

DR. ALVIN'S PUBLICATIONS

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A SUMMARY BY DR. ALVIN ANG



CONTENTS

Chapter 1: ITIL 4 Big Picture	6
ITIL External Factors (PESTLE).....	7
ITIL 4 Dimensions (OIPV).....	8
ITIL Service Value System (IO-SVC-34P-G-7-CI).....	9
ITIL Service Value Chain (PIEDOD)	10
7 ITIL Guiding Principles (F – S – P – C – T – O K).....	11
34 ITIL Practices:	12
General Management Practices	12
Service Management Practices	12
Technical Management Practices	13
Chapter 2: ITIL Service Value Chain (SVC)	14
SVC Activity 1 – Plan.....	15
SVC Activity 2 – Improve.....	15
SVC Activity 3 – Engage.....	15
SVC Activity 4 – Design and Transition	16
SVC Activity 5 – Obtain or Build	16
SVC Activity 6 – Deliver and Support	16
Q&A for ITIL SVC Activities.....	17
Chapter 3: ITIL 4 Dimensions	18
Organization and People Dimension	19
Organizational Culture	19
People	19
Information and Technology Dimension	20
Partners and Suppliers Dimension	21
Value Stream and Processes Dimension	22
Value Stream.....	22
Processes	23
Q&A for ITIL 4 Dimensions.....	24
Chapter 4: ITIL Service Value System (SVS)	25
Inputs Outputs	26

Inputs = Opportunity or Demand	26
Outputs = Value.....	26
Service Value Chain	26
34 Practices.....	26
Governance.....	26
7 Guiding Principles.....	27
Continual Improvement.....	27
Q&A for ITIL SVS.....	27
Chapter 5: ITIL 7 Guiding Principles.....	28
1. Principle 1: Focus on Value	29
2. Principle 2: Start Where You ARE.....	30
3. Principle 3: Progress Iteratively with Feedback.....	31
4. Principle 4: Collaborate and Promote Visibility.....	32
5. Principle 5: Think and Work Holistically	33
6. Principle 6: Optimize and Automate	34
Optimization	34
Automation	34
7. Principle 7: Keep it Simple and Practical	35
Q&A for 7 Guiding Principles	36
Chapter 6: ITIL 34 Practices	37
General Management Practices	38
Continual Improvement (CI)	38
Continual Improvement Model	38
Continual Improvement Methods.....	38
Continual Improvement Register (CIR).....	39
Information Security Management (ISM)	39
Relationship Management (RM).....	39
Supplier Management (SM).....	39
Service Management Practices	40
Change Control (CC).....	40
Incident Management (IM).....	40
IT Asset Management (IT-AM).....	41
Monitoring and Event Management (MEM)	41
Problem Management (PM)	41
Release Management (RM)	43
Traditional / Waterfall Release Management	43

Agile / DevOps Release Management	44
Service Configuration Management (SCM)	45
Service Desk (SD)	45
Service Level Management (SLM)	47
Service Request Management (SRM)	48
Technical Management PRactices	50
Deployment Management (DM)	50
Q&A for 34 ITIL Practices	51
<i>Chapter 7: Concepts of Service Management</i>	<i>53</i>
Services	53
IT Service Management (IT – SM)	53
Organization	53
Value	53
Definition	53
3 Dimensions	54
Value + Outcomes + Costs + Risks	55
Costs	55
Risk	56
Customers + Sponsor + User	56
Output vs Outcome	57
Utility & Warranty	58
Utility	58
Performance Supported?	58
Constraints Removed?	58
Warranty	58
Available enough?	58
Capacity enough?	59
Continuous enough?	59
Secure enough?	59
Service Relationship (SR)	60
Service Provisioning (SP)	60
Service Consumption (SC)	60
Service Relationship Model (SRM)	61
Products	61
Service Offering (SO)	61
Goods	62
Access to Resources	62

Service Actions.....	63
Q&A for Concepts for SM	63
<i>Sample Exam Questions</i>.....	64
<i>References</i>	69
<i>About the Authors</i>.....	70

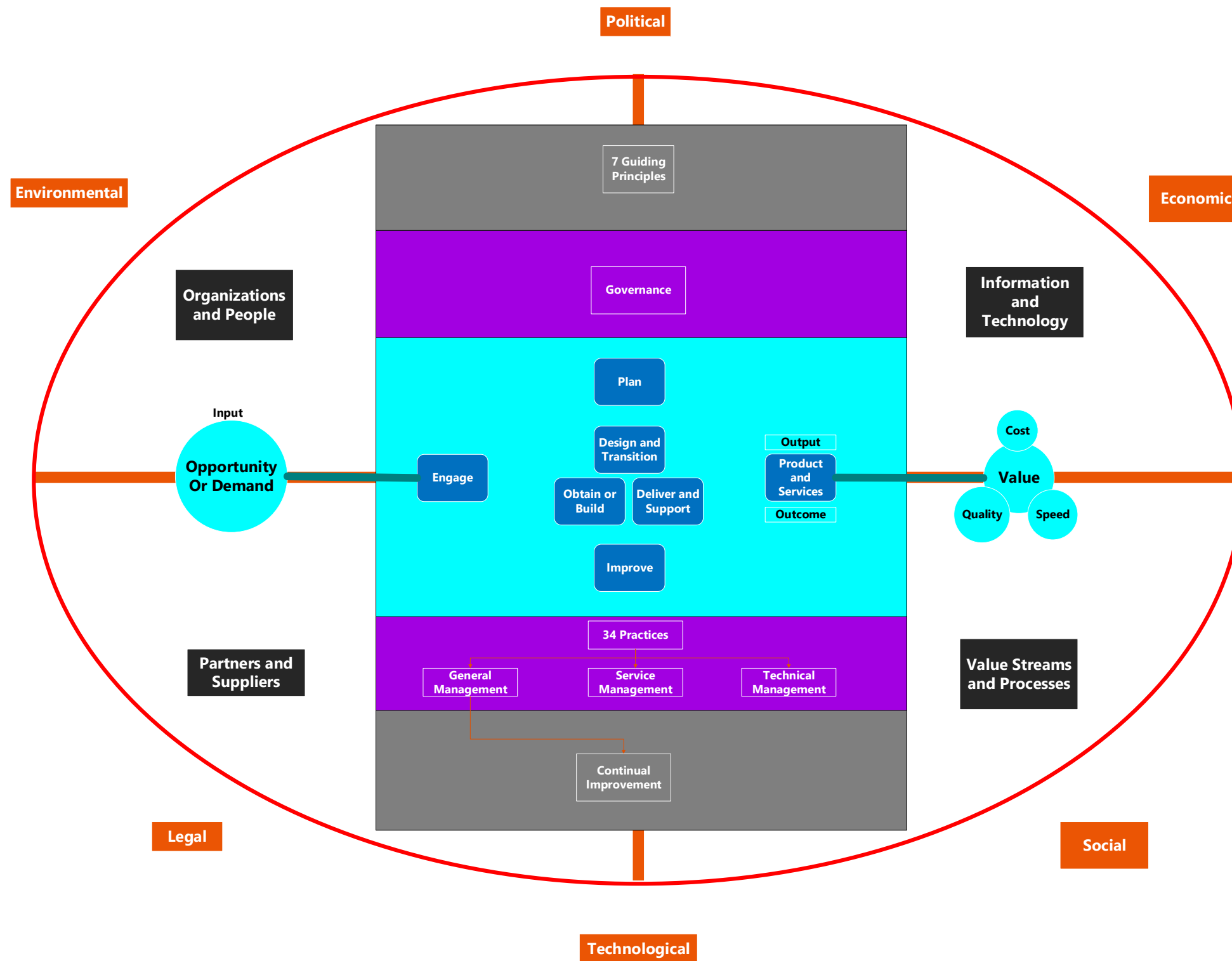


Figure 1: ITIL 4 Big Picture (NTUC-Learning-Hub 2019)

ITIL EXTERNAL FACTORS (PESTLE)

- P - Political
- E - Economic
- S - Social
- T - Technological
- L - Legal
- E – Environmental

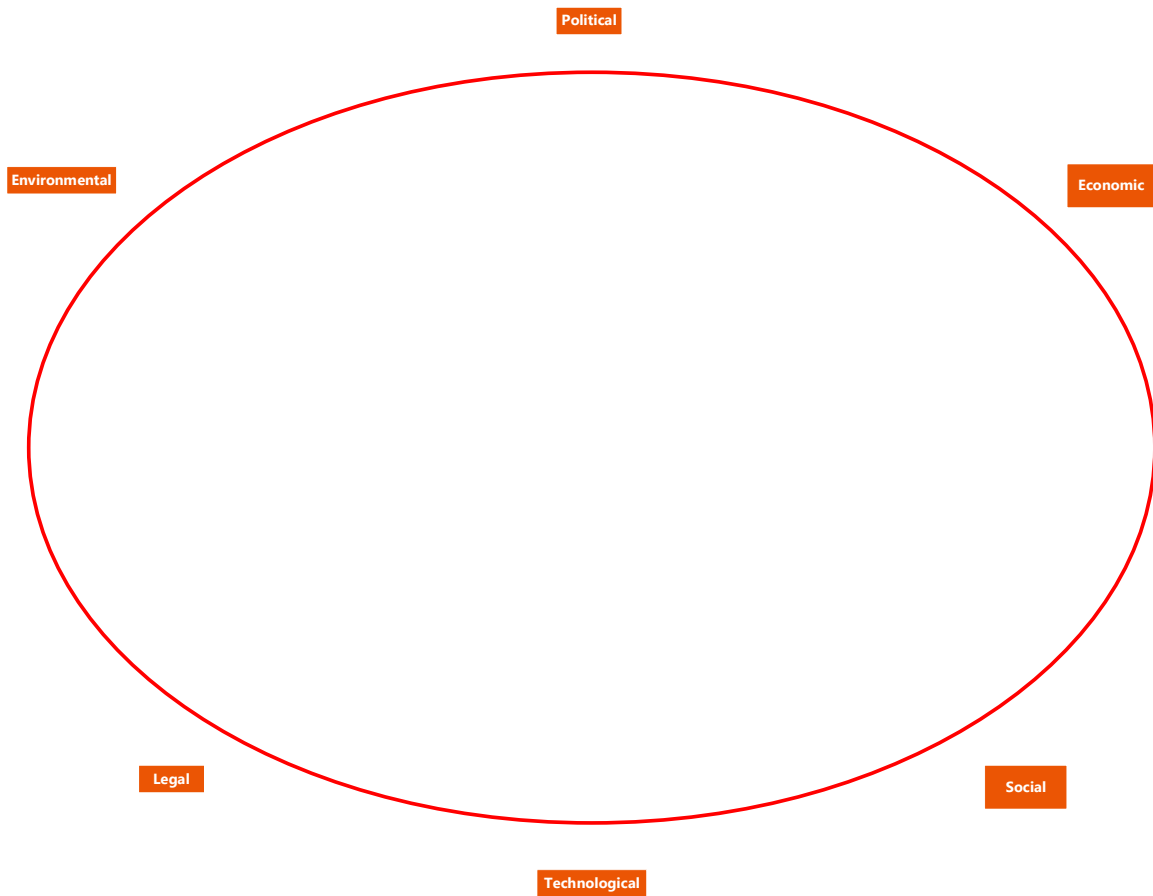


Figure 2: ITIL External Factors (NTUC-Learning-Hub 2019)

