be that many organizations begin service management initiatives by choosing a tool. This runs the risk of not understanding 1) your own needs and desires, 2) how your suppliers and partners need to be integrated into the workflows, 3) how your processes and value streams need to be architected. As a result, many tooling efforts are far less effective than they might be.

2. **How does organizational culture affect our practices? How does that help or hinder your ability to co-create value with your customers? What are some potential gaps that might form in this dimension, and what would you need to do to close that gap?**

   A: Cultures have a lot to do with the success of organizations. They may affect knowledge sharing, other collaboration, and focus on customer value. Departments often implement changes to their practices without a clear understanding of impact on other people and organizations. Effective service management requires that you work collaboratively across organizations to ensure you have collaboration and knowledge sharing, and that you are working to improve the overall service, not just a component.

3. **IT organizations tend to overfocus on tools to solve problems, yet the old adage "a fool with a tool is still a fool" applies. What are some potential gaps that might form in this dimension, and what would you need to do to close that gap?**

   A: As alluded to in a previous example, organizations that focus too much on tooling without alignment across the dimensions will end up getting far less value from the tool, and creating conflicts in the other dimensions.

4. **Many organizations implement practices without fully considering the engagement implications with their suppliers and partners. How does your organization engage partners to ensure alignment? What are some potential gaps that might form in this dimension, and what would you need to do to close that gap?**

   A: Many service management initiatives focus on internal staff needs, and fail to recognize the needs and obligations of third party suppliers and partners. All of your practices need to consider and resolve how you will align your suppliers and partners.

5. **Many organizations implementing ITIL in the past focused on process adoption without full consideration of the other dimensions. What are some potential gaps that might form in this dimension, and what would you need to do to close that gap?**

   A: One challenge with how many organizations implemented ITIL practices in the past was to focus exclusively on process architecture, without fully taking into account the other three dimensions. While establishing coherent value streams and processes is a critical dimension, it is only one of the dimensions, and the others need to be given equivalent weight.

6. **Provide some examples of how PESTLE factors have impacted your organization.**

   A: Answers will vary greatly. In short, all practices are subject to change based on other factors that affect their value.

ACTIVITY 2-2: Discussing the Service Value System

1. **When considering the two major components of the SVS, is one of them more important or critical to service management?**

   A: Both components of the SVS are equally important. The SVC provides the operating model for service management activities that is structured to ensure that the co-creation of value is always the focus. The four dimensions of service management provide a holistic approach to service management by ensuring that service provision is viewed from the perspective of each of the dimensions.

2. **In the SVS, what is the difference between a practice and a principle?**

   A: A practice is a set of organizational resources designed for performing work or accomplishing an objective, while a principle provides guidance that should be applied to all circumstances.

3. **Which guiding principle has the major point of service management incorporated into its name?**

   A: Focus on Value

4. **What are the six activities in the service value chain (SVC)?**

   A: Plan, Engage, Improve, Obtain/Build, Design and Transition, and Deliver and Support.

5. **Why is governance a fundamental part of the SVS?**

   A: All aspects of the SVS are subject to the overall governance of the organization.

6. **What are the three ways that continual improvement is addressed in ITIL and the SVS?**

   A: The Continual Improvement model, the Improve activity in the service value chain, and the Continual Improvement practice.

ACTIVITY 3-1: Discussing the Focus on Value Principle

1. **How does Focus on Value help you "keep your eyes on the prize" of delivering results for your stakeholders?**

   A: There is a temptation in IT to focus on the underpinning technology, or technical factors, instead of beginning with the customer. The principle helps keep the focus on the outcome, not the output.

2. **Can you think of examples where you or your team got so caught up in execution that you lost sight of the value proposition?**

   A: Answers will vary depending on students' experiences. One example might be getting so excited about the development of a new tool for the internal team, and it not creating any value for the customer because they don't want it.

3. **How can you help your team stay focused on what helps co-create value?**

   A: Agile teams use practices, such as Personas, to try to clearly depict who their customer stakeholders are, what their preferences and dislikes are, and how the solution creates value for them. This serves as a constant reminder of why and for whom the solution co-creates value.

ACTIVITY 3-2: Discussing the Start Where You Are Principle

1. **What's the inherent benefit of starting where you are?**

   A: The benefit of starting where you are is that you are able to more accurately assess how far you will need to go in order to reach your destination. In other words, you know what needs to be done or accomplished to achieve the desired outcome because you know the state of the existing service.

2. **Most organizations have many existing practices, technologies, and of course, people. What steps should you take in an improvement initiative to "start where you are?"**

   A: Begin by assessing current capabilities. Assess your people, practices, tools, and how well they meet the desired objectives. If you can use any of the capabilities you already have, then do so.

3. **Are there times you will need to start over?**

   A: Even if you need to start over, be sure to keep lessons learned at the top of your mind as you begin to rebuild your practice.

ACTIVITY 3-3: Discussing the Progress Iteratively with Feedback Principle

1. **What does it really mean to progress iteratively?**

   A: Progressing iteratively means to drive improvements in small increments, delivering high value capabilities quickly, and getting feedback that will help determine and prioritize next steps. This will help to better deliver optimal value for customers.

2. **Does traditional project management work this way? What are the implications?**

   A: Traditional approaches to project management deliver all of the value at the end. Customers did not receive anything until the very end so service providers had no way of knowing if they were on the right track.

3. **What are the benefits of progressing iteratively? How will you create the feedback mechanisms you need?**

   A: Agile approaches emphasize early delivery of the highest value pieces, with consistent feedback loops that may lead to reprioritizing the work needed to be done by the teams in a way that delivers better results. Both service providers and service consumers need to understand the value of Agile ways of working and plan for the frequent feedback that is needed to enable better outcomes.

4. **What are some potential pitfalls if you don't get feedback in a timely way?**

   A: Answers may vary, but late feedback might translate into you and your team getting too far down the road working on something that is no longer needed, or its requirements changed. An increase in the amount of rework can lead to increase in stress and ultimately result in poor quality.

