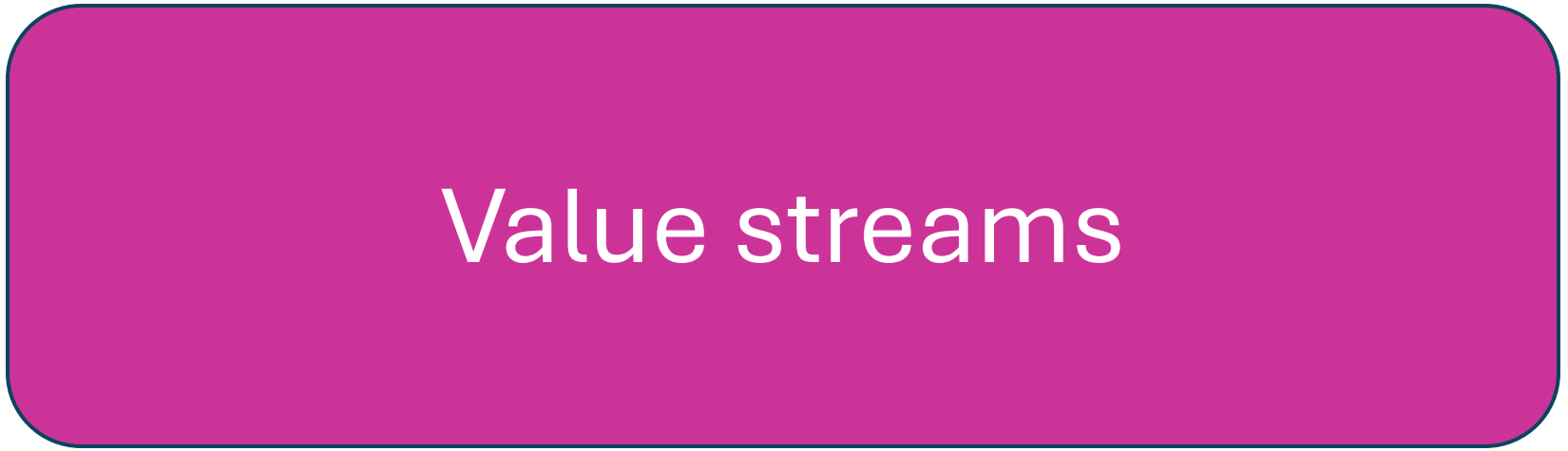
ITIL version 5 Annex

Annex – Value streams, Practices, processes

Value streams



Value streams

Value stream:

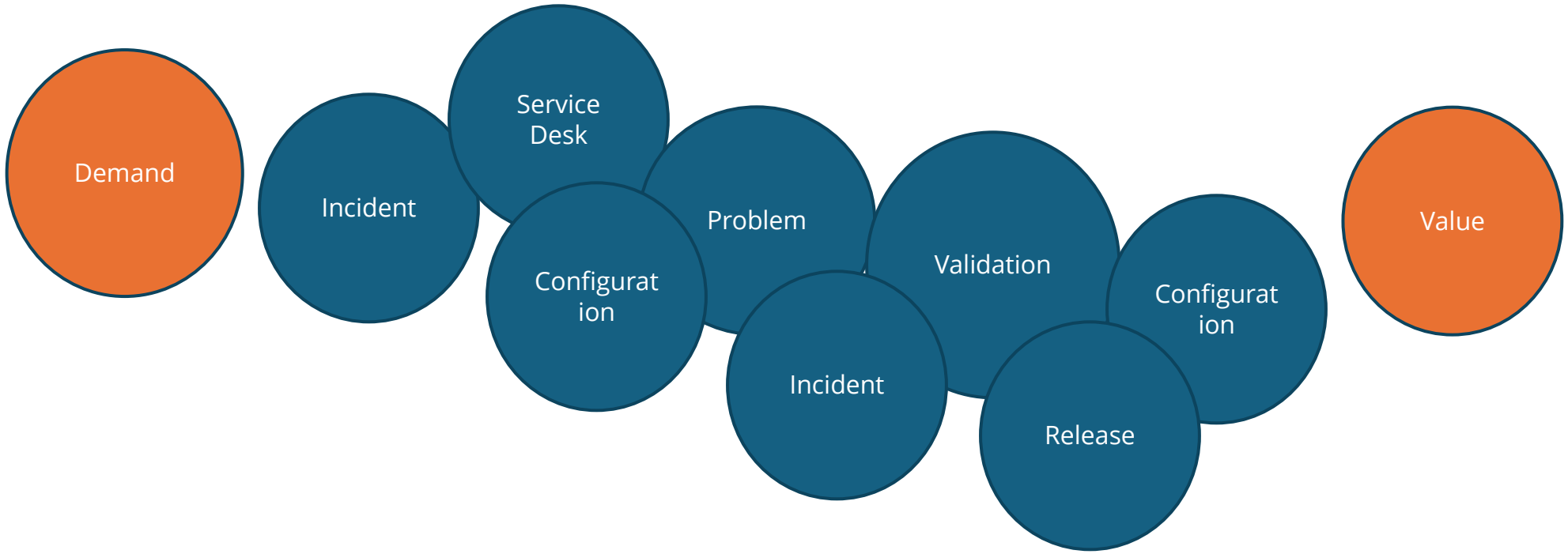
A series of steps an organization undertakes to create and deliver products and services to consumers.