ITIL 4 DIMENSIONS (OIPV)

- O – Organizations and People
- I – Information and Technology
- P – Partners and Suppliers
- V – Value Streams and Processes

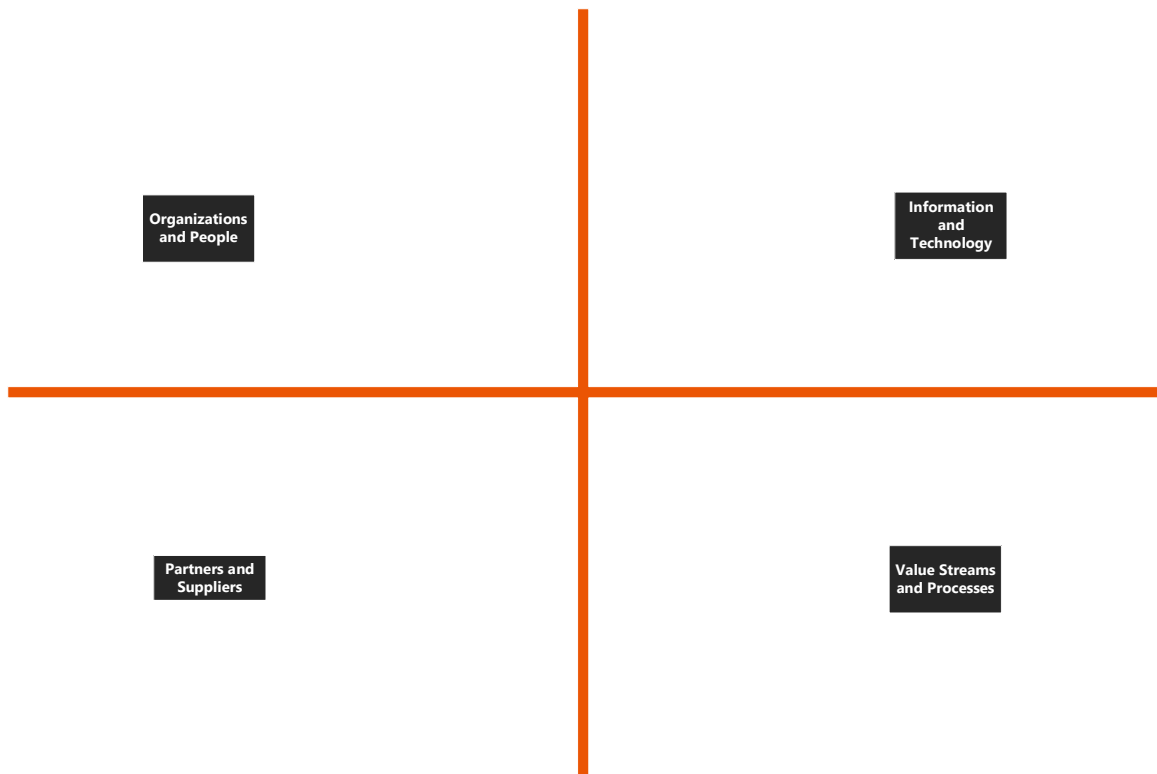


Figure 3: ITIL 4 Dimensions (NTUC-Learning-Hub 2019)

ITIL SERVICE VALUE SYSTEM (IO-SVC-34P-G-7-CI)

- IO – Input Outputs
- SVC – Service Value Chain
- 34P – 34 Practices
- G – Governance
- 7 – 7 Guiding Principles
- CI – Continual Improvement

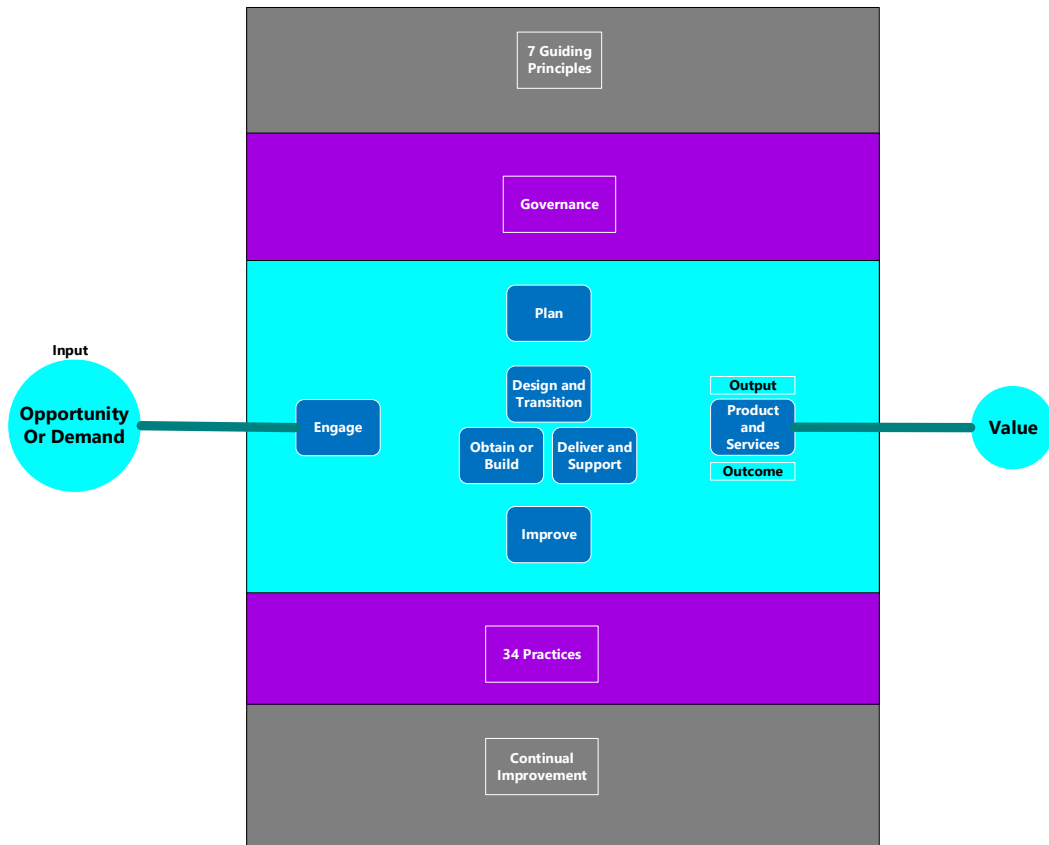


Figure 4: ITIL SVS (NTUC-Learning-Hub 2019)

ITIL SERVICE VALUE CHAIN (PIEDOD)

- P – Plan
- I – Improve
- E – Engage
- D – Design and Transition
- O – Obtain and Build
- D – Deliver and Support

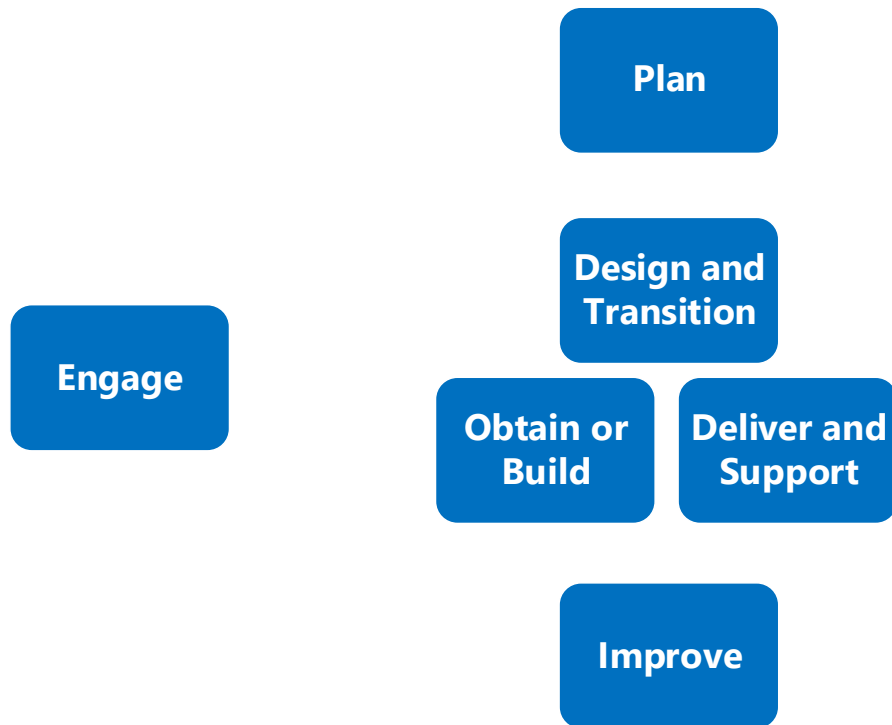


Figure 5: ITIL SVC (NTUC-Learning-Hub 2019)

7 ITIL GUIDING PRINCIPLES (F – S – P – C – T – O K)

- Focus on Value
- Start Where You Are
- Progress Iteratively With Feedback
- Collaborate and Promote Visibility
- Think and Work Holistically
- Optimize and Automate
- Keep it Simple and Practical

34 ITIL PRACTICES:



GENERAL MANAGEMENT PRACTICES

- ~~1. Architecture Management~~
2. Continual Improvement
3. Information Security Management
- ~~4. Knowledge Management~~
- ~~5. Measuring and Reporting~~
- ~~6. Organization Change Management~~
- ~~7. Portfolio Management~~
- ~~8. Project Management~~
9. Relationship Management
- ~~10. Risk Management~~
- ~~11. Service Financial Management~~
- ~~12. Strategy Management~~
13. Supplier Management
- ~~14. Workforce and Talent Management~~

SERVICE MANAGEMENT PRACTICES

- ~~15. Availability Management~~
- ~~16. Business Analysis~~
- ~~17. Capacity and Performance Management~~

18. Change Control
19. Incident Management
20. IT Asset Management
21. Monitoring and Event Management
22. Problem Management
23. Release Management
- ~~24. Service Catalogue Management~~
25. Service Configuration Management
- ~~26. Service Continuity Management~~
- ~~27. Service Design~~
28. Service Desk
29. Service Level Management
30. Service Request Management
- ~~31. Service Validation and Testing~~

TECHNICAL MANAGEMENT PRACTICES

32. Deployment Management
- ~~33. Infrastructure and Platform Management~~
- ~~34. Software and Development Management~~

CHAPTER 2: ITIL SERVICE VALUE CHAIN (SVC)

ITIL Service Value Chain (SVC) =

- Key activities for **creating value** through **management** of products and services.
- SVC = a set of interconnected activities that delivers value
- SVC has 6 types of activities (of no particular order or priority)
 1. P – Plan
 2. I – Improve
 3. E – Engage
 4. D – Design and Transition
 5. O – Obtain and Build
 6. D – Deliver and Support

