



Standards for lightweight  
IT service management

## FitSM Service Operation & Control (SOC)

Advanced training in service planning and delivery according to FitSM

Version 3.4.2



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## Purpose of this training

- Repeat the most important Foundation knowledge on IT Service Management (ITSM) according to FitSM
- Create understanding of:
  - the **general aspects** of implementing ITSM according to FitSM-1 and FitSM-2
  - the **roles** in a service management system according to FitSM-3
  - the **processes and activities** to plan and deliver services effectively according to FitSM-1 and FitSM-2
- Achieve the ***Advanced Level Certificate in Service Operation and Control*** according to FitSM

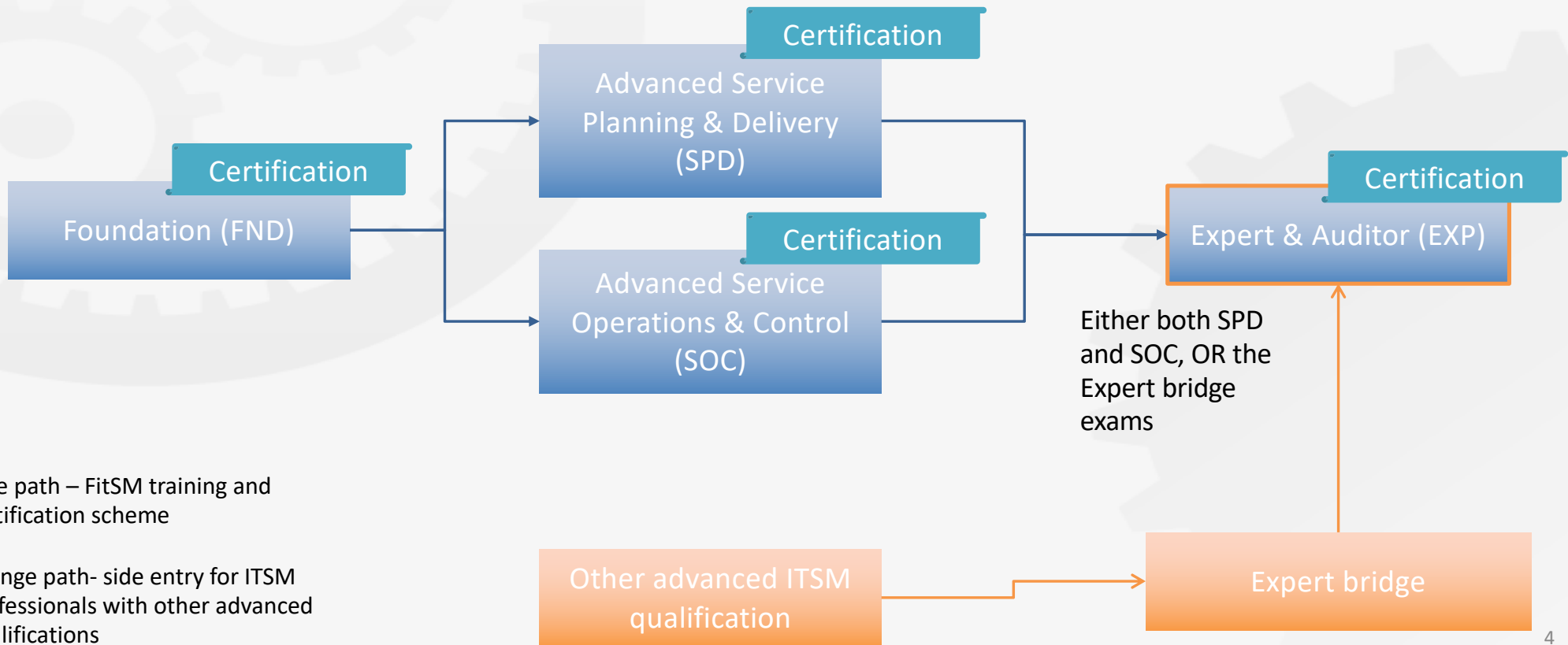


## FitSM Advanced Level exam

- At the end of this training
- Closed book, i.e. no aids are allowed
- Duration: 60 minutes
- 30 multiple choice questions:
  - Four possible answers for each question: A, B, C or D
  - One correct answer per question
- At least 70% correct answers (21 of 30) are required to pass the examination