Value streams should be defined by organizations for *each of their services and products.*

Value streams help the organization to identify wasteful activities and remove obstacles that hinder the organization's productivity (LEAN)

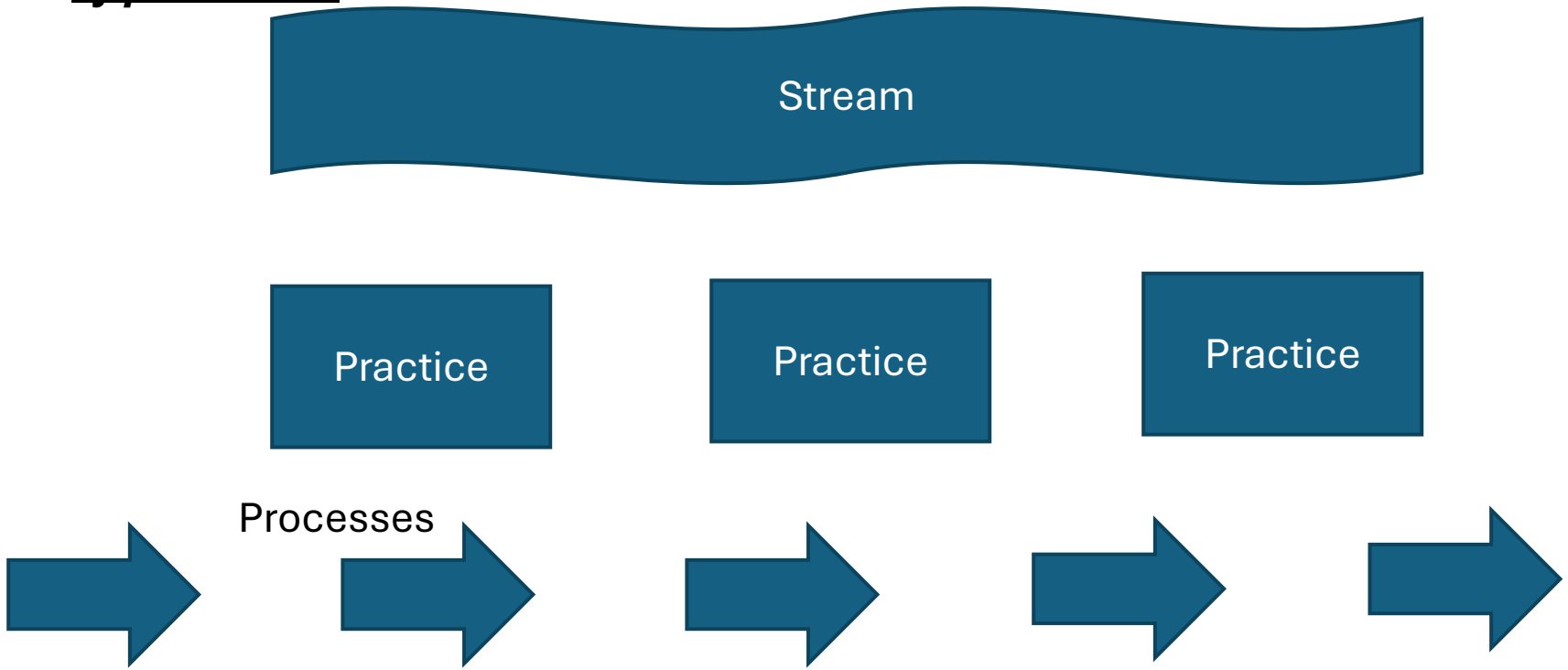
Value stream

A value stream is a series of steps that an organization uses to create and deliver products and services to a service consumer. These series of steps are made up from the combination of practices we use. The practices are defined by combination of processes.



Building a Value Stream

A train of activities make up a stream. An activity is built of practices, different practices in different stages of the train. A practice is made of processes.