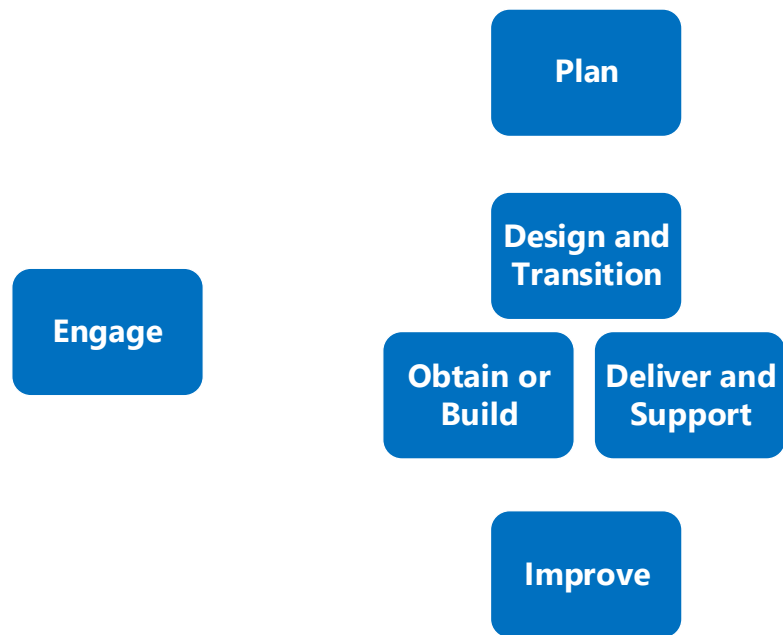


Figure 6: ITIL Service Value Chain (SVC) (NTUC-Learning-Hub 2019)

SVC ACTIVITY 1 – PLAN

- To Ensure shared *understanding* of
 - Vision,
 - Current Status,
 - Improvement for
 - all 4 ITIL Dimensions and
 - all Products and Services

SVC ACTIVITY 2 – IMPROVE

- Ensure continual *improvement* of
 - Products
 - Services
 - Practices for
 - all 4 ITIL Dimensions and
 - all SVC Activities

SVC ACTIVITY 3 – ENGAGE

- Good understanding of stakeholder
 - Needs
 - Transparency
 - Continual *Engagement* and
 - Good Relationships with all stakeholders.

SVC ACTIVITY 4 – DESIGN AND TRANSITION

- Ensure that services continually *meet stakeholder expectations* for quality, costs and time to market.

SVC ACTIVITY 5 – OBTAIN OR BUILD

- Ensure that *service components are available* when and where they are needed, and meet agreed upon specifications.

SVC ACTIVITY 6 – DELIVER AND SUPPORT

- Ensure that services are *delivered and supported* according to agreed upon specifications and stakeholders' expectations.

Q&A FOR ITIL SVC ACTIVITIES

1. Which SVC Activity provides good understanding of stakeholder needs, promotes transparency, continual **engagement** and good relationship with all stakeholders?
 - a. Answer = Engage

2. Which SVC Activity ensures **service components are available**, when and where needed, and that they meet agreed – upon specifications?
 - a. Answer = Obtain or Build

3. Which SVC Activity ensures **products and services continually meet stakeholder expectations** for quality, cost and time to market?
 - a. Answer = Design and Transition

CHAPTER 3: ITIL 4 DIMENSIONS

- O – Organizations and People
- I – Information and Technology
- P – Partners and Suppliers
- V – Value Streams and Processes

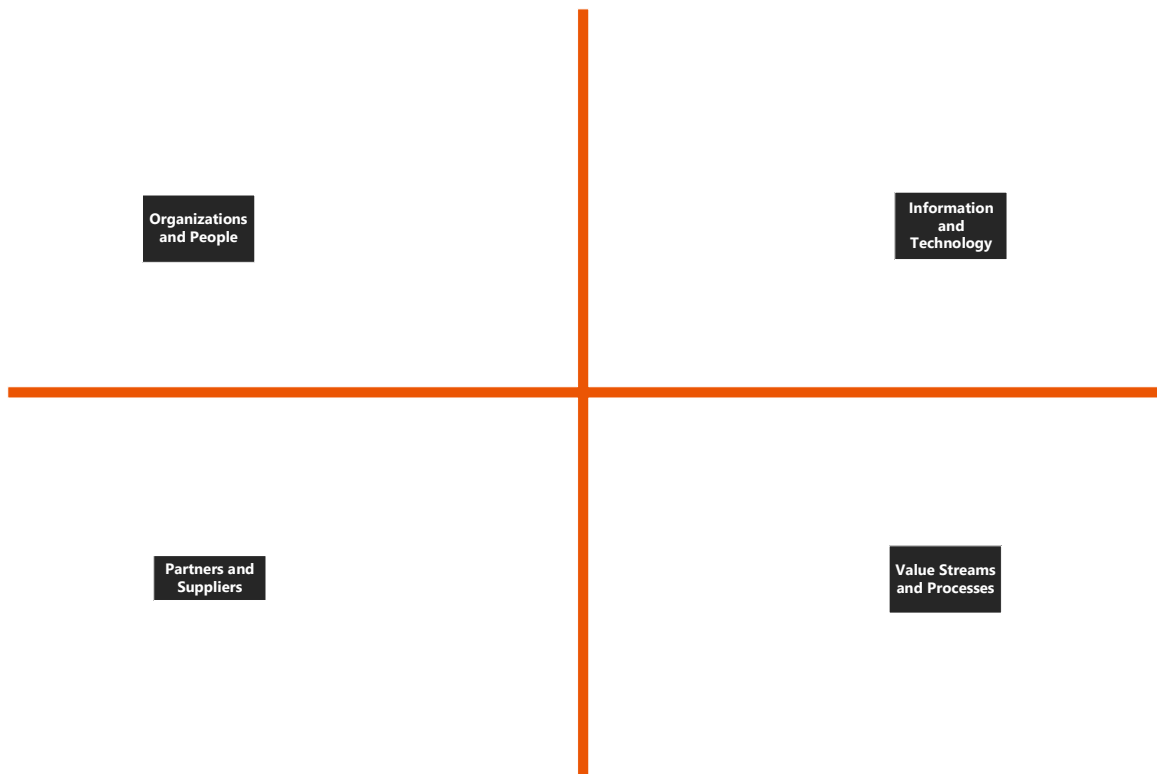


Figure 7: ITIL 4 Dimensions (NTUC-Learning-Hub 2019)

ORGANIZATION AND PEOPLE DIMENSION

Organization and People dimension covers:

- Roles and responsibilities
- Leaders championing and advocating values
- Communication and collaboration
- Shared values and attitudes
- Trust and transparency
- Competency in the workforce

ORGANIZATIONAL CULTURE

- The way which the organization carries out its work
- Creating shared values and attitudes

PEOPLE

- Every person should have clear understanding of
 - contribution & roles
 - specialization
- Promote the focus on value creation
- Pay attention to peoples':
 - Skills and competencies
 - Management and leadership styles
 - Communication and collaboration

INFORMATION AND TECHNOLOGY DIMENSION

IT applied to the Service Value System (SVS) includes

- Information
- Knowledge
- Supporting Technologies such as
 - a. Workflow Management Systems
 - b. Knowledge Bases
 - c. Inventory Systems
 - d. Communication Systems
 - e. Analytical Tools
- Relationships between SVS components e.g. Inputs and Outputs
- Organizational Culture impacts the technologies they choose to use

PARTNERS AND SUPPLIERS DIMENSION

- This refers to an organization's relationship with other organizations.
- It also refers to contracts and agreements.
- Service Integration and Management (SIAM) is a method used to address the Partners and Suppliers Dimension
- Supplier Strategy includes:
 - Strategic focus
 - Resource scarcity
 - Corporate culture
 - Demand patterns
 - Cost concerns
 - Subject matter expertise
 - External constraints

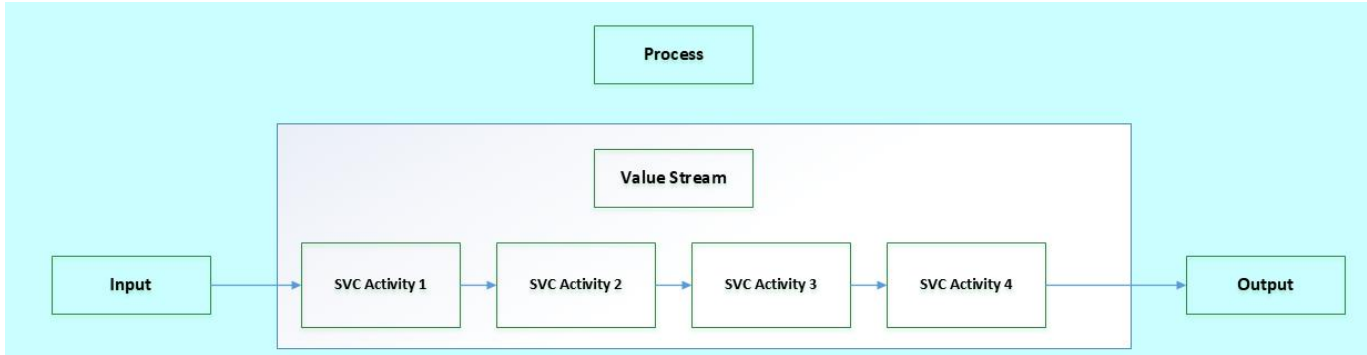
VALUE STREAM AND PROCESSES DIMENSION

VALUE STREAM

- Value Stream = series of steps and organization uses to create and deliver products and services to a consumer.
- Value Stream = a *combination* of the *Service Value Chain (SVC)* Activities
- SVC has been explained in previous chapter.
- Since SVC has 6 types of activities (of no particular order or priority)
 - P – Plan
 - I – Improve
 - E – Engage
 - D – Design and Transition
 - O – Obtain and Build
 - D – Deliver and Support
- This means that Value Stream **IS** a set order of the SVC.
- E.g. one particular Value Stream could be:
 - Plan → Design and Transition → Obtain or Build → Deliver and Support
- Another particular Value Stream could be:
 - Deliver and Support → Engage → Improve
- Benefits of having a Value Stream:
 - Helps in analyzing the current state
 - Identify workflow barriers
 - Remove waste
 - Improve productivity

PROCESSES

- A process is a set of activities that transforms inputs to outputs.



- Processes = what is done to accomplish an objective.
- Processes = Procedures + Work Instructions
 - Procedures = **WHO** is involved
 - Work Instructions = **HOW** is it carried out

Q&A FOR ITIL 4 DIMENSIONS

1. Which dimension addresses the activities organization undertake, and how they are organized to efficiently and effectively *enable value co-creation* for stakeholders?
 - a. Answer = Value Stream and Processes

2. Which dimension will be more concern in relation *to nature of the business* of the company?
 - a. Answer = Information and Technology

3. If a company has a comprehensive plan to manage its existing *organization complexity* structure for growth, which dimension is this?
 - a. Answer = Organization and People

4. Value Stream is defined as:
 - a. Answer = A *series of steps* that organization uses to *create and deliver products and services*.