ACTIVITY 3-4: Discussing the Collaborate and Promote Visibility Principle

1. **What is the value of the Collaborate and Promote Visibility principle?**

   A: It provides clarity on roles and on the inputs and outputs needed by the service team.

2. **Who are the members of your service teams? How do your teams collaborate with one another?**

   A: Many organizations are structured in technical/functional silos, and collaboration across work teams can be very difficult.

3. **What tools or "information radiators" do you use so that work is visible to all?**

   A: To enable better collaboration, you can use tools such as Kanban boards, online dashboards, burndown charts, and other tools that help make the work more visible to everyone.

ACTIVITY 3-5: Discussing the Think and Work Holistically Principle

1. **What does the Think and Work Holistically principle mean?**

   A: Think and Work Holistically means focusing not just on a part of a system, but on how the entire system or workstream produces value for a customer.

2. **What happens if you focus on a local improvement, but don't consider the broader implications on the system as a whole?**

   A: Many IT improvements focus on improving a technology stack, like certain infrastructure components like servers and storage. This guiding principle reminds you that the objective is to improve the entire system end-to-end, and not just improve local components that may not result in an overall improvement.

ACTIVITY 3-6: Discussing the Keep It Simple and Practical Principle

1. **How do organizations benefit from keeping it simple and practical?**

   A: It ensures you don't create things you don't need, or over-develop solutions.

2. **What steps could you take to ensure you are keeping your solutions simple and practical?**

   A: Many solutions solve non-problems. In other words, you might anticipate potential problems that are not realistic. As a result, your solutions are often more complex and costly than what is needed. Solutions should focus on what is needed, and you should be pragmatic in using as much solution as you need, without overproducing.

3. **What is wrong with the following statement? "You should prepare a solution in advance for every potential exception."**

   A: Attempting to create a solution for every exception can result in an overcomplicated solution. Sometimes, it's better to deal with exceptions as they arise rather than build them into the process. Solve the problem in front of you.

ACTIVITY 3-7: Discussing the Optimize and Automate Principle

1. **How would you describe the value of the Optimize and Automate principle?**

   A: This principle enables you to maximize the value of technical and human resources.

2. **Many organizations focus on automation using their tools, but don't take the time to optimize their processes, or consider implications for other dimensions. What are the risk factors of automation for its own sake?**

   A: Automation allows us to perform a series of tasks quickly and efficiently. However, if they're not the *right* tasks, you'll just do bad (or not valuable) things quickly!

3. **What steps could you take to ensure your automation helps produce higher value solutions?**

   A: The best practice is to simplify and streamline your workflows first, then automate!

ACTIVITY 3-8: Discussing the Interaction Between the Principles

1. **What is the key consideration when choosing which ITIL guiding principle to apply?**

   A: The ITIL guiding principles do not exist in a vacuum, but constantly work together to support effective service management practices. Therefore, you should not cherry pick one or two principles to apply. You need to consider all of them when working in service management.

2. **Identify a few examples of how the principles can work together.**

   A: There are an unlimited number of combinations, but one might be: by Thinking and Working Holistically, it enables you to keep your Focus on Value. Also, you must Start Where You Are before you Optimize and Automate.

ACTIVITY 4-1: Discussing Governance in the Service Value System

1. **Why is governance a fundamental part of the SVS?**

   A: Governance is responsible for evaluating strategic options for the organization, directing action (through strategy and policy) and evaluating performance against those expectations. All aspects of the SVS are subject to the organization's governance.

2. **Who is the governing body for your organization? For IT?**

   A: The governing body for the enterprise is probably the Board of Directors or equivalent. IT governance is often headed by some type of IT governance or steering committee.

3. **How is authority delegated from your organization's governing body to your IT governing body?**

   A: This question here might stump you and it's an excellent point for discussion. How exactly does your organization get its authorities to act and deliver certain capabilities?

4. **What are the key deliverables a governing body provides to an organization? When a governing body evaluates, what are they evaluating? What are the implications for the organization's strategies and policies?**

   A: Governing bodies provide strategies and policy guidance. The governing body evaluates strategic alternatives and chooses strategic courses of action.

5. What is the role of a governing body?

   A: Governing bodies are ultimately accountable for the performance of an organization. They are accountable to optimize organizational risk, the use of organizational resources, and to deliver benefits to the organization's stakeholders. Governance is responsible for evaluating strategic options for the organization, directing action (through strategy and policy), and evaluating performance against those expectations.

6. How does governance differ from management?

   A: Governance is responsible for evaluating strategic options for the organization, directing action (through strategy and policy), and evaluating performance against those expectations. Management is expected to plan, build, and run the services that execute the strategy, and to drive improvement.

ACTIVITY 4-2: Discussing the Service Value Chain

1. What kinds of plans get created in a service provider organization? How do they help organizations manage tradeoffs and prioritize?

   A: Plans include strategic plans, project plans, service plans, and many others. Eventually a fundamental part of planning is prioritizing different alternatives and making decisions.

2. Which of the six service value chain activities require information from all other activities and in turn informs all other parts of the value chain?

   A: The Improve activity gets information about the performance of the entire value chain since all activities are subject to improvement. In turn, the Improve activity provides improvement plans and improvement status information to all other value chain activities.

3. Do you engage with different sets of stakeholders at different levels? What's the difference between engaging at an operational level, a tactical level, and a strategic level?

   A: You engage with different stakeholders and use different service management practices to do so. For example, operational day-to-day collaboration with users may occur at the service desk and therefore involve the Service Desk practice.

4. Which service chain activity starts with plans and architecture information and finishes with an end product that is transferred to the customer?

   A: The Design and Transition activity.

5. What considerations do you use when trying to decide whether to build or buy?

   A: You need to consider if the capacity is readily available, and whether it is strategic to your organization's competitiveness. If a third party has the economies of scale that make it more cost effective to buy rather than build, then you should buy.