About value streams

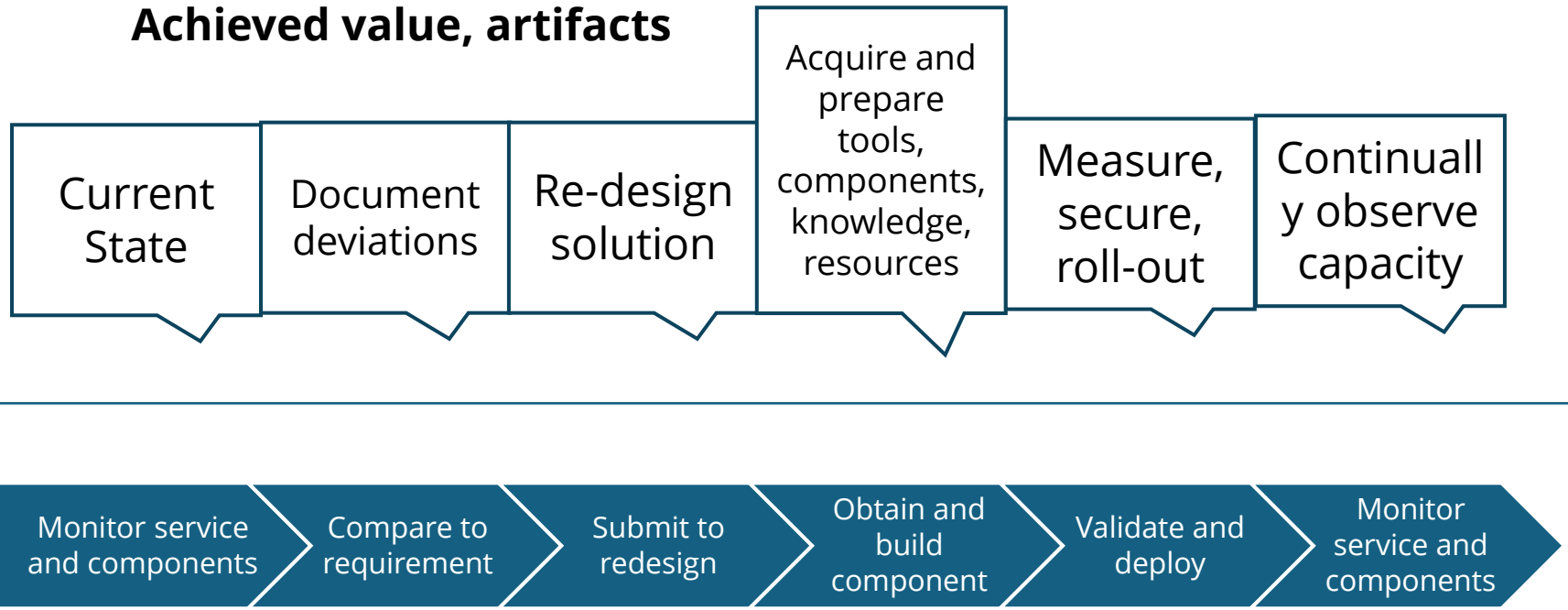
Value streams:

- are the actual sequence of activities performed, rather than a predetermined blueprint
- include the flow of information and artifacts created, processed, and transferred during the activities
- enable value for a customer or another stakeholder
- cover an end-to-end flow of work information and artifacts across one or several organizations

LEAN ‘waste’

1. the waste of unused resources
2. the waste of overproduction (producing more than what is needed now)
3. the waste of over-processing (processing beyond the standard expected by customer),
4. the waste of transportation (unnecessary movement of anything)
5. the waste of excess motion (mechanizing or automating before improving the method)
6. the waste of waiting (inactive working periods due to job queues)
7. the waste of making defective products (reworking to fix avoidable defects in products and processes).