5. What is Work Instruction?
 - a. Answer = *How* is carried out

CHAPTER 4: ITIL SERVICE VALUE SYSTEM (SVS)

ITIL SVS = Ensure that organization *continually co-creates value* with all stakeholders through Use and Management of Products and Services.

The ITIL SVS includes:

- IO – Input Outputs
- SVC – Service Value Chain
- 34P – 34 Practices
- G – Governance
- 7 – 7 Guiding Principles
- CI – Continual Improvement

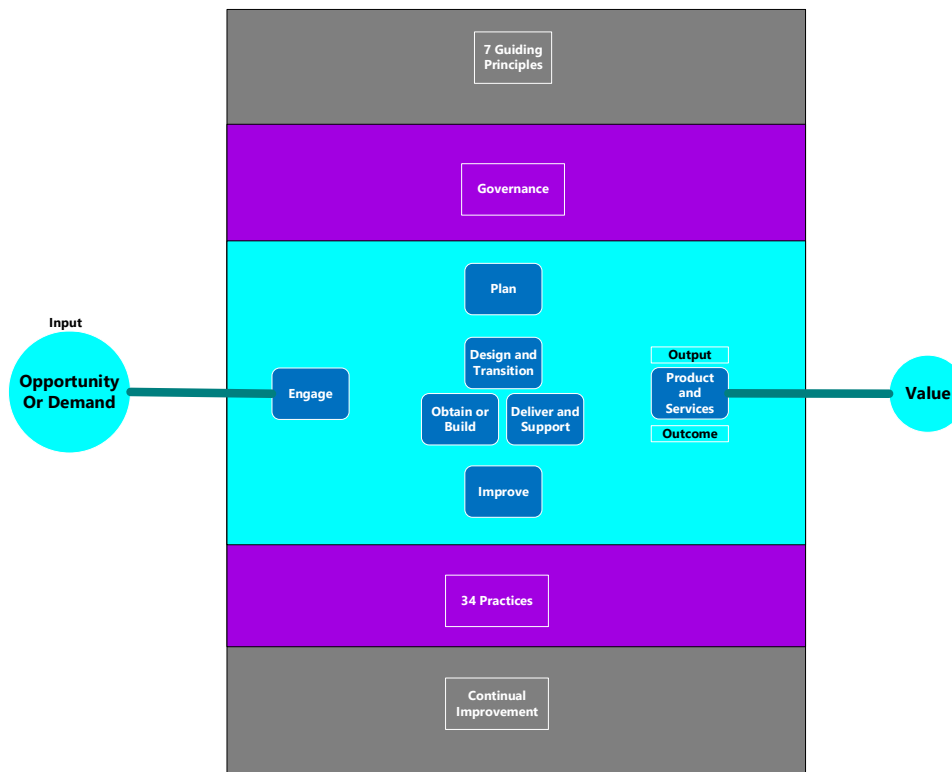


Figure 8: ITIL Service Value System (SVS) (NTUC-Learning-Hub 2019)

INPUTS OUTPUTS

INPUTS = OPPORTUNITY OR DEMAND

- Demand = need for products and services among
 - internal and
 - external customers.
- ITIL SVS can create many different types of value for a wide group of stakeholders.
- Opportunities = Possibilities to add value OR improve the organization.

OUTPUTS = VALUE

- Value = Outcome of the SVS is
 - Value
 - Perceived benefits
 - Usefulness
 - Importance of something

SERVICE VALUE CHAIN

- Please refer to ITIL SVC Chapter.

34 PRACTICES

- Please refer to ITIL 34 Practices.

GOVERNANCE

- Governance = How the organization is controlled.

7 GUIDING PRINCIPLES

- Please refer to ITIL 7 Guiding Principles

CONTINUAL IMPROVEMENT

- Please refer to 34 Practices → General Management Practices → Continual Improvement

Q&A FOR ITIL SVS

1. Within ITIL 4, how many components make up the SVS?
 - a. Answer = 6
2. What are the inputs to SVS?
 - a. Answer = Demand or opportunities
3. SVS is defined as
 - a. Answer = A set of interconnected activities that are performed to deliver a product or service to consumers.
4. Which component within ITIL SVS is supposed to make recommendations to *guide* an organization in all circumstances?
 - a. Answer = Guiding Principles
5. ITIL ensures a holistic approach to ITSM through the consideration of?
 - a. Answer = 4 Dimensions of Service Management

CHAPTER 5: ITIL 7 GUIDING PRINCIPLES

- 7 Guiding Principles = *recommendations that guide* an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management.

- 7 Guiding Principles =
 1. Focus on Value
 2. Start Where You Are
 3. Progress Iteratively with Feedback
 4. Collaborate and Promote Visibility
 5. Think and Work Holistically
 6. Optimize and Automate
 7. Keep it Simple and Practical

1. PRINCIPLE 1: FOCUS ON VALUE

- Focus on Value = Everything the organization does should link back to value for itself, its customers and other stakeholders.
- How?
 - Value comes in forms of
 - Revenue
 - Customer Loyalty
 - Lower Cost
 - Growth Opportunities
- Know who is being served.
- What is truly of value to consumer?
- Know how consumers use each service.
- Encourage Focus on Value amongst staff.
- Focus on Value during Operational Activity
- Include a Focus on Value in every step of Improvement Initiatives.

2. PRINCIPLE 2: START WHERE YOU ARE

- Start Where You Are = Do not start over without first considering what is already available to be leveraged.
- Look at what exists as objectively as possible.
- Apply risk management skills during decision making.
- Determine if successful practices or services can be replicated.
- Recognize that sometimes nothing from the current state can be reused.

3. PRINCIPLE 3: PROGRESS ITERATIVELY WITH FEEDBACK

- By organizing work into smaller, manageable sections that can be executed and completed in a timely manner, the focus on each effort will be sharper and easier to maintain.
- Seek and use feedback at all times.
- Feedback loop = Part of the output of an activity is used for new input.
- Minimum Viable Product (MVP) = a version of the final product that allows validated learning with the least effort.
 - Every iteration should be produced with the concept of MVP.
- Prevent “Analysis Paralysis” – Understanding the big picture is important, but so is making progress.

4. PRINCIPLE 4: COLLABORATE AND PROMOTE VISIBILITY

- When initiatives involve the right people in the correct roles, efforts benefit from better buy-in, more relevance (because better information is available for decision making, and an increased likelihood of long-term success).
- Stake holder groups:
 - Service Provider (helps to facilitate outcomes for...) → Customers
 - Developers (helps to facilitate outcomes for...) → Operations
 - Suppliers (helps to facilitate outcomes for...) → Organization
- Improvement Work (IW) vs Daily Tasks (DT):
 - Improvement Work (IW) needs to be supported by Management.
 - Else, if staff prioritize Daily Tasks (DT) over Improvement Work (IW), then IW may appear to be low-priority activity.
- No visibility of work = Poor decision-making.
- Critical Analysis Activities (CAA) help to improve visibility:
 - Understand Work In Progress (WIP)
 - Identify Bottlenecks
 - Identify Waste
- Not necessary to get consensus from everyone before proceeding.
- Collaboration does not mean Consensus.
- Right method for communication is critical for success.
- Decisions can only be made on visible data.
- What data is needed vs cost of obtaining the data is a management balance.

5. PRINCIPLE 5: THINK AND WORK HOLISTICALLY

- No service, practice, process, department, or supplier stands alone.
- The outputs that the organization delivers to itself, its customers, and other stakeholders will suffer unless it works in an integrated way to handle its activities as a whole, rather than as separate parts.
- All the organization's activities should be focused on the delivery of value.
- How to 'Think and Work Holistically'?
 - Use automation as a means of integrated management.
 - Recognize system complexity – Methods for simple system are ineffective and harmful for complex systems.
 - Collaborate between all stakeholders.
 - Identify success elements within each area, then look for relationships between these success elements that influence outcomes.

6. PRINCIPLE 6: OPTIMIZE AND AUTOMATE

- Organizations must maximize the value of the work carried out by their human and technical resources.
- Technology can help organizations to scale up and take on frequent and repetitive tasks, allowing human resources to be used for more complex decision-making.

OPTIMIZATION

- Optimization = make something as effective and useful as it needs to be.
- Optimization needs to be done first before Automation.
- Optimization Steps:
 - Agree upon the objectives for optimization. (Define your metrics – measure results of optimization using metrics).
 - Assess current state of things.
 - Assess the future state (after optimization).
 - Ensure that optimization has appropriate level of stakeholder engagement.
 - Execute improvements in iterative way.
 - Continually monitor impact of optimization.

AUTOMATION

- Automation = using technology to perform consistent steps without human intervention.
- Do not automate:
 - Complex stuff
 - Sub-optimal (unoptimized) stuff
- Use other 7 Guiding Principles as well while Optimizing and Automating.

7. PRINCIPLE 7: KEEP IT SIMPLE AND PRACTICAL

- Always use the minimum number of steps to accomplish an objective.
- Outcome based thinking should be used to produce practical solutions that deliver valuable outcomes.
- Always ask whether a:
 - Practice
 - Process
 - Service
 - Metric is useful for contributing to value?
- Be mindful of conflicting objectives.
- Simplicity is the ultimate sophistication.
- Do fewer things, but do them better.
- Ensure value.
- Simplicity is the best route to achieving quick wins.
- Respect the time of people involved.
- Easier to understand, more likely to adopt.

Q&A FOR 7 GUIDING PRINCIPLES

1. Which principle focusing on work in an integrated way to approach activities as related to the **whole**, rather than as separate parts?
 - a. Answer: Think and work holistically

2. Which principle **put the right people in the correct roles** to ensure that initiatives have an increased likelihood of long-term success?
 - a. Answer: Collaborate and promote visibility

3. Which is a recommended principle when applying **'Focus on Value' and 'Progress iteratively with feedback'** principle?
 - a. Answer: Optimize and Automate

4. Which principle understands the **flow of Work in Progress (WIP), identify bottlenecks and excess capacity and uncover waste**?
 - a. Answer: Collaborate and promote visibility

5. What describe the 'Focus on Value' principle?
 - a. Answer: Establish an understanding of what is truly value to the service customer.