6. What types of information are created as part of Deliver and Support?

   A: Deliver and support creates data about incidents, service requests, events, and myriad other performance data that can be used to identify potential service improvements.

ACTIVITY 4-3: Discussing the Continual Improvement Model

1. **What happens in each step of the Continual Improvement model?**

   A: 1. What is the Vision requires you to think about the long term objectives and the desired outcomes. 2. Where are We Now involves identifying the current baseline. 3. Where Do We Want to Be requires setting SMART targets. 4. How Do We Get There involves the Improvement Plan. 5. Take Action requires you to execute the plan. 6. Did We Get There involves measuring again to verify that the desired results were achieved. 7. How Do We Keep the Momentum Going requires you to identify what needs to be done next, the areas to focus on next, and any lessons learned.

2. **What might be the result of skipping one of the steps?**

   A: While it is not expected that all improvement projects will follow all of the steps, skipping steps increases the risk that you will not achieve the desired results.

3. **How does following the guiding principles drive a focus on improvement? How does a continual improvement culture drive interest in the use of the guiding principles?**

   A: The key point is that improvement activities should operate within the prism of the guiding principles. Improvements should focus on value, start where you are, and so on. As your organization works toward a continual improvement culture, it will be a natural step to consider the guiding principles whenever beginning to plan an improvement.

4. **How does the Theory of Constraints reinforce the guiding principle to Think and Work Holistically? Does it have implications for any of the other guiding principles?**

   A: The Theory of Constraints reinforces the idea of Think and Work Holistically because improvements that do not address the bottleneck in systems will not improve the overall system. It has implications for many of the other guiding principles, most especially the focus on value—in order to improve value, you must improve the performance of the whole system.

ACTIVITY 5-1: Analyzing the Continual Improvement Practice

1. **Why is it essential to have a specific Continual Improvement practice?**

   A: Having a specific practice provides a "game plan" and ensures that the plan is clear to everyone.

2. **How do you reconcile *improvement is everybody's job* with *identify a small team to focus on driving improvement activities*?**

   A: Many people implementing continual improvement guidance in previous versions of ITIL struggled with how to implement the guidance. Improvement requires participation from everyone, because every individual can and will identify opportunities to improve products, services, and practices. An organization overall needs to have a small team focused on driving these improvements through to execution.

3. **How do you conceive of the relationships between continual improvement as a principle, as an activity, and as a model?**

   A: The Continual Improvement model provides a structured approach to implementing improvement. The Improve activity in the SVC embeds improvement into the value chain, and the Continual Improvement practice supports organizations in their day-to-day improvement efforts.

ACTIVITY 5-2: Analyzing the Service Level Management Practice

1. **How does service level management help understand and set customer expectations?**

   A: Service Level Management meets with customers to assess requirements, negotiate targets, and provide regular reporting and reviews about service performance.

2. **What is the role of a service review?**

   A: Service reviews are a natural opportunity to discuss service performance, changes in business needs, and potential needs for changes in the services.

ACTIVITY 5-3: Analyzing the Change Control Practice

1. **How does change control help you Focus on Value?**

   A: Changes should be intended to create value through improvement in service utility and/or service warranty. When you assess a change, you assess the Value of a Change against the costs and risks; you seek to optimize the value and maximize the number of changes, while protecting the organization against risk.

2. **What is the role of the Change Schedule in Collaborate and Promote Visibility?**

   A: The challenge is that some IT organizations don't recognize the customer's need to know when a change is coming. Tools like the Change Schedule can raise awareness about changes, and help mitigate potential technical and business risks.

3. **What are some tradeoffs in balancing change benefits against potential risks?**

   A: All change is inherently risky because all incidents come from changes. You need to trade off the risk of making the change with the risk of not doing it.

4. **What types of mitigation activities could you do?**

   A: Risk mitigation activities could include review and approval by a Change Authority, or peer review of potential changes to assess risk and identify mitigation options.

ACTIVITY 5-4: Analyzing the Incident Management Practice

1. **What is the overall purpose of Incident Management?**

   A: The overall purpose of Incident Management is to minimize the impact of incidents and restore service as quickly as possible.

2. **Why are categorization and prioritization important?**

   A: Categorizing incidents as they happen enables you to accurately prioritize the incident and ensure that you are always working on the incident of the highest priority.

3. How do techniques such as swarming promote better incident management?

   A: Techniques like swarming allow you to take advantage of different skillsets and points of view to quickly identify who should take the lead in resolving an incident to ensure that it's being handled by the correct team.

4. What role can effective tools play in supporting our practice?

   A: Effective tools facilitate communication between groups working on incidents. Additionally, these tools can help us match incidents against previously identified incidents, problems, and known errors to apply workarounds and restore service more rapidly.

ACTIVITY 5-5: Analyzing the Service Request Management Practice

1. Where do service requests come from?

   A: Service requests can come from anyone, but often come from users of the service.

2. How should an organization establish standard services and the fulfillment procedures to deliver them?

   A: As part of establishing a service, you want to establish standard sets of information you provide about the service and fulfillment procedures for how you will deliver the service when it is requested.

3. How would you reassign requests that turn out to be incidents or changes?

   A: Some service requests are subsequently determined to be incidents or changes; these should be reallocated to the correct practice for handling. This may be supported by corresponding tools to enable tracking and management.

ACTIVITY 5-6: Analyzing the Service Desk Practice

1. What is the purpose of the Service Desk practice?

   A: The purpose of the Service Desk practice is to capture demand for incident resolution and service requests in the most efficient and streamlined manner possible.

2. What are some of the key competencies that service desk staff need to have?

   A: Service desk personnel require a combination of technical and business competencies, including customer service skills, empathy, incident analysis and prioritization, effective communications, and emotional intelligence.

3. What types of tools might help service desk staff perform their work more effectively?

   A: Tools may include telephony systems, workflow systems, workforce management, knowledge bases, and many others.