# FitSM qualification program





## Training agenda

- **FitSM Foundation wrap-up & ITSM basics**
- General aspects of establishing a service management system
- Roles in a service management system
- ITSM processes for service planning and delivery (SPD)

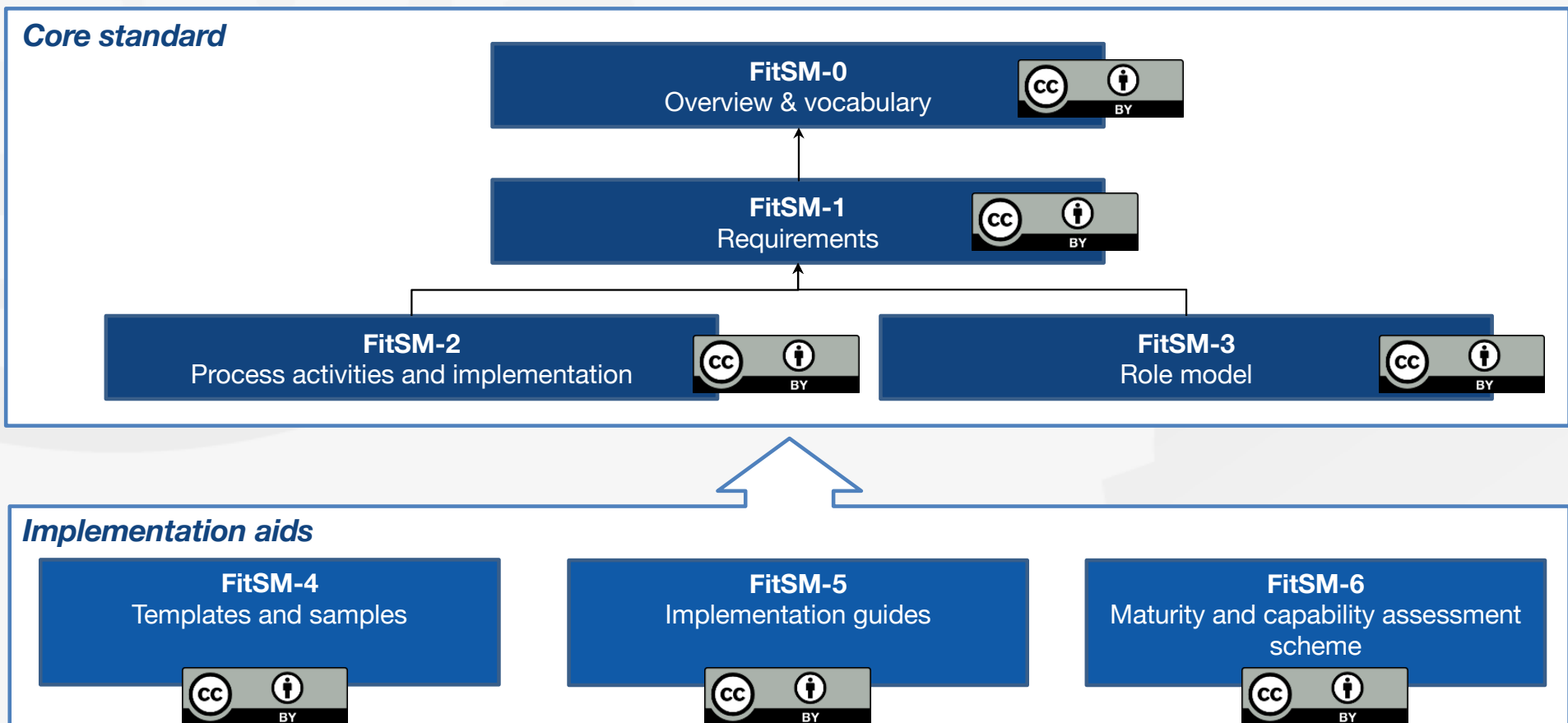


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## FitSM Foundation wrap-up & ITSM basics

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# FitSM parts



# The FitSM approach



The key principles of the FitSM approach to managing IT services:

Practicality

Consistency

Sufficiency

Extendibility

The foundation for systematic IT Service Management:

Service- and  
customer-orientation

Process-orientation

Continual  
improvement

# FitSM key principles



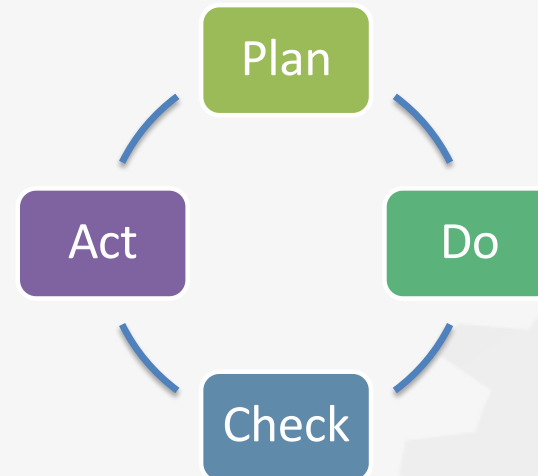
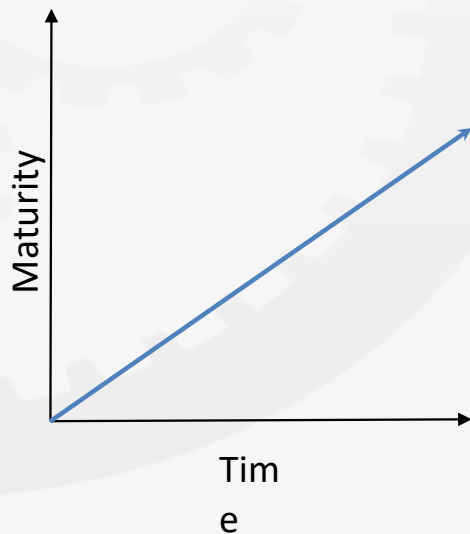
Principle	Explanation
<b>Practicality</b>	Apply simple, proven guidance instead of drowning in theoretical best practices
<b>Consistency</b>	Repeatable performance before detailed documentation
<b>Sufficiency</b>	Good enough and working over seeking the perfect solution
<b>Extendibility</b>	Leverage many sources of knowledge rather than live in a walled garden

# ITSM principles



Principle	Explanation
<b>Service- and customer-orientation</b>	<p>IT-driven solutions provided to customers and users are arranged as services and provided according to clearly defined service levels.</p> <p>Services are aligned to the needs and expectations of (potential) customers. Both the service provider and customer are aware of agreed service targets.</p>
<b>Process-orientation</b>	<p>Activities required to plan, deliver, operate and control services are carried out as part of well-understood and effective processes.</p>
<b>Continual improvement</b>	<p>The entire service management system follows the plan-do-check-act approach.</p> <p>All processes and activities necessary to manage IT services as well as the services themselves are subject to evaluation, aimed at identifying opportunities for improvement and taking appropriate follow-up actions.</p>

## ITSM principles: Plan-Do-Check-Act cycle (PDCA)



- Quality management approach according to W. E. Deming
- Key principle: continual improvement
- Plan-Do-Check-Act can be applied to the whole service management system

# Service and value



- A service ...
  - ... is an intangible good delivered by a **service provider** to **customers**
  - ... is something that provides **value** to the customers by helping them achieve their goals
  - ... is typically a standalone deliverable that is provided



**What** does the service do?

**How** (e.g. regarding reliability, performance etc.) does a service need to be delivered in order to help the customers achieve their goals?



# What is a service?

Definition following FitSM-0:

**Service:**

A way to provide value to customers through bringing about results that they want to achieve

Examples of IT services:

- Provision of standard desktop workstations
- Connectivity: E-Mail, LAN, internet access
- Provision of computational resources
- Provision of standard and special applications
- Storage, backup, archival storage

Definition following FitSM-0:

**Service provider:**

Organisation or federation (or part of an organisation or federation) that manages and delivers a service or services to customers



# What is a service?

Definition following FitSM-0:

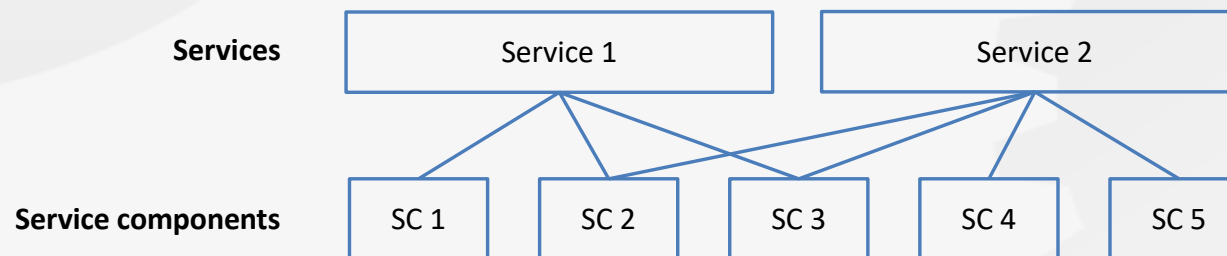
## Service component:

Logical part of a service that provides a function enabling or enhancing a service

Note 1: A service is usually composed of several service components.

Note 2: A service component is usually built from one or more configuration items (CIs).

Note 3: Although a service component underlies one or more services, it usually does not create value for a customer alone and is therefore not a service by itself.





# The Service Management System (SMS)

Definition following FitSM-0:

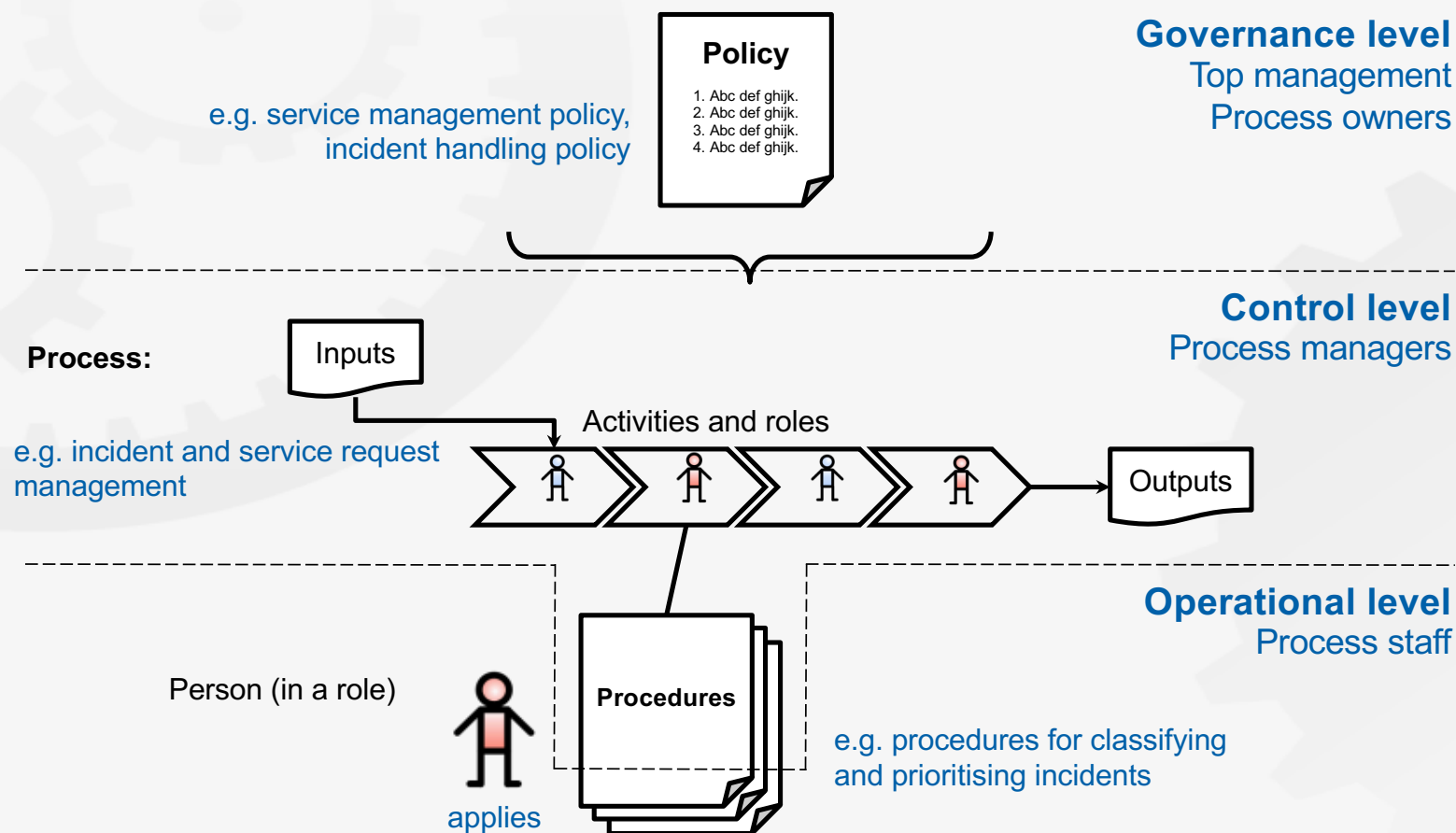
## **Service Management System (SMS):**

Overall management system that controls and supports management of services within an organisation or federation

Note: The SMS can be regarded as the entirety of interconnected policies, processes, procedures, roles, agreements, plans, related resources and other elements needed and used by a service provider to effectively manage the delivery of services to customers.



# Service management system (SMS): Overview



# Key SMS terms



## Definition following FitSM-0:

### **Policy:**

Documented set of intentions, expectations, goals, rules and requirements, often formally expressed by top management representatives in an organisation or federation

Note: Policies are then realised in processes, which are in turn made up of activities that people carry out according to defined procedures.

## Definition following FitSM-0:

### **Process:**

Structured set of activities, with clearly defined responsibilities, that bring about a specific objective or set of results from a set of defined inputs

Note: Generally, a process consists of a number of activities used to manage services, if the process is part of a service management system (SMS).

## Definition following FitSM-0:

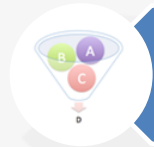
### **Procedure:**

Specified set of steps or instructions to be carried out by an individual or group to perform one or more activities of a process

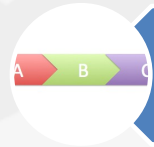
# Most important elements of a process



Goal(s), objectives



Clearly defined inputs, triggers and outputs



Set of interrelated activities  
(across different functions)