CHAPTER 6: ITIL 34 PRACTICES

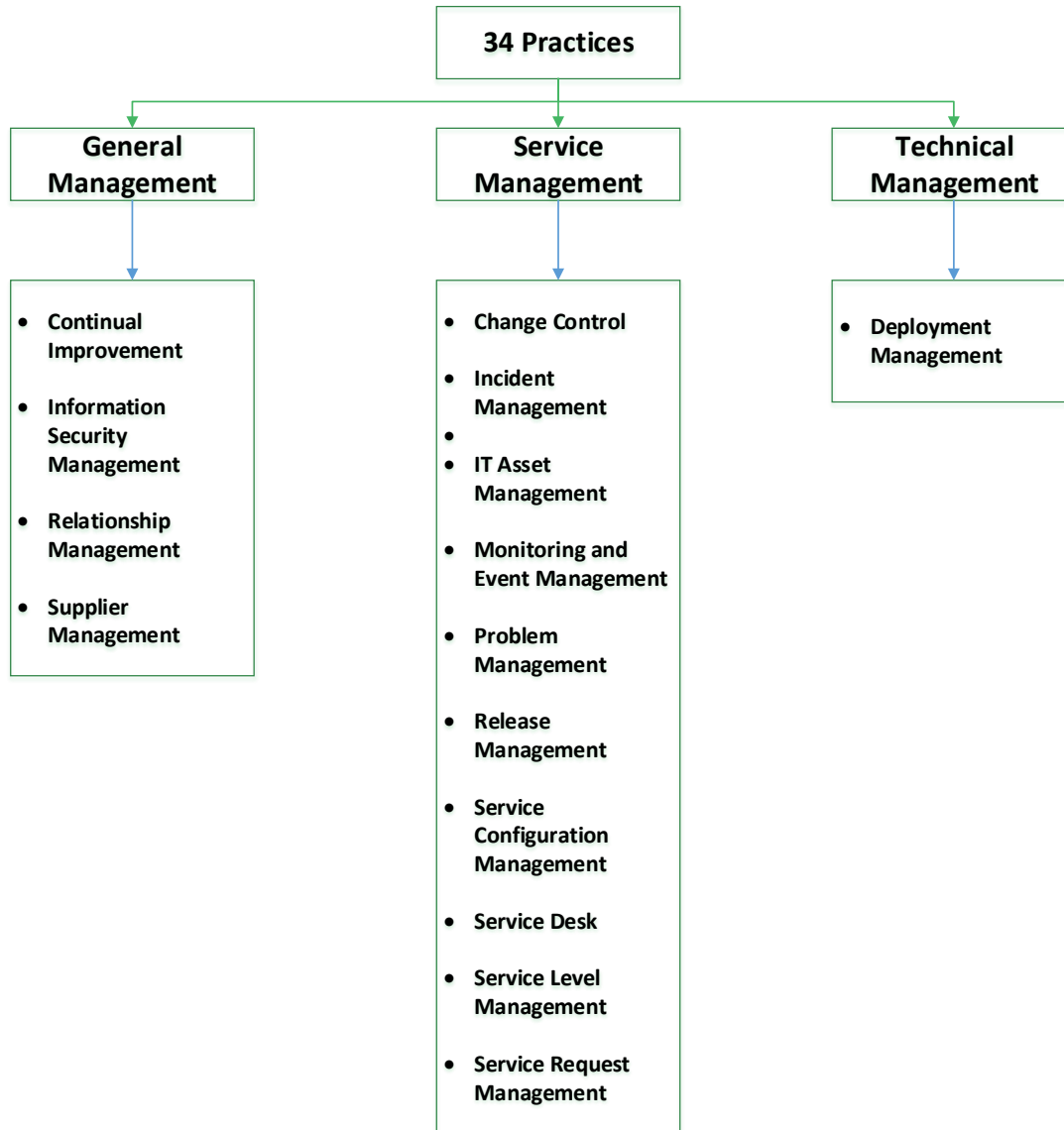


Figure 9: ITIL 34 Practices - only the important ones (NTUC-Learning-Hub 2019)

- 34 Practices = a set of organization *resources designed for performing work* or accomplishing an objective.

GENERAL MANAGEMENT PRACTICES

CONTINUAL IMPROVEMENT (CI)

- CI = A *recurring organizational activity* performed at all levels to ensure that an organization's performance *continually* meets stakeholders' expectations.
- CI = to align organization's practices with changing business needs through ongoing improvement.

Continual Improvement Model

- Step 1: What is the vision? → Vision and Objectives
- Step 2: Where are we now? → Perform Assessments
- Step 3: Where do we want to be? → Define measurable targets
- Step 4: How do we get there? → Define improvement plan
- Step 5: Take action → Execute
- Step 6: Did we get there yet? → Evaluate metrics
- Step 7: How do we keep the momentum?

Continual Improvement Methods

- There are many methods such as:
 - Lean = Elimination of waste
 - Agile = Incremental improvements
 - DevOps = holistic work, ensures improvements are effectively applied.

Continual Improvement Register (CIR)

- CIR = a database used to track and manage improvement ideas
- CIRs help to make things visible → provides value.

INFORMATION SECURITY MANAGEMENT (ISM)

- ISM = protect the information needed by the organization to conduct its business.
- ISM includes:
 - Confidentiality
 - Integrity
 - Availability of information – balance between protection vs innovation
 - Authentication - real person?
 - Non-repudiation - ensuring that someone can't deny that they took an action
 - Prevention
 - Detection
 - Correction

RELATIONSHIP MANAGEMENT (RM)

- RM = establish and nurture links between organization and stakeholders.

SUPPLIER MANAGEMENT (SM)

- SM = ensure suppliers provide seamless quality.

SERVICE MANAGEMENT PRACTICES

CHANGE CONTROL (CC)

- CC = manage the change schedule - maximize the number of successful IT changes - ensure that risks have been properly assessed and authorizing changes to proceed.
- Change = addition / modification / removal that could affect services.
- Types of Changes:
 - Emergency – must be implemented ASAP e.g. security patch.
 - Normal – scheduled and authorized change that follows a standard process
 - Standard – can be implemented without additional authorization e.g. service requests.
- Change Authority = the person or group who authorizes.
- Change Schedule = help plan changes + avoid conflicts + assign resources.

INCIDENT MANAGEMENT (IM)

- IM = minimizes negative impact of incidents by restoring normal service operation as quickly as possible.
- Incident = unplanned interruption to service = Configuration Item (CI) is affected
- Swarming = involving many stakeholders working together initially, until it becomes clear which of them is best placed to continue and which can move on to other tasks.
- Swarming is a technique to help manage incidents.
- IM Considerations:
 - Prioritize incidents
 - Design incident appropriately for different types of incidents.
 - Use robust tool to log incidents.

IT ASSET MANAGEMENT (IT-AM)

- IT - AM = manage full lifecycle of all IT assets.
 - Helps organization retire assets, meet regulatory requirements, decide about purchases.
- IT Asset = anything of financial value that contributes to the IT service.

MONITORING AND EVENT MANAGEMENT (MEM)

- MEM = observe and report any changes of state (identified as events).
- Establishes appropriate response to events.
- Event = change of state or Configuration Item (CI)
- 3 Types of Events:
 - Informational – does not require action
 - Warning – Actions to be taken before impact
 - Exceptions – Breach to the norm.

PROBLEM MANAGEMENT (PM)

- PM = Reduce the likelihood and impact of incidents by identifying causes of incidents and, managing workarounds.
- PM is applied mainly to ITIL Service Value Chain (SVC): 'Improve' & 'Deliver & Support'.
- PM is interfaced with other ITIL Practices such as:
 - GM: Continual Improvement
 - SM: Change Control
 - SM: Incident Management
- Problem = Cause or potential cause of incidents.

- Known error = problem that has been analyzed but not resolved.
- Phases of PM:
 - Step 1: Problem Identification → Step 2: Problem Control → Step 3: Error Control
 - Step 1: Problem Identification
 - Detecting issues from Service Desk / Technical Support Staff / Suppliers and Partners / Internal Software Developers / Test Teams / Project Teams
 - Step 2: Problem Control
 - Analyzing problems using 4 ITIL Dimensions perspective.
 - Prioritize problems based on high to low risk
 - Step 3: Error Control
 - After Problem Control / Analysis is completed (i.e. faulty components have been identified), Error Control identifies solutions to these problems.
 - Result may be a Change Request for implementation
 - Once done, Error Control does regular re-assessment on the known error such as
 - Impact on customers
 - Cost of solution
 - Effectiveness of Workaround.
 - Workaround = solution that reduces or eliminates impact of problem (since full resolution is not yet available).
 - Workarounds must be documented in records.
 - If there's no way to resolve the problem (due to in-viability or too costly), and the problem remains as a permanent 'error', workaround could be the permanent way.

RELEASE MANAGEMENT (RM)

- RM = Make New / Changed service features available for use.
- = plans which components to be deployed for a particular release.

Traditional / Waterfall Release Management

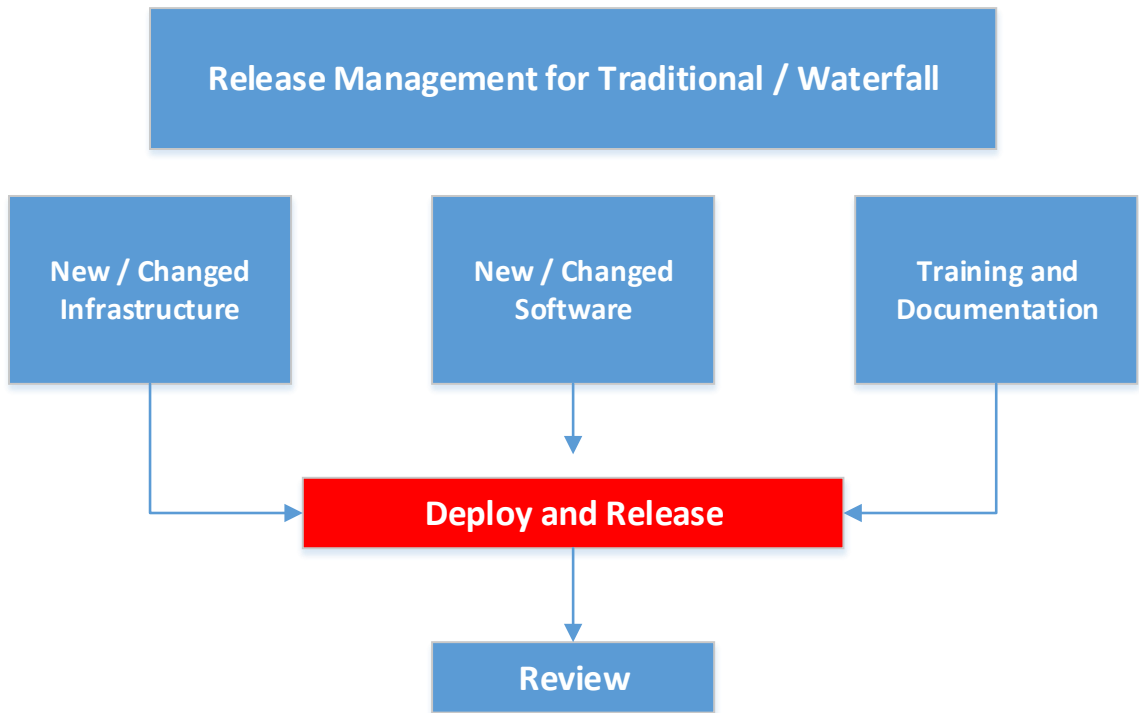


Figure 10: Release Management for Traditional / Waterfall Environment (NTUC-Learning-Hub 2019)

- In Traditional / Waterfall Environment (Figure 10), Release + Deployment is combined.
- Deployment makes the new functionality available.