ACTIVITY 5-7: Analyzing the Problem Management Practice

1. **What happens in the three phases of Problem Management?**

   A: Problem Identification is used to trigger problem activities and includes logging the issue; it could come from a major incident, information from suppliers, recurring incidents, and other sources. Problem Control assesses the root cause of the incident or incidents and may identify a workaround as the assessment continues. Error Control publishes guidance about known errors and may trigger a request for change to remove errors from the infrastructure.

2. **What is the difference between an incident and a problem? A problem and a known error? Why are the distinctions important?**

   A: Incidents are disruptions to services experienced by users; the problem is the unknown root cause of the incident. Known errors are known to you—or through your suppliers and partners—and the emphasis is on cost effective removal of errors that can be removed. Also, guidance for handling errors cannot be removed, including workarounds as available.

ACTIVITY 6-1: Discussing the General Management Practices

1. **Why is Relationship Management separated from Service Level Management? What are some of the key differences?**

   A: Service Level Management focuses on service performance against targets and ensuring ongoing alignment of services to business needs. Relationship Management broadly focuses on both current and future needs of the customer, and how the service provider can best optimize value delivery.

2. **Why is it important that Information Security Management be a general management practice and not just an ITSM practice? Who is on the hook for organization-wide security?**

   A: Information Security is a risk factor subject to the highest level of organization governance; it is our job to establish information security practices to underpin and support business security policies and practices.

3. **How does Supplier Management help organizations streamline costs and improve the quality of supplier performance?**

   A: Supplier Management brings a coherent set of practices to engage with our suppliers to ensure value for money. These include assessing provider capabilities and risks, establishing supplier and contract relationships, and creating an ongoing managed supplier relationship with regular reporting, reviews, and improvements.

ACTIVITY 6-2: Discussing the Service Management Practices

1. **How does Service Configuration Management support the broader needs for organizational control? How does it support practices like Incident Management or Problem Management?**

   A: Service Configuration Management helps to maintain our current configuration baselines. In the face of the increased need to adapt to very frequent changes, it has become more important to maintain control of configurations, and to automate where possible to keep this information accurate. Service Configuration Management information is critical to other practices to support incident prioritization, problem replication, change risk assessments, and activities from virtually every service management practice.

2. **How does IT Asset Management differ from Service Configuration Management? What are some of the implications of the objective to maximize the value of the IT asset, and not just to track it?**

   A: IT Asset Management tracks the lifecycle of each IT asset, from acquisition through use to disposal. Many CIs are not assets, and Service Configuration Management focuses more on the context of a particular CI (how is it used in service delivery) than the content of the component itself. IT Asset Management should work to ensure assets are used and that the value of the asset is optimized; this suggests that the effective use of the asset is an important part of the practice, not merely tracking where it is and who has it.

3. **How might Monitoring and Event Management trigger other practices?**

   A: Events can trigger Incident Management in the case of early warning of an incident. Events can also trigger Change Control based on the needs to do things like add capacity, or even provide data indicating a potential for Problem Management.

4. **What are some of the responsibilities of Release Management?**

   A: Release Management works to ensure stakeholder readiness for the new or changed service. This practice is responsible for establishing agreed release plans and release schedules with relevant users, customers, operations, and others.

ACTIVITY 6-3: Discussing the Technical Management Practices

1. **How does Deployment Management differ from Release Management? Change Control? Why is each one needed to effectively introduce new services and changes?**

   A: Deployment Management is responsible for the physical instantiation of the hardware or software component into a supported environment. Release Management is responsible for ensuring that there are agreed plans among the relevant stakeholders for how a new or changed service will be introduced and to ensure effective knowledge transfer, training, and readiness. Change Control is responsible for ensuring successful changes by assessing the risks, authorizing changes, and managing the change schedule. Each practice has a key role to play in managing the effective management and introduction of changes with the goal of maximizing value and managing overall risk.

2. How does the work of Release and Deployment change when an organization is working in an Agile/DevOps environment compared to a traditional one? What opportunities does this create?

A: Using Feature Flags or multiple production environments in an Agile/DevOps environment deployment can occur as a routine, automated practice that introduces new hardware and software safely into supported environments. You can confirm the technical stability of the change before you enable it in production, to better align feature enablement with customer readiness while speeding up deployment and reducing risk.

Mastery Builder 6-1: Reviewing ITIL Foundation I

1. How does prioritization of incidents assist incident management?
   - ○ It helps direct the incident to the correct support area.
   - ◉ It determines the resource assigned to the incident.
   - ○ It ensures that incidents are resolved as quickly as possible.
   - ○ It determines how the service provider is perceived.

2. Which value chain activity provides information about service improvements to all value chain activities?
   - ◉ Improve
   - ○ Engage
   - ○ Obtain/build
   - ○ Deliver and support

3. Which value chain activity uses service components to fulfill service requests?
   - ○ Improve
   - ○ Engage
   - ○ Obtain/build
   - ◉ Deliver and support

4. What is the definition of utility?
   - ○ A tangible or intangible deliverable that is produced by carrying out an activity.
   - ○ The assurance that a product or service will meet agreed requirements.
   - ○ A possible event that could cause harm or loss, or make it more difficult to achieve objectives.
   - ◉ The functionality offered by a product or service to meet a particular need.

5. What is defined as "perceived benefits, usefulness, and importance of something"?
   - ○ Outputs
   - ○ Outcomes
   - ◉ Value
   - ○ Warranty

6. Identify the missing word(s) in the following sentence: An organization is a person or a group of people that has its own functions with _____ to achieve its objectives.
   - ◉ responsibilities, authorities, and relationships
   - ○ products and services
   - ○ utility
   - ○ outputs and outcomes

7. Which value chain activity includes communications with customers and users?
   - ◉ Engage
   - ○ Design and transition
   - ○ Obtain/build
   - ○ Deliver and support

8. Which is a purpose of the "problem management" practice?
   - ◉ To reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents.
   - ○ To maximize the number of successful IT changes by ensuring risks are properly assessed.
   - ○ To capture demand for incident resolution and service requests.
   - ○ To set clear business-based targets for service performance.