Value stream: Capacity degradation incident resolution



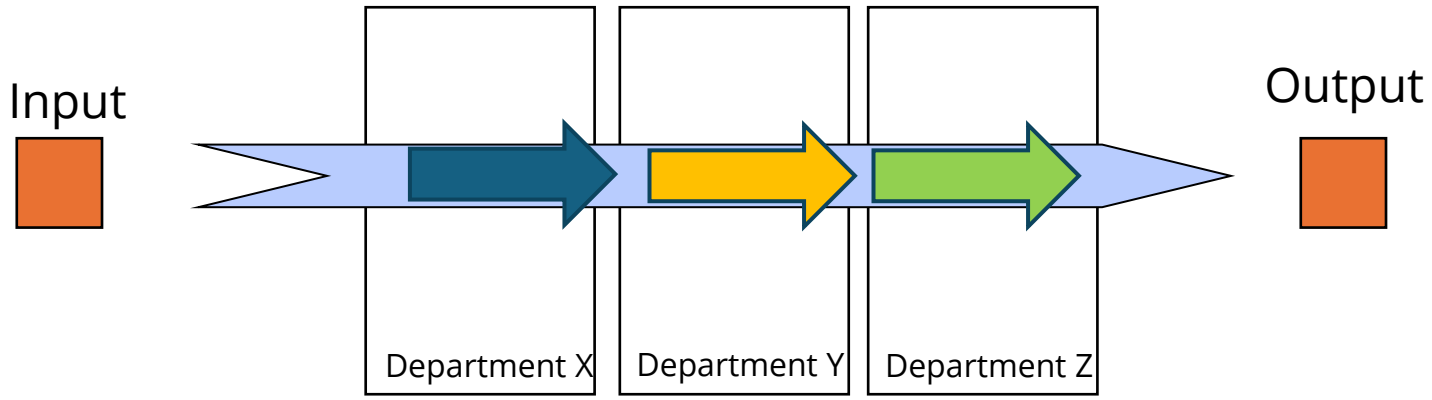
Processes

Process
A set of interrelated or interacting activities that transform inputs to outputs.

There can be several inputs and outputs.

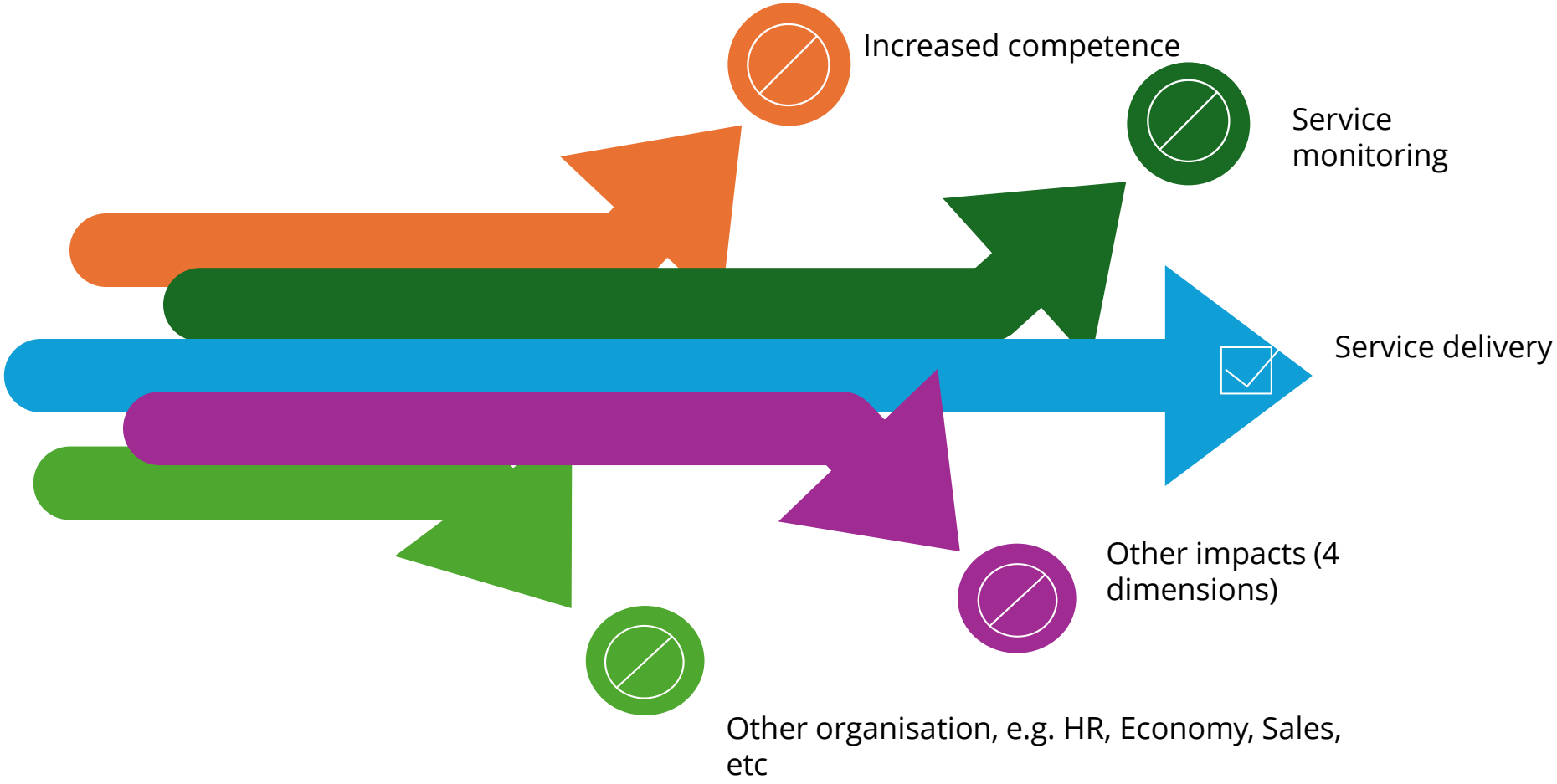
Processes define the sequence of actions and their dependencies.