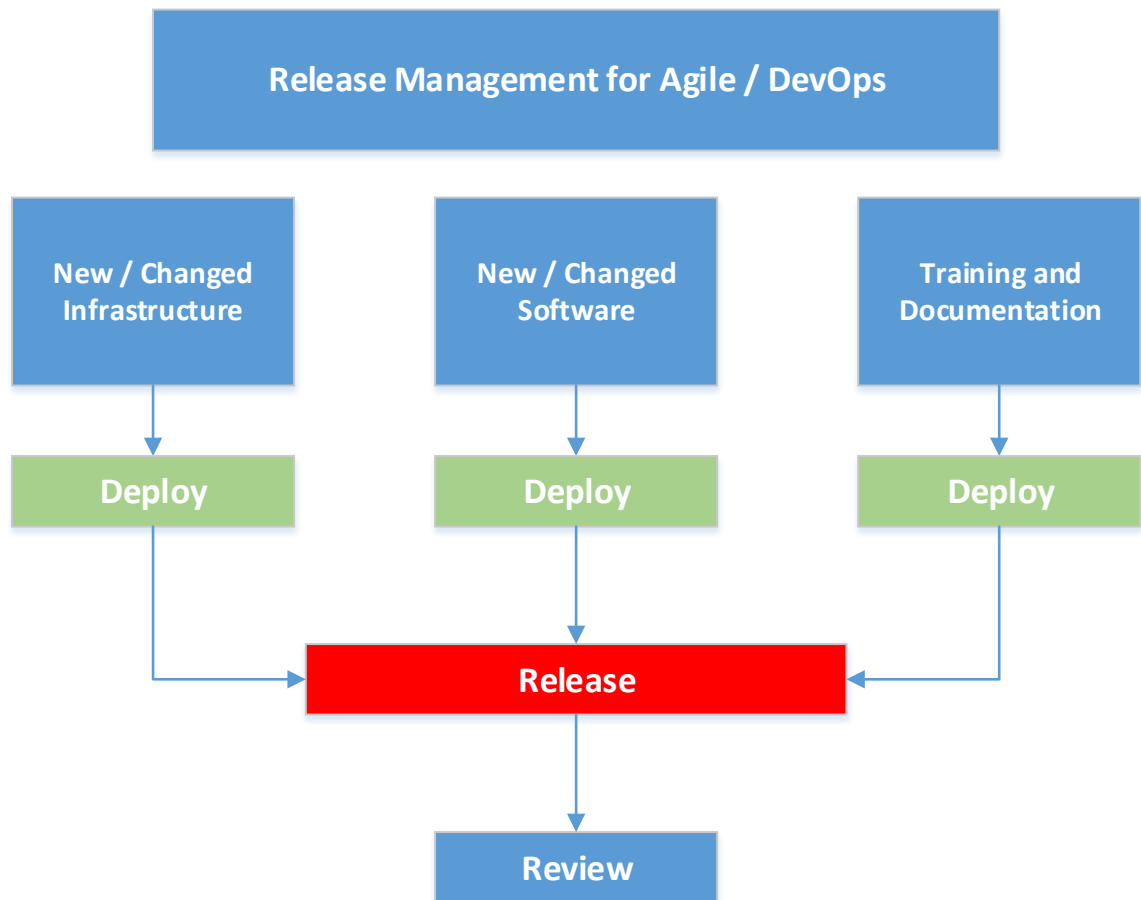


Figure 11: ITIL Release Management for Agile / DevOps Environment (NTUC-Learning-Hub 2019)

- In Agile / DevOps Environment (Figure 11), we Deploy first, then Release.
- Software is Deployed incrementally first.
- Then later on, Release allows new functions.

SERVICE CONFIGURATION MANAGEMENT (SCM)

- SCM = Ensure accurate information about Service Configuration
 - and ensures Configuration Items (CI) are available when needed.
- Configuration Item (CI) = Components needed to be managed to deliver IT service.
- Configuration Management System (CMS) = Tools / Data / Information used to support SCM.

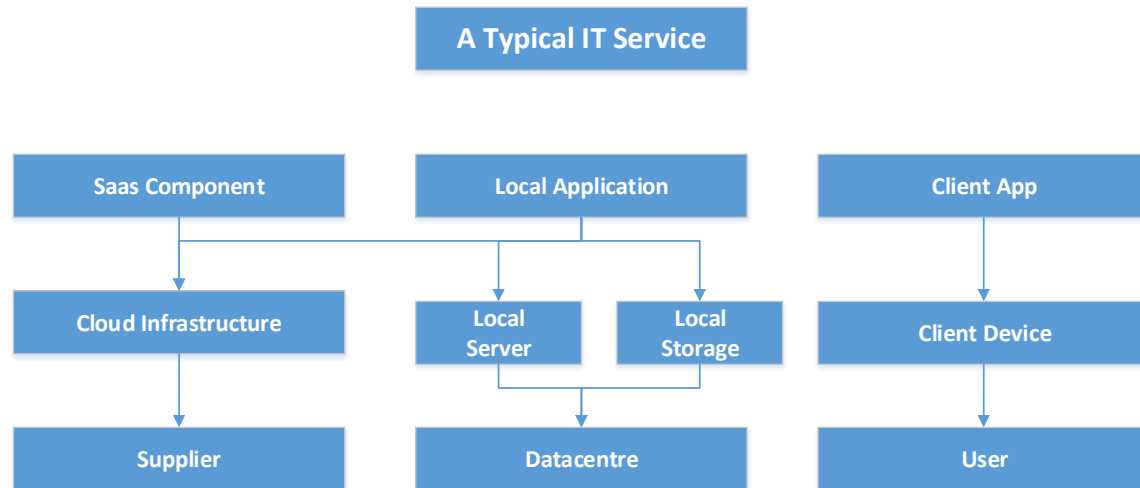


Figure 12: Typical IT Service Configuration Model (SCM) (NTUC-Learning-Hub 2019)

SERVICE DESK (SD)

- SD = To capture demand for Incident Resolution & Service Requests.
- SD = Applied to SVC Activities IEDOD (all except P)
 - Improve
 - Engage
 - Design and Transition
 - Obtain and Build
 - Deliver and Support

- Best Practices of SD
 - Don't need to be highly technical, but need to have practical understanding of business processes.
 - Need to explain, arrange and coordinate – not just fix broken technology
 - Need to report / acknowledge / classify issue
 - Need to work closely with support teams
- SD Channels:
 - Phone
 - Live Chat
 - Chat bots
 - Email
 - Service Portal
 - Walk in SD
 - Social Media Messaging
 - Public Forums
- SD Technologies:
 - Knowledge Base
 - Remote Access Tools
 - Workflow Systems
 - Configuration Management Systems
 - Dashboard and Monitoring Tools
 - Call Recording and Quality Control
- Virtual Service Desk (VSD)
 - Allows agents to work from geographical dispersed locations.

- SD Skills Required:
 - Excellent customer service
 - Effective communication
 - Incident analysis
 - Emotional intelligence

SERVICE LEVEL MANAGEMENT (SLM)

- SLM = set clear business targets for performance
 - Assess / monitor Service Delivery
- SLM = applied to SVC Activities PE:
 - Plan and Engage.
- SLM Activities include:
 - Service Reviews
 - Collect / Analyze / Report metrics
 - Establish shared view of services with customers
- SLM Info Sources:
 - Customer Feedback:
 - Surveys
 - Operational Metrics
 - Business Metrics
 - Customer Engagement (Questions for Customers):
 - How can we help you more?
 - What is the best measure of your success?

- What are your goals and objectives?
- Service Level Agreement (SLA) = agreed document between Service Provider and Customer that identifies expected level of service.
- Best Practices for drafting an SLA:
 - Must be simple to understand
 - Should involve all stakeholders
 - Should have defined outcomes (metrics) e.g. customer satisfaction
 - Must be related to a real service e.g. live service.

SERVICE REQUEST MANAGEMENT (SRM)

- SRM = support all Service Requests in a user-friendly manner.
- SRM = Applied to All SVC Activities IEDOD (except P)
 - Improve
 - Engage
 - Design and Transition
 - Obtain and Build
 - Deliver and Support
- Best Practices for SRM:
 - SR should be standardized and automated
 - Users' expectations / Policies should be clearly set and realistic
 - Improvement Opportunities should be identified
- Service Request (SR)= A User / Authorized Representative initiates a Service Action agreed in the SLA.
- SR Examples:

- Request for Service Delivery Action
- Request for Information
- Request for Access
- Feedback / Compliments / Complaints

TECHNICAL MANAGEMENT PRACTICES

DEPLOYMENT MANAGEMENT (DM)

- DM = to *move* new / changed hardware / software / documentation / processes / component to *LIVE* environments.
- DM = Infrastructural Deployment + Software Deployment
- DM is closely related to Release Management (RM) and Change Control (CC) → but they are practiced separately.
- Types of Deployments:
 - Phased Deployment
 - Components are Deployed in Phases – meaning, deployed in Portions of the Environment.
 - Repeated until Deployment is completed.
 - Big Bang Deployment
 - Components are Deployed all at the same time.
 - Continuous Delivery Deployment
 - Components are Integrated / Tested / Deployed only when they are needed.
 - Allows for frequent Customer Feedbacks.
 - Pull Deployment
 - Used only for software – Deployed only when needed.
 - The software is stored in a repository – users download / update their devices only when needed.

Q&A FOR 34 ITIL PRACTICES

1. Which ITIL Practice provides a Single Point of Contact for Users?
 - a. Answer = Service Desk

2. What is the Definition of **Change**?
 - a. Answer = Add / **Modify** / Remove anything that could have direct or indirect effect on service.

3. Identify the missing word:
 - a. The Purpose of the **Information Security Management** practice is to **(PROTECT)** the organization's information)

4. To **track** and manage **improvement ideas** from identification through to final action, organizations use a **database or structured document** called:
 - a. Answer = Continual Improvement Register

5. Which Problem Management Phases have activities managed known **errors**?
 - a. Answer = Error Control

6. Which ITIL Practice **set clear business-based targets for service performance**, so that the delivery of a service can be properly assessed, monitored, and managed against these targets?
 - a. Answer = Service Level Management (SLM)

7. Service Level Management (SLM) practices mainly apply to which Service Value Chain (SVC) activities?

a. Answer = Plan and Engage

8. Which of the following is NOT an ***Incident***?

a. Answer = A user make a complain to the Service Desk

CHAPTER 7: CONCEPTS OF SERVICE MANAGEMENT

SERVICES

- Services = enable value co-creation
 - By facilitating outcomes that customers want to achieve
 - Without the customer having to manage costs and risks.

IT SERVICE MANAGEMENT (IT – SM)

- IT – SM = a set of specialized organizational capabilities for enabling value to customers in the form of services.
- IT – SM = application of Service to IT

ORGANIZATION

- Organization = a group of people that has responsibilities / authorities / relationships to achieve its objectives.

VALUE

DEFINITION

- Value = Perceived benefits / usefulness / importance of something.