9. How does "service level management" contribute to "obtain/build" value chain activity?
   - ○ It analyzes data to identify opportunities to provide new service request options.
   - ○ It ensures users continue to be productive when they need assistance from the service provider.
   - ○ It acquires pre-approved service components to help fulfill service requests.
   - ◉ It collects user-specific requirements, sets expectations, and provides status updates.

10. A service provider describes a package that includes a mobile phone, with network access and 24/7 phone support. What is this an example of?
    - ○ Value
    - ○ An outcome
    - ○ Warranty of a service
    - ◉ A service offering

11. A service provider suggests that their service guarantees 99.9% availability. What is this an example of?
    - ○ Value
    - ○ An outcome
    - ◉ Warranty of a service
    - ○ A service offering

12. What should be included in every service level agreement?

- ○ Details of the process-based metrics used.
- ○ Technical description of the service components and how they are operated.
- ◉ Expectations of both parties.
- ○ Legal language.

13. What is a normal change?

- ○ A change that doesn't need risk assessment because the procedure has been pre-authorized.
- ◉ A change that needs to be assessed, authorized, and scheduled by a change authority.
- ○ A change that doesn't need risk assessment because it is required to resolve an incident.
- ○ A change that is assessed, authorized, and scheduled as part of "continual improvement."

14. Which practice provides service actions, general information, and fulfillment of standard services?

- ○ Incident management
- ○ Change control
- ○ Service desk
- ◉ Service request management

15. Which guiding principle recommends investigation of existing capabilities before starting a practice over?

- ○ Focus on value
- ◉ Start where you are
- ○ Progress iteratively with feedback
- ○ Collaborate and promote visibility

16. What is the purpose of "continual improvement"?

- ○ To ensure that the organization's suppliers and their performance are managed appropriately to support the provision of seamless, quality products and services.
- ◉ To align the organization's practices and services with changing business needs through the ongoing identification and improvement of services.
- ○ To ensure that the organization's suppliers and their performance are managed appropriately at strategic and tactical levels through coordinated marketing, selling, and delivery activities.
- ○ To ensure that accurate and reliable information about the configuration of supplier's services is available when and where it is needed.

17. Which is a key focus of the "organizations and people" dimension?

- ○ Security and compliance
- ○ Activity workflows
- ○ Knowledge sharing with partners
- ◉ Roles and responsibilities

18. Which statement about an emergency change is CORRECT?

- ○ Emergency changes should be pre-approved and defined with change models.
- ○ Emergency changes will be reviewed at the next scheduled CAB meeting.
- ◉ Emergency changes require expedited handling and may reduce testing.
- ○ Emergency changes can be implemented without authorization from a change authority.

19. Which describes outputs?

- ◉ Tangible or intangible deliverables
- ○ Functionality offered by a product or service
- ○ Results for a stakeholder
- ○ Configuration of an organization's resources

20. Which is NOT a recommendation of the "continual improvement" practice?

- ○ There should be a small team dedicated to leading continual improvement efforts.
- ◉ All improvements should be managed as multi-phase projects.
- ○ Continual improvement should be integrated with other practices.
- ○ External suppliers should be included in improvement initiatives.

21. Which describes products?

- ○ Tangible or intangible deliverables.
- ○ Functionality offered by a product or service.
- ○ Results for a stakeholder.
- ◉ Configuration of an organization's resources.

22. Which service management dimension is focused on third parties and how they are managed?

- ○ Organizations and people
- ○ Information and technology
- ◉ Partners and suppliers
- ○ Value streams and processes

23. Which is NOT a recommendation of the "service desk" practice?

- ○ Service desks can use technologies such as SMS and chat functions.
- ○ Service desks can be highly technical functions depending on the organization's need.
- ○ Service desks should have a practical understanding of the wider business.
- ◉ Service desks should always be a physical team in a single fixed location.

24. Which value chain activity includes reviewing service performance with customers?

- ○ Plan
- ◉ Improve
- ○ Engage
- ○ Obtain/build

25. Which value chain activity includes establishing enterprise architecture?
- (•) Plan
- ( ) Improve
- ( ) Engage
- ( ) Obtain/build

26. Which value chain activity includes the introduction of new or changed services?
- ( ) Plan
- (•) Design and Transition
- ( ) Engage
- ( ) Obtain/build

27. Which practice has the purpose of maximizing the number of successful changes?
- (•) Change control
- ( ) Service request management
- ( ) Release management
- ( ) Deployment management

28. How does "service request management" contribute to "obtain and build" activity?
- ( ) By collecting user-specific request requirements
- (•) By acquiring pre-approved service components
- ( ) By providing service request trend and quality information
- ( ) By initiating standard changes to fulfill service requests

29. How does "service request management" contribute to "engage" activity?
- (•) By collecting user-specific request requirements
- ( ) By acquiring pre-approved service components
- ( ) By providing service request trend and quality information
- ( ) By initiating standard changes to fulfill service requests

30. "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." What is this the ITIL definition of?
- ( ) Products
- (•) Service
- ( ) Service Management
- ( ) Outputs

31. Which describes the principle "start where you are"?

- ◉ Conducting a review of existing service management practices and deciding what to keep and what to discard.
- ○ Reviewing how an improvement initiative can be organized into smaller, manageable sections that can be completed in a timely manner.
- ○ Reviewing service management practices and removing any unnecessary complexity.
- ○ Using the four dimensions of service management to ensure coordination of all aspects of an improvement initiative.

32. Identify the missing word(s) in the following sentence: The purpose of the Release Management practice is to make new and changed _____ available for use.