Process diagram



Enables continual improvement –

Process effects



Process benefits

- It allows the organization to define its preferred approach to managing the task
- The task will be carried out consistently
- It avoids staff wasting time recreating an approach each time the task is carried out
- New staff can be quickly trained to carry out a process
- It can be measured and assessed
- It can be used as a baseline for improvement

Major challenges with processes

- Processes can get input from other processes at any stage, not only at the process beginning
- Process inputs are seldom complete at the start
- Processes are not applicable for every scenario as described
- There can be additional activities that are not described in the process documentation
- Processes need to be redefined for Agile, Devops working method
- Processes need to be augmented in a SIAM environment (multiple service providers)

Information Security Management

Information security mgt purpose

- To protect the information needed by the organization to conduct its business.
- This includes understanding and managing the risks to the confidentiality, integrity, availability.
- Also, it includes managing risks to security (authentication) and
- non-repudiation (Cannot deny an action).

Relationship management

Relationship mgt purpose

- 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 with and between stakeholders.

Supplier management

Supplier mgt purpose

- To ensure that the organization's suppliers and their performances are managed to support the provision of quality products and services.
- Includes creating close, collaborative relationships with key suppliers to uncover and realize new value and reduce the risk of failure.

Supplier
A third party responsible for supplying goods or services required to deliver IT services

Supplier management

How

- Manage supplier relationship and performance
- Negotiate and agree SLA
- Maintain a supplier policy and database

Supplier management

What is the purpose of the ‘supplier management’ practice?

A. To ensure that the organization‘s suppliers and their performance are managed appropriately to support the seamless provision of quality products and services

B. To align the organization's practices and services with changing business needs through the ongoing identification and improvement of services

C. 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

D. To ensure that accurate and reliable information about the configuration of suppliers' services is available when and where it is needed

Monitoring and event management

Monitoring and event mgt purpose

- Observe services and service components and record and report selected changes of state identified as events and responds to events, regarding:
  - Infrastructure
  - Services
  - Business processes
  - Information security events

IT asset management

IT asset mgt purpose

- To plan and manage the full lifecycle of all IT assets to help the organization to maximize value, control costs and manage risks.
  - Maximize value
  - Control costs
  - Manage risks
  - Support decision-making about purchase, retirement and disposal of assets
  - Meet regulatory and contractual requirements

Service configuration management

Service configuration mgt purpose

- To ensure that accurate and reliable information about the configuration of services, and the CIs (configuration items) that support them, is available when and where it is needed.
- Includes information on how CIs are configured and the relationships between them.

Service configuration management

How:

Providing a logical model of the IT Infrastructure by identifying, controlling, maintaining and verifying the versions of all Configuration Items in existence.

Also:
The control of changes, including the recording thereof, that are made to the hardware, software, firmware, and documentation throughout the systems life-cycle.

Service configuration management

- **Configuration Item (CI)**

– *Any component of an IT Infrastructure - or an item associated with an IT Infrastructure which is under the control of Configuration Management and therefore subject to formal change control*

Configuration Management Database (CMDB)

– *A database that contains all relevant details of each CI and details of the important relationships between CI´s*

Release management

Release mgt purpose

- To make new and changed services and features available for use. (***prepare*** for use)

Release management

How:

- Taking a holistic view of a Change of a Product/Service and ensure that all aspects of a Release, both technical and non-technical, are considered together

Release

- *A collection of new and/or changed CI's which are tested and introduced into the live environment together*

Deployment management

Deployment mgt purpose

- To move new or changed hardware, software, documentation, processes or any other component to live environments.
- May also be involved in deploying components to other environments for testing and staging.

Continual improvement

Align the organization’s practices and services with

changing business needs

through ongoing improvement of products, services and practices or any element involved in the management of products and services.

Continual improvement

Guidance:

- Appoint a team with focus on continual improvement
- Everybody is responsible
- Also 3rd parties should be involved
- All practices can be improved
- Log in Continual Improvement Register (CIR)
- Make commitment from management visible

Continual improvement model

How? The model

- Start where you are
- Define where you want to be
- Plan how to get there
- Take action, implement
- Measure the success

Continual improvement control question

How should an organization adopt continual improvement methods?