3 DIMENSIONS

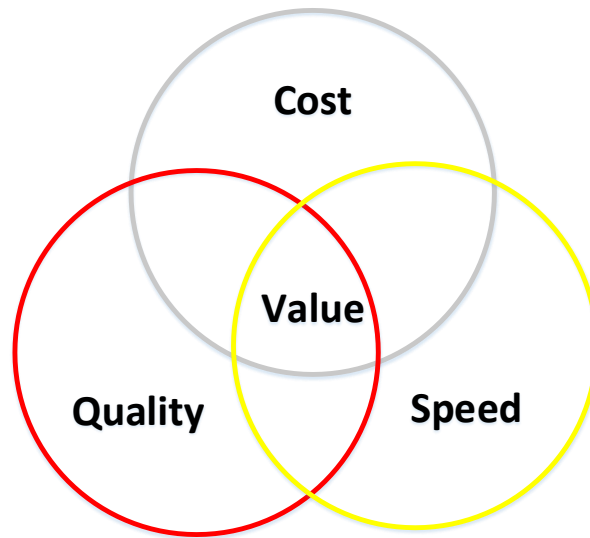


Figure 13: 3 Dimensions of Value (NTUC-Learning-Hub 2019)

- Cost = Measured against how much the customer is willing to pay.
- Quality = Customer requirements and the warranty around service delivery.
- Speed = Growing demand for increased time to market and time to value.
- Each dimension must be given appropriate attention – do not overly focus on a single dimension.

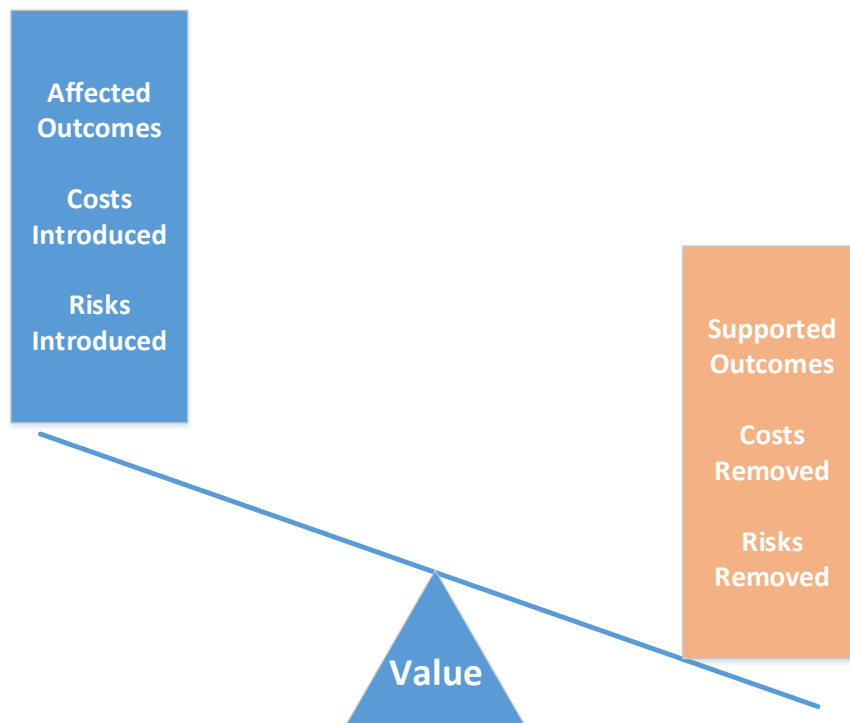


Figure 14: Link between Value + Cost + Risk + Outcomes (NTUC-Learning-Hub 2019)

COSTS

- Cost = amount of money spent on a specific activity or resource.
- Types of Costs:
 - Type 1 = Imposed on the consumer (by the service provider)
 - Type 2 = Removed from the consumer (by the service provider)
- From Consumer's perspective → He needs to consider both costs to assess the value created.
- From Provider's perspective → He needs to ensure he can meet budget constraints.

RISK

- Risk = possible events that could cause harm / loss / make it difficult to achieve objectives.
- Risk = uncertainty of the outcome.
- Types of Risks:
 - Type 1 = Imposed on the consumer (by the service provider)
 - Type 2 = Removed from the consumer (by the service provider)
- How to manage Risk (for Service Providers)?
 - Actively define required outcomes of customer
 - Communicate clearly Critical Success Factors (CSF) of service
 - Ensure provider has necessary resources

CUSTOMERS + SPONSOR + USER

- 3 Roles of a Possible Consumer = Customer / Sponsor / User
- Customer = Person who defines requirements for Service Provider + takes responsibility for Outcomes of Consumption.
- User = Person who uses the services
- Sponsor = Person who authorizes the budget for service consumption e.g. Finance Department.

OUTPUT VS OUTCOME

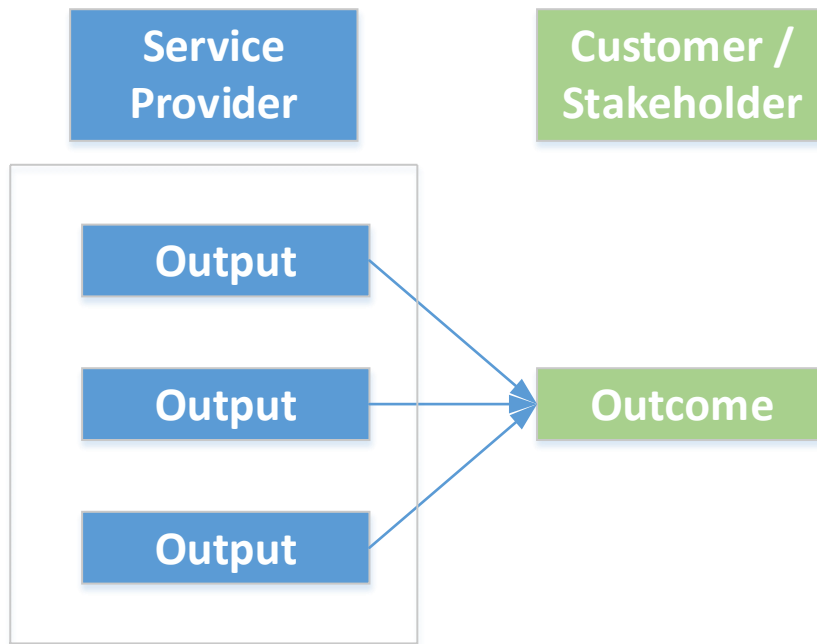


Figure 15: Output vs Outcome

- Output = Tangible / Intangible deliverable of an activity.
- Outcome = Consists of one or more Outputs (put together to help enablement for Stakeholder)
- **Service Provider** produces *Outputs* to help its **Consumers** achieve *Outcomes*
- **Outputs contribute to Outcome**
- Sometimes, Provider and Consumers work together to achieve the desired *Outcome*
- But if its *Non-Value Add*, its defined as *Compliance*.

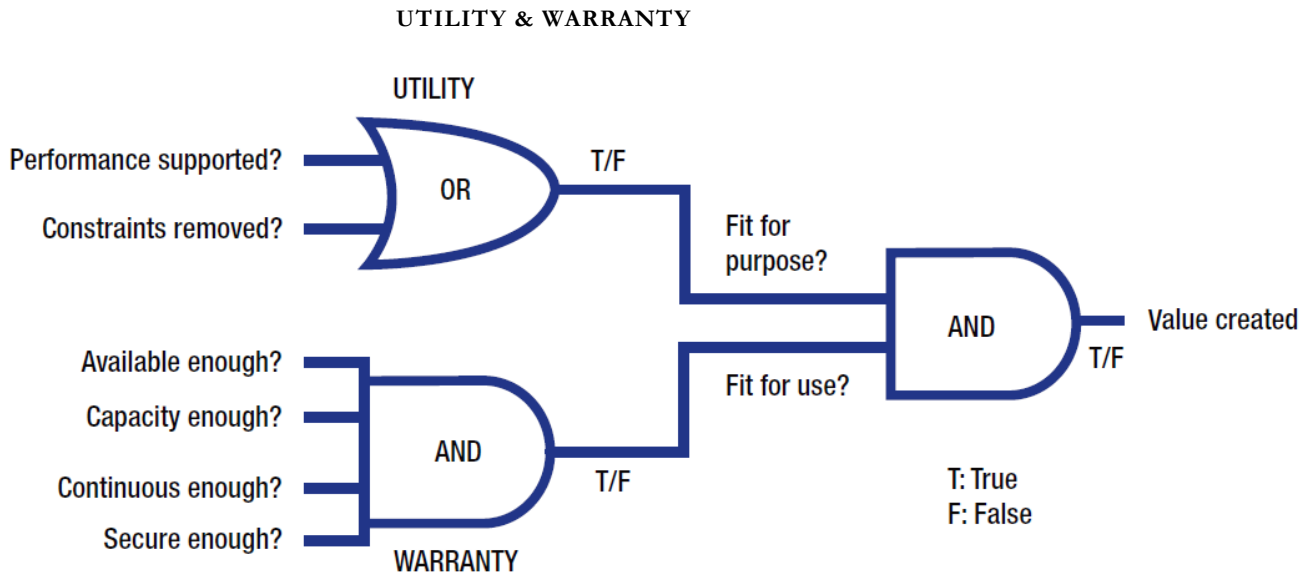


Figure 16: Utility & Warranty (Kaiser 2017)

UTILITY

Performance Supported?

- For example, a mobile phone service must enable the customer better communication.

Constraints Removed?

- For example, the mobile service provider, by providing the ability to make calls while you golf, removes the constraints that usually would exist if you had to stop midgame, head back to your office, and make the call.
- In this instance the constraints have been removed through the service the mobile phone offers.

WARRANTY

Available enough?

- On holiday, you see that the mobile service provider does not have coverage inside the resort. = Not enough Availability!

Capacity enough?

- Stuck in a traffic jam, you can't make an urgent call even though you have service coverage.
- Because the service provider does not have sufficient capacity to handle calls from that particular cell tower. = Not enough Capacity!

Continuous enough?

- The call drops every few minutes when you are in an important call. = Not enough Continuity!

Secure enough?

- Someone can eavesdrop on your confidential call. = Not Secure enough!

	Utility	Warranty
Meeting Need / Requirement	Service meets a <i>Need</i>	Service meets a <i>Requirement</i>
Service	What the service does...	How the service performs...
Fit for...	Is the service Fit for Purpose?	Is the service Fit for Use?
Supportive vs Restrictive	The service <i>supports</i> the customer's performance	The service <i>meets</i> the agreed conditions of the customer.