Roles and responsibilities

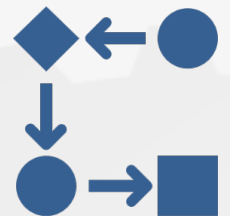


Measurements and KPIs

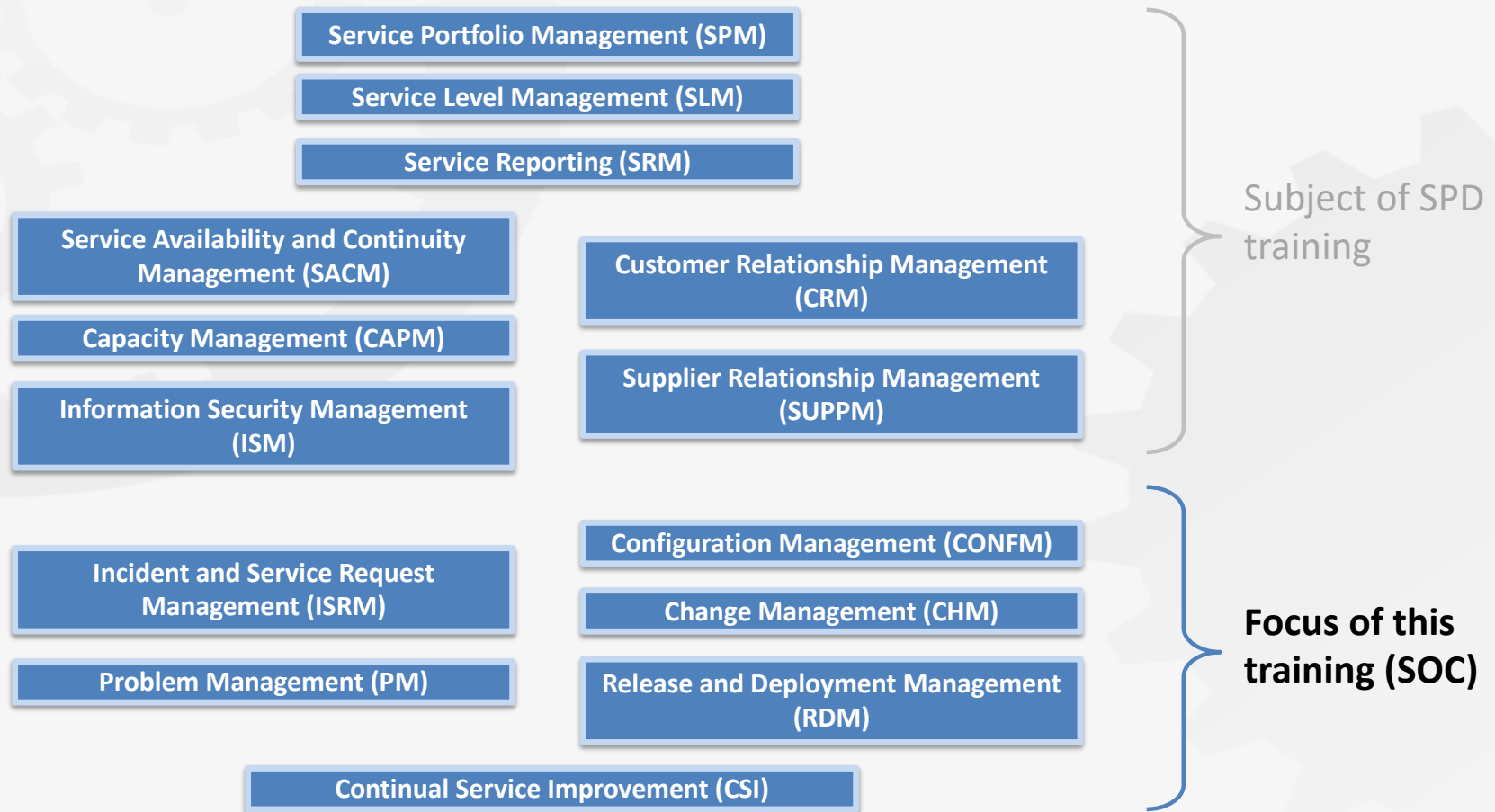
# Implementing processes



- Key facts about ITSM processes
  - ITSM processes support the delivery of IT services.
  - To provide one IT service to a customer, often several processes are needed.
  - An IT service being successfully delivered is the result from many processes successfully operating and interacting.
- Tools and processes
  - Tools are necessary for implementing services
    - Documenting the SMS.
    - Handling tickets of various types (incident, service request, problem, change, release, improvement etc.).
    - Inventorying elements of the SMS (configuration management database).
  - Process requirements should drive tool choices, tools should not (generally) drive processes
    - Tools cannot solve problems alone, only support solutions coming from well-trained individuals operating effective processes which follow clear policies.



# FitSM process model





# FitSM process model: SPD versus SOC

Service Portfolio Management (SPM)

Service Level Management (SLM)

Service Reporting (SRM)

Service Availability and Continuity Management (SACM)

Capacity Management (CAPM)

Information Security Management (ISM)

Customer Relationship Management (CRM)

Supplier Relationship Management (SUPPM)

## Service Planning and Delivery (SPD)

- More strategic processes
- What do you offer? What promises do you make about it? How do you plan to deliver those promises? How do you manage relationships?
- Less requirements per process *but* individual requirements can be more complex
- Frequently external facing: deal with customers, suppliers, competitors, investors, funders etc.

Incident and Service Request Management (ISRM)

Problem Management (PM)

Configuration Management (CONFM)

Change Management (CHM)

Release and Deployment Management (RDM)

Continual Service Improvement (CSI)

## Focus of this training

### Service Operations and Control (SOC)

- More operational processes
- Manage the many elements (technical, human, documentary etc.) needed to operate services
- Many requirements but often fit into clear workflows
- Generally internal facing: Many internal interfaces but few external ones



## General aspects

- General aspects of a service management system (SMS) cover all topics that are **not directly related to a specific ITSM process**.
- Topics to be considered:

Top Management Commitment & Accountability (MCA)

Documentation (DOC)

Scope & Stakeholders of IT Service Management (SCS)

Planning IT Service Management (PLAN)

Implementing IT Service Management (DO)

Monitoring & Reviewing IT Service Management (CHECK)

Continually Improving IT Service Management (ACT)



## Training agenda

- FitSM Foundation wrap-up & ITSM basics