A. Use a new method for each improvement the organization handles

B. Select a few key methods for the types of improvement that the organization handles

C. Build the capability to use as many improvement methods as possible

D. Select a single method for all improvements that the organization handles

Control question

Which practices are typically involved in the implementation of a problem resolution?

1. Continual improvement
2. Service request management
3. Service level management
4. Change enablement

A. 1 and 2
B. 2 and 3
C. 3 and 4
D. 1 and 4

Change enablement

Change enablement purpose

- to maximize the number of successful service and product changes by
  - ensuring that risks have been properly assessed,
  - authorizing changes to proceed and
  - managing the change schedule.

e.g. Authorize to proceed with the analysis -> authorize to proceed with the build -> authorize to proceed with deployment

Change management according to ITIL v2

Objective:

To ensure that

standardised methods and procedures are used for

efficient and

prompt handling of all changes,

in order to minimise the impact of

any related incidents

upon service.

Change enablement

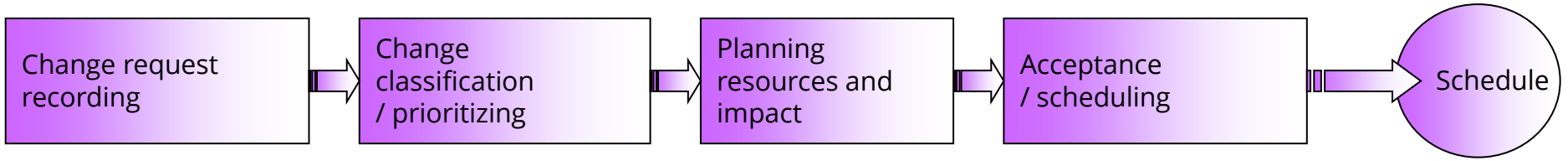
The addition, modification or removal of anything that could have a direct or indirect effect on services.

Change vs stability – needs to be evaluated and balanced

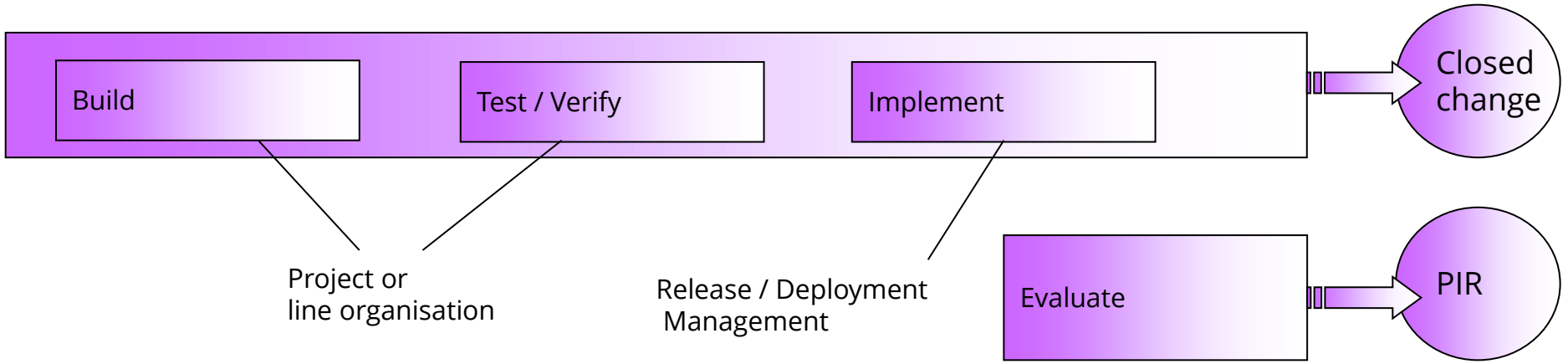
The person or group who authorizes a change = change authority. It is assigned to each type of change. All changes should be authorized by people who understand the risks and expected benefits.

Change type	Description
Standard	pre-approved, low risk, low cost, known procedures .Operational changes or standard service requests.
Normal	planned, assessed, authorized, scheduled
Emergency	typically used for high priority incident resolution

Nomal change



Coordination



Why changes?

Strategic

- *Politics, business development, laws and regulations, environment, economics, partnerships*

Tactical

- *Capacity/Availability/Security/Stability etc improvement*
- *End of life cycle*

Operational

- *Incident / problem solutions, prevention*

Any other

- *Implementation of newest and coolest*

Change enablement roles

Change Manager

The change manager is typically responsible for:

- the initial processing and verification of change requests
- allocating changes to appropriate teams for assessment and authorization, according to the change model
- formally communicating decisions of change authorities to affected parties
- monitoring and reviewing the activities of the teams that build and test changes
- publishing the change schedule and ensuring that it is available as needed
- conducting regular and ad hoc service review analyses; and initiating improvements to the practice, the change models, and the standard change procedures
- developing the organization’s expertise in the processes and methods of the change enablement practice.