- ○ objectives
- ◉ services and features
- ○ deployments
- ○ outcomes

33. Which describes the "focus on value" principle?

- ○ Conducting a review of existing service management practices and deciding what to keep and what to discard.
- ○ Reviewing how an improvement initiative can be organized into smaller, manageable sections that can be completed in a timely manner.
- ○ Reviewing service management practices and removing any unnecessary complexity.
- ◉ Investigating why the customer uses the services and how the services help them meet their goals.

34. Which is a key focus of the "value streams and processes" dimension?

- ○ Security and compliance
- ◉ Activity workflows
- ○ Knowledge sharing with partners
- ○ Roles and responsibilities

35. Which is a purpose of the "service desk" practice?

- ○ To reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents.
- ○ To maximize the number of successful IT changes by ensuring risks are properly assessed.
- ◉ To capture demand for incident resolution and service requests.
- ○ To set clear business-based targets for service performance.

36. Which is a purpose of the "relationship management" practice?

- ○ To make new and changed services and features available for use.
- ○ To plan and manage the full lifecycle of all IT assets.
- ◉ To establish and nurture the links between the organization and its stakeholders at strategic and tactical levels.
- ○ Properly assess, monitor, and manage the delivery of a service.

37. What is the definition of an IT asset?

- ○ Any change of state that has significance for the management of a configuration item or IT service.
- ○ Any component that needs to be managed in order to deliver an IT service.
- ○ The ability of an IT service or other configuration item to perform its agreed function when required.
- ◉ Any financially valuable component that can contribute to delivery of an IT product or service.

38. Which value chain activity includes providing components?

- ○ Plan
- ○ Improve
- ○ Engage
- ◉ Obtain/build

39. Which value chain activity provides stakeholder feedback for improvements?

- ◉ Engage
- ○ Design and transition
- ○ Obtain/build
- ○ Deliver and support

40. Which value chain activity produces requirements and specifications?

- ◉ Engage
- ○ Design and transition
- ○ Obtain/build
- ○ Deliver and support

Mastery Builder 6-1: Reviewing ITIL Foundation II

1. Which is a purpose of the "information security" practice?

- ○ Ensure that the organization's suppliers and their performance are managed appropriately.
- ◉ Protect the information needed by the organization to conduct its business.
- ○ Establish and nurture the links between the organization and its stakeholders.
- ○ Systematically observe services and service components.

2. Plan Evaluate Direct Monitor

Select the correct answer.

- ○ 1, 2, 3
- ○ 1, 2, 4
- ○ 1, 3, 4
- ◉ 2, 3, 4

3. Which is NOT one of the steps of the Continual Improvement model?

- ○ Take Action
- ○ How Do We Keep the Momentum Going?
- ◉ What Improvement Method Will We Use?
- ○ Where Are We Now?

4. What is the utility of a service?

- ◉ Service functionality.
- ○ Reliability of the components.
- ○ End-to-end service performance.
- ○ Assurance that the service will meet security requirements.

5. What is the definition of an output?

- ○ Joint activities performed by a service provider and a service consumer to ensure continual value co-creation based on agreed and available service offerings.
- ○ A result for a stakeholder enabled by one or more outputs.
- ◉ A tangible or intangible deliverable of an activity.
- ○ Activities performed by an organization to consume services.

6. Goods Policies Access to resources Service actions

Select the correct answer.

- ○ 1, 2, 3
- ○ 1, 2, 4
- ◉ 1, 3, 4
- ○ 2, 3, 4

7. Which is the best definition of a customer?

- ◉ A person who defines the requirements for a service and takes responsibility for the outcomes of service consumption.
- ○ A person who uses services.
- ○ A person who authorizes budget for service consumption. Can also be used to describe an organization or individual that provides financial or other support for an initiative.
- ○ A person who is willing to provide a service.

8. The ultimate value of a service is determined by?

- ○ The service provider
- ◉ The customer
- ○ The supplier
- ○ The service relationship manager

9. Organizations and People Hardware and Software Information and Technology Value Streams and Processes

Select the correct answer.

- ○ 1, 2, 3
- ○ 1, 2, 4
- ◉ 1, 3, 4
- ○ 2, 3, 4

10. Which Guiding Principle begins with assessing who the customer and stakeholders are?

- ○ Optimize and Automate
- ○ Progress Iteratively with Feedback
- ○ Keep It Simple and Practical
- ◉ Focus on Value

11. Which of the following is a tool for Collaborating and Promoting Visibility?

- ◉ Kanban Board
- ○ SWOT Analysis
- ○ Balanced Scorecard
- ○ Continual Improvement Model

12. Which of the Guiding Principles is highlighted in the Theory of Constraints?

- ○ Focus on Value
- ○ Start Where You Are
- ◉ Think and Work Holistically
- ○ Optimize and Automate

13. Which is not one of the Optimization Steps in Optimize and Automate?

- ○ Desired Future State
- ○ Stakeholder Engagement
- ◉ Customer Preparation
- ○ Monitoring Feedback

14. Which of the following is true of a value chain?

- ○ Supports a single ITIL practice.
- ◉ Converts inputs into outputs.
- ○ Does not consider needed skills and competencies.
- ○ Defines a single sequence of activities and are not combined in different ways.

15. In which step of the Continual Improvement model do we define a high-level organizational objective of the improvement?

- ○ Where Are We Now?
- ○ How Do We Get There?
- ◉ What is the Vision?
- ○ How Do We Keep the Momentum Going?

16. Which of the steps of the Continual Improvement model has the strongest relationship to the guiding principle Start Where You Are?

- ○ What is the Vision?
- ◉ Where Are We Now?
- ○ How Do We Get There?
- ○ Take Action

17. Products and services Practices Service components The entire Service Value System

Select the correct answer.

- ○ 1, 2, 3 only
- ○ 2, 3, 4 only
- ○ 1, 2, 4 only
- ◉ 1, 2, 3, and 4

18. Fill in the missing word(s): The Continual Improvement Register (CIR) is a structured database or document used to track and manage _____.