SERVICE RELATIONSHIP (SR)

- SR = Cooperation between Provider + Consumer
- SR = Includes **Service Provision (SP)** + **Service Consumption (SC)** + Service Relationship Management (SRM)

SERVICE PROVISIONING (SP)

- SP =
 - Supplying of goods
 - Service Level Management (SLM) + Continual Improvement (CI)
 - Fulfillment of Service Actions
 - Managing Provider's resources

SERVICE CONSUMPTION (SC)

- SC =
 - Acquisition of goods
 - Service Actions made by users e.g. using the Provider's resources
 - Managing Consumer's resources

SERVICE RELATIONSHIP MODEL (SRM)

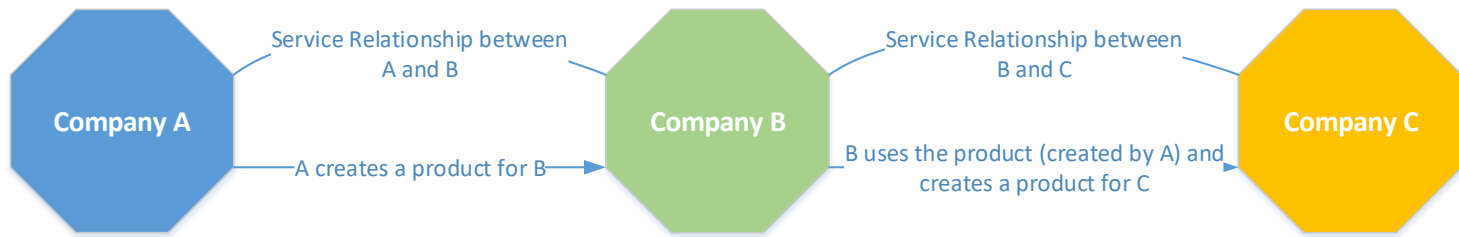


Figure 17: Service Relationship Model (SRM)

PRODUCTS

- Product = A configuration of an organization's resources designed to offer value to customer.
- Resource = A person / entity that is required for an activity or achievement of an objective.

SERVICE OFFERING (SO)

- SO = A description of services designed to address needs of a target consumer group.
- SO = may include Goods / Access to Resources / Service Actions

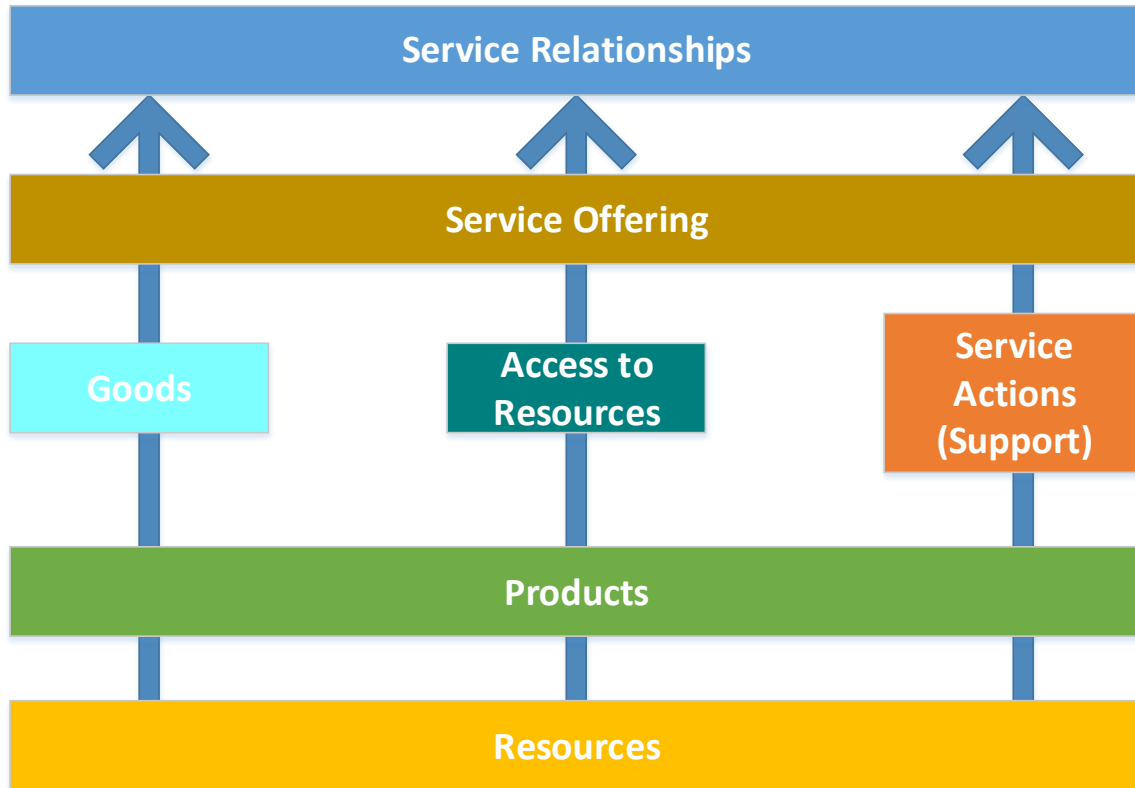


Figure 18: Services are Based on Products (NTUC-Learning-Hub 2019)

GOODS

- Goods are supplied to Consumer
- Ownership of Goods are transferred to Consumer
- Consumer takes responsibility of Goods

ACCESS TO RESOURCES

- Access to Resources (for Consumers) are only allowed under agreed terms and agreed Consumption Period.
- Ownership of Access is NOT transferred to Consumer.

SERVICE ACTIONS

- Performed by Provider (for Consumer) according to Agreement

Q&A FOR CONCEPTS FOR SM

1. How many Roles are there for Consumers?
 - a. Answer = 3 (Customer / Sponsor / User)
2. Cost is defined as:
 - a. Answer = Money spent on resources or specific activity
3. Utility is defined as:
 - a. Answer = Functionality of the service to meet a particular need.
4. What is a description of one or more service, ***designed to address the needs*** of a target consumer group?
 - a. Answer = Service Offering (SO)
5. When services are delivered by the provider, they create new _____ for service consumers or modify their existing ones.
 - a. Answer = Resources
6. What is the definition of Warranty?
 - a. Answer = The assurance that a product of service will meet agreed requirements.

SAMPLE EXAM QUESTIONS

1. What is the definition of a **Service**?
 - a. Answer = 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*

2. Identify the missing word(s) in the following sentence. **Utility** is the [?] offered by a product or service to meet a particular need.
 - a. Answer = **Functionality**

3. LHub Training has decided to offer two membership levels to their training programs. The first membership level includes all of their video courses, practice exams, and study guides for a single monthly fee. This plan does not provide the students with the actual exam voucher to take the certification exams, though. What term best describes this membership level which provides several services for a single price?
 - a. Answer = A service offering

4. Which describes *outputs*?
 - a. Answer = Tangible or intangible *deliverables*

5. What term best describes a person or a **group of people that has its own functions** with responsibilities, authorities, and relationships to achieve its objectives?
 - a. Answer = Organization

6. Which describes the nature of the *guiding principles*?
 - a. Answer = A guiding principle is a *recommendation used as guidance* in all circumstances

7. Which guiding principle is most affected by the *customer experience (CX)*?
- a. Answer = Focus on Value
8. Lhub Training Solutions wants to build a new service to automatically fulfill exam voucher orders for students. Currently, exam vouchers are fulfilled manually by a staff member once the order is received from the student by copying and pasting the voucher number from a spreadsheet into an email template and sending out the email to the students. Before attempting to automate this fulfillment process, the team lead **takes an inventory of the current services**, processes, and procedures that are being used by the voucher fulfillment team to see if they might be able to be reused. What guiding principle best describes this scenario?
- a. Answer = Start where you are
9. Lhub Training Solutions has decided to create an online course for the ITIL 4 Foundation exam. The company developed their curriculum and then invited 50 students to participate in live training to determine if the training was effective. During the training, some students didn't understand the concept of the service value chain, so the instructor rewrote that portion of the curriculum. Which guiding principle is being demonstrated by this approach to curriculum development?
- a. Answer = Progress iteratively with feedback
10. You are working to design a new service for internal use across your organization. As part of your design efforts, you form a small team with relevant stakeholders from the human resources, information technology, sales, and other relevant departments to ensure the **service adequately meets each department's needs** and hope this results in great acceptance of the service when delivered. Which guiding principle best describes this scenario?
- a. Answer = Collaborate and promote visibility
11. John is currently working to create a new service that would allow a customer to purchase a digital product online and have it delivered to the user's inbox. John is responsible for the payment portion of this service, but Sally is responsible for the digital product fulfillment portion of the service. Which of the following should John do in order to follow the principle of 'think and **work holistically**'?

- a. Answer = John should meet with Sally to determine how the digital product fulfillment will occur
12. Which of these are a key focus of the '*organization and people*' dimension?
- a. Answer = Roles and responsibilities
13. Which of these are NOT a key focus of the '*partners and suppliers*' dimension?
- a. Answer = Workflow management and inventory systems
14. Which ITIL concept describes the Service Value Chain (SVC)?
- a. Answer = Service Value System (SVS)
15. What operating model outlines the key activities required to respond to demand and *facilitate value realization* through the creation and management of products and services?
- a. Answer = Service Value Chain (SVC)
16. Which value chain activity includes portfolio *decisions for design and transition*?
- a. Answer = Plan
17. Identify the missing word(s) in the following sentence. A customer is a person who defines the requirements for a service and *takes responsibility* for the [?] of service consumption
- a. Answer = Outcomes

18. Lhub Training has decided not to run their own email servers. Instead, Lhub Training pays a monthly service fee to Google's G-Suite to provide email services to the company so that Lhub Training can receive emails from its students. What best describes this **co-creation of value** by Lhub Training and Google in order to provide email support to Lhub Training's students?
- a. Answer = Service relationship management
19. Your organization is preparing to launch a new service. Your manager is concerned that there is a possibility that **something bad might happen** which could cause the service to fail and the desired outcome won't be achieved. What term best describes your manager's concerns?
- a. Answer = Risks
20. You have been assigned to a team that has been asked to identify how your consumers use a particular service, what the service helps them to do, and **how the service helps them to identify their goals**. Which of the guiding principles should best be applied in your situation?
- a. Answer = Focus on value
21. Your organization is currently running a web hosting service, but it is not providing sufficient utility and warranty. In order to fix this, a team has been assembled and asked to design a new web hosting service. The team manager suggests that the team **first look at the existing service** and its processes before they begin to design the new service. What guiding principle is being followed by the team manager?
- a. Answer = Start where you are
22. Which guiding principle is focused on **involving the right people in the correct roles** in order to get additional buy-in for the project and increase the likelihood of long-term success?
- a. Answer = Collaborate and promote visibility

23. During a review of the New Account Creation process at your company, you determine that the current process requires 15 steps to create a new account. As you analyze each step, you find that steps 3 and 5 **provide no value** to the process or the organization. Based on which guiding principle should you **eliminate** steps 3 and 5 from the process?
- a. Answer = Keep it simple and practical
24. Which ITIL concept describes **practices**?
- a. Answer = Service Value System (SVS)
25. Your company has recently engaged a new supplier to provide you with 3 routers that will handle 1 Gbps of throughput. They are scheduled for installation in three months. Your team is currently configuring the devices in preparation for installation into the network architecture based upon the design requirements. Which value chain activity would best categorize your configuration actions in this scenario?
- a. Answer = Obtain / Build

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