Change enablement roles

Change Authority

- Change models should define the requirements and procedures for authorization, delegating the role of change authority to the appropriate level, such as development teams, technical experts, or service and product owners.

- The change authority is responsible for the assessment and authorization of a change during its lifecycle (from initiation to completion). Depending on the change model, assessment and authorization may be done manually, automatically, or skipped for specific types of change.

Agile Change enablement

- **Delegated authority** – the Product Owner has the authority to determine when the best time is to release value and approve a release.

- **Standard changes** – the agile team has the authority to fix defects and release them into production.

- **Peer reviews** – the agile team reviews its own work and its adherence to quality standards as part of its Definition of Done.

Change enablement question

What is the definition of change?

A. To add, modify or remove anything that could have a direct or indirect effect on services

B. To ensure that accurate and reliable information about the configuration of services is available

C. To make new and changed services and features available for use

D. To move new or changed hardware, software, or any other component to live environments

Incident and Problem management

Incident Management purpose	• To minimize the negative impact of incidents by restoring normal service operation as quickly as possible.
Problem Management purpose	• To reduce the likelihood and impact of incidents by identifing actual and potential causes of incidents and managing workarounds and known errors.

Incident management

An unplanned interruption to a service or reduction in the quality of a service.

Incident resolution workarounds can also be permanent, if it is not justified to analyse and action the root cause of the incident.

Incident Management concentrates on restoring the service to users as quickly as possible.

Failure of a configuration item that has not yet impacted service is also an incident, for example failure of one disk from a mirror set.

Incident management

Flow:

Detect = can be by user or by Event mgt tool

Log = Service desk logs in service management tool

Classify= major incident, user reported incident, infrastructure incident

Categorize = Localisation of the incident, e.g.network, application, hardware (used for correct routing to 2nd level and for statistics / trend analysis)

Match = search in previous incidents, problem records, Known Errors

Diagnose = trouble shooting on 1st level

Escalate = depending on category escalate to 2nd / 3rd level

Resolve = with workaround (including emergency change)

Confirm = when applicable, confirm with user that the service is restored

Close = close the incident case in the service management tool.

Problem management purpose

Problem management purpose

- to prevent problems and resulting incidents from happening,
- to eliminate recurring incidents and
- to minimize the impact of incidents that cannot be prevented.

Problem Management involves root-cause analysis (RCA) to determine and resolve the cause of events and incidents, proactive activities to detect and prevent future problems/incidents and Error control to allow quicker diagnosis and resolution if further incidents do occur.

Problem management

A **Problem** is cause or potential cause of one or more incidents.

A **Known Error** is a problem that has been analysed but has not been resolved. (Although a solution/workaround might have been identified).

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.

Investigating the root cause of the incidents (**Root Cause Analysis**) can be triggered by incidents or by continual improvement. Implementing the permanent resolution to the root cause may trigger Change enablement.

Problem management

Phases: Problem identification – Problem Control – Error Control

Problem identification	**Re-active or pro-active problem detection, logging, filtering (Risk management!), categorizing**
Problem Control	Root Cause Analysis (RCA), workarounds, Known Errors logging, options for permanent solution
Error Control	Assessing options for permanent solution and requesting Change if needed.

Problem records remain open until a permanent solution is implemented. These open problem records are also called Known Errors.

Problem manager’s role

- Align with Incident Management about problem candidates
- Analyse and filter problem candidates in regard to cost, complexity, feasibility and applicability
- Authorize (or not) submitting Change Request
- Define and dispatch tasks
- Analyze Event Management alerts for proactive problem investigation
- Extract information from Incident database and other sources to act proactively
- Coordinate activities with Global Problem Manager, if any
- Compile management reports, with options and recommendations

Problem Management control question

What happens if a workaround becomes the permanent way of dealing with a problem that cannot be resolved cost-effectively?

A. A change request is submitted to change enablement

B. Problem management restores the service as soon as possible

C. The problem remains in the known error status

D. The problem record is deleted

Service request management

Service request mgt purpose

- To support the agreed quality of service by handling all pre-defined, use-initiated service requests in an effective and user-friendly manner.

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

Service request management

Service request management purpose

- To provide a channel for users to request and receive standard services for which a pre-defined approval and qualification process exists.
- To provide information to users and customers about the availability of services and the procedure for obtaining them.