- ○ Changes
- ○ Incidents
- ◉ Improvement Opportunities
- ○ Service Requests

19. Fill in the missing word(s): The Service Level Management practice's purpose is to set clear _____ targets for service performance, so that the delivery of a service can be properly assessed, monitored, and managed.

- ○ service-based
- ○ system-based
- ○ technology-based
- ◉ business-based

20. Which of the following reflects ITIL guidance about SLA Requirements?

- ○ Sets stretch targets to motivate service providers
- ◉ Related to key customer outcomes and customer satisfaction
- ○ Written in technical detail
- ○ Specifies system performance reporting

21. Which of the following is true for a Change Authority?

- ◉ Different Change Authorities may be identified for different types of changes.
- ○ A single Change Authority should be identified for all changes.
- ○ Changes in high-velocity organizations should be reviewed by a Change Advisory Board.
- ○ Should allow changes only when there are no risks.

22. "The addition, modification, or removal of anything that could have a direct or indirect effect on services" is the ITIL definition of a?

- ○ Release
- ○ Deployment
- ○ Package
- ◉ Change

23. Standard Urgent Emergency Normal

Select the correct answer.

- ○ 1, 2, 3 only
- ○ 1, 2, 4 only
- ◉ 1, 3, 4 only
- ○ 2, 3, 4 only

24. Which of the following practices would be MOST LIKELY to use information from the Change Schedule?

- ○ Monitoring and Event Management
- ○ Relationship Management
- ◉ Incident Management
- ○ IT Asset Management

25. Which features would NOT be part of a suitable Incident Management tool?

- ○ Automated Incident Matching
- ◉ Detailed procedures for resolving complex incidents
- ○ Timestamping and tracking
- ○ Links to problem, known error, and knowledge information

26. Which is NOT a benefit of using swarming as an incident management technique?

- ○ Faster resolution.
- ○ Quicker identification of the right teams to work an incident.
- ○ Maintaining focus on optimizing resources used to respond to an incident.
- ◉ Reduced need for service desk support.

27. Which of the following "initiates a service action that has been agreed as a normal part of service delivery"?

- ○ Incident
- ○ Problem
- ◉ Service Request
- ○ Change

28. Which of the following has the purpose to "capture demand for incident resolution and service requests"?

- ○ Technical Management
- ◉ Service Desk
- ○ Service Request Management
- ○ Relationship Management

29. Walk-in Email Chatbot Text messaging

Select the correct answer.

- ○ 1, 2, 3
- ○ 1, 2, 4
- ○ 2, 3, 4
- ◉ 1, 2, 3, 4

30. Empathy and emotional intelligence Effective communications skills Detailed knowledge of infrastructure components Understanding of business priority

Select the correct answer.

- ○ 1, 2, 3
- ◉ 1, 2, 4
- ○ 2, 3, 4
- ○ 1, 2, 3, and 4

31. "Any financially valuable component that can contribute to delivery of an IT product or service" is the ITIL definition of?

- ◉ IT Asset
- ○ Configuration Item
- ○ Component
- ○ Service

32. Prevention Detection Correction Recovery

Select the correct answer.

- ◉ 1, 2, 3
- ○ 1, 2, 4
- ○ 2, 3, 4
- ○ 1, 2, 3, 4

33. Which of the following is the purpose of supplier management?

- ○ Reduce the likelihood and impact of incidents.
- ○ Maximize the number of successful changes.
- ○ Set clear business-based targets for service performance so that the delivery of a service can be properly assessed, monitored, and managed.
- ◉ Ensure that the organization's suppliers and their performance are managed appropriately to support the provision of seamless, quality products and services.

34. "Any component that needs to be managed in order to deliver an IT service" is the ITIL definition of?

- ○ IT Asset
- ○ Service
- ○ Output
- ◉ Configuration Item

35. General Management Service Management Component Management Technical Management

Select the correct answer.

- ○ 1, 2, 3
- ◉ 1, 2, 4
- ○ 2, 3, 4
- ○ 1, 2, 3, and 4

36. A service provider suggests that their service guarantees recovery in 24 hours in the event of a disaster. What is this an example of?

- ○ Value
- ○ An outcome
- ◉ Warranty of a service
- ○ A service offering

37. How does categorization of incidents assist incident management?

- ◉ It helps direct the incident to the correct support area.
- ○ It determines the resource assigned to the incident.
- ○ It ensures that incidents are resolved as quickly as possible.
- ○ It determines how the service provider is perceived.

38. Which is a key focus of the "suppliers and partners" dimension?

- ○ Security and compliance
- ○ Activity workflows
- ◉ Knowledge sharing
- ○ Roles and responsibilities

39. Which is NOT a benefit of adopting ITIL practices?

- ○ Balance agility and stability.
- ○ Create new revenue streams and sources of competitive advantage.
- ○ Support new digital business models.
- ◉ Demonstrate compliance with a standard.

40. "A set of specialized organizational capabilities for enabling value for customers in the form of services" is the ITIL definition of?

- ○ Products
- ◉ Services
- ○ Service Management
- ○ Outcomes

Glossary

Agile
An umbrella term for a collection of frameworks and techniques that together enable teams and individuals to work in a way that is typified by collaboration, prioritization, iterative and incremental delivery, and time-boxing. These are several specific methods (or frameworks) that are classed as Agile, such as Scrum, Lean, and Kanban.

change
The addition, modification, or removal of anything that could have a direct or indirect effect on services.

change authority
The person or group who authorizes a change.

CI
(Configuration Item) Any component that needs to be managed in order to deliver an IT service.

CIR
(Continual Improvement Register) A structured database or document that is used to track and manage improvement opportunities.

continual improvement practice
The practice of aligning an organization's practices and services with changing business needs through the ongoing identification and improvement of all elements involved in the effective management of products and services.

cost
The amount of money spent on a specific activity or resource.

CSF
(critical success factor) A necessary precondition for the achievement of intended results.

customer
A person who defines the requirements for a service and takes responsibility for the outcomes of service consumption.