Service request management

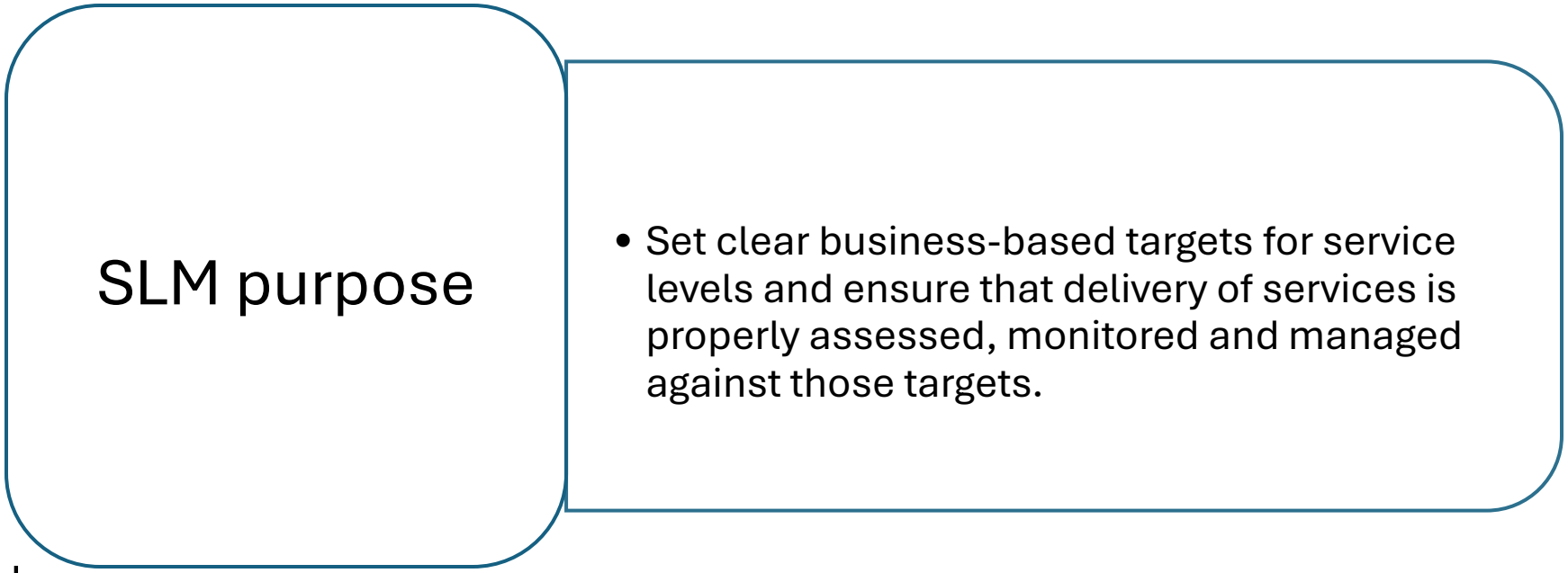
Service request

A request from a user or a user's authorized representative that includes a service which has been agreed as a normal part of service delivery.

Types, example:

- Request for a service delivery action, e.g. a report, replacing a toner cartridge
- Request for information ('How to....')
- Request for provision of a resource or service (laptop to a user, virtual server for testing)
- Request for access to a resource or service (project folder...)
- Feedback

Service Level Management



Service level

One or more metrics that define expected or achieved service quality.

Service Level Agreement

Service Level Agreement (SLA)

A documented agreement between a service provider and a customer that identifies the services provided and the agreed level of each service.

Key SLA considerations:

- **Formality, scope**, and **customization** of SLA depend on service type and relationship.
- Digital service SLAs should cover: **utility, warranty, sustainability.**
- For user-facing services, include **user experience** metrics.

Service value = utility + warranty + sustainability + experience

Service Level Agreement

GENERAL

Introduction

- *Parties*
- *Signatures*
- *Service Description(s)*

Reporting & reviewing

- *Content*
- *Frequencies*

Incentives & Penalties

Change Procedures

SUPPORT

Service Hours

e.g. 24/7

Special Service Hours, *e.g. holidays*

Service Calendar

Special support requests

Escalation

DELIVERY

Availability

Reliability

Throughput

Response times

Batch turnaround times

Contingency & Security

Charging

Sustainability

Customer experience

The SLA should not contain anything that is not measurable!

Service Level Management

- Design framework for SLA (template, document structure)
- Monitor and produce reports on service performance
- Measure and strive to improve customer satisfaction

Examples of measurements:

- # or % of service targets being met
- # and severity of service breaches
- # of services with up-to-date SLAs
- Improvements in customer satisfaction (customer experience)