CX
(customer experience) The sum of functional and emotional interactions with a service and service provider as perceived by a service consumer.

demand
Input to the Service Value System based on opportunities and needs from internal and external stakeholders.

DevOps
An organizational culture that aims to improve the flow of value to customers. DevOps focuses on culture, automation, Lean, measurement, and sharing (CALMS).

event
Any change of state that has significance for the management of a service or other configuration item (CI).

feedback loop
A technique whereby the outputs of one part of a system are used as inputs to the same part of the system.

four dimensions of service management
The four perspectives that are critical to the effective and efficient facilitation of value for customers and other stakeholders in the form of products and services.

governance
The means by which an organization is directed and controlled.

holistic
The treatment of the system as a whole and not just the sum of its parts.

incident
An unplanned interruption to a service, or reduction in the quality of a service.

information and technology
One of the four dimensions of service management. It includes the information and knowledge used to deliver services, and the information and technologies used to manage all aspects of the Service Value System.

IT asset
Any financially valuable component that can contribute to delivery of an IT product or service.

ITIL
Best-practice guidance for IT service management.

ITIL guiding principles
Recommendations that can guide an organization in all circumstances, regardless of changes in its goals, strategies, types of work, or management structure.

ITIL service value chain
An operating model for service providers that covers all the key activities required to effectively manage products and services.

Kanban
A method for visualizing work, identifying potential blockages and resource conflicts, and managing work in progress.

known error
A problem that has been analyzed but has not been resolved.

KPI
(key performance indicator) An important metric used to evaluate the success in meeting an objective.

Lean
An approach that focuses on improving workflows by maximizing value through the elimination of waste.

metric
A measurement or calculation that is monitored or reported for management and improvement.

MVP
(Minimum Viable Product) A product with just enough features to satisfy early customers, and to provide feedback for future product development.

opportunity
Options or possibilities to add value for stakeholders or otherwise improve the organization.

organization
A person or a group of people that has its own functions with responsibilities, authorities, and relationships to achieve its objectives.

organizations and people
One of the four dimensions of service management. It ensures that the way an organization is structured and managed, as well as its roles, responsibilities, and systems of authority and communication, is well defined and supports its overall strategy and operating model.

outcome
A result for a stakeholder enabled by one or more outputs.

output
A tangible or intangible deliverable of an activity.

partners and suppliers
One of the four dimensions of service management. It encompasses the relationships an organization has with other organizations that are involved in the design, development, deployment, delivery, support, and/or continual improvement of services.

partnership
A relationship between two organizations that involves working closely together to achieve common goals and objectives.

performance
A measure of what is achieved or delivered by a system, person, team, practice, or service.

practice
Sets of organizational resources designed for performing work or accomplishing an objective.

problem
A cause, or potential cause, of one or more incidents.

process
A set of interrelated or interacting activities that transform inputs into outputs. A process takes one or more defined inputs and turns them into defined outputs. Processes define the sequence of actions and their dependencies.

product
A configuration of an organization's resources designed to offer value for a consumer.

release
A version of a service or other configuration item, or a collection of configuration items, that is made available for use.

risk
A possible event that could cause harm or loss, or make it more difficult to achieve objectives. Risk can also be defined as uncertainty of outcome, and can be used in the context of measuring the probability of positive outcomes as well as negative outcomes.

service
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 catalog
Structured information about all the services and service offerings for a service provider, relevant for a specific target audience.

service consumption
Activities performed by an organization to consume services. It includes the management of the consumer's resources needed to use the service, service actions performed by users, and the receiving (acquiring) of goods (if required).

service desk
The point of communication between the service provider and all of its users.

service management
A set of specialized organizational capabilities for enabling value for customers in the form of services.

service offering
A formal 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.

service provider
A role performed by an organization in a service relationship to provide services to consumers.

service provision
Activities performed by an organization to provide services. It includes management of the provider's resources; configured to deliver the service, ensuring access to these resources for users; fulfillment of the agreed service actions; service level management; and continual improvement. It may also include the supply of goods.

service relationship
A cooperation between a service provider and service consumer. Service relationships include service provision, service consumption, and service relationship management.

service relationship management
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 request
A request from a user or user's authorized representative that initiates a service action which has been agreed as a normal part of service delivery.

SLA
(Service Level Agreement) A documented agreement between a service provider and a customer that identifies both services required and the expected level of service.

sponsor
A person who authorizes budget for service consumption. Can also be used to describe an organization or individual that provides financial or other support for an initiative.

supplier
A stakeholder responsible for providing services that are used by an organization.

SVS
(Service Value System) A model representing how all the components and activities of an organization work together to facilitate value creation.

systems thinking
A holistic approach to analysis that focuses on the way that a system's constituent parts work, interrelate, and interact over time, and within the context of other systems.

TOC
(Theory of Constraints) A method of continual improvement that involves identifying the weakest link in the value chain (i.e. the constraint) and then making systematic improvements until it is no longer the weakest link.

user
A person who uses services.

utility
The functionality offered by a product or service to meet a particular need. Utility can be summarized as "what the service does" and can be used to determine whether a service is "fit for purpose." To have utility, a service must either support the performance of the consumer or remove constraints from the consumer. Many services do both.

value
The perceived benefits, usefulness, and importance of something.

value stream
A series of steps an organization undertakes to create and deliver products and services to consumers.

value stream and processes
One of the four dimensions of service management. It defines the activities, workflows, controls, and procedures needed to achieve the agreed objectives.

warranty
Assurance that a product or service will meet agreed requirements. Warranty can be summarized as "how the service performs" and can be used to determine whether a service is "fit for use." Warranty often relates to service levels aligned with the needs of service consumers. This may be based on a formal agreement, or it may be a marketing message or brand image. Warranty typically addresses such areas as the availability of the service, its capacity, levels of security, and continuity. A service may be said to provide acceptable assurance, or "warranty," if all defined and agreed conditions are met.

workaround
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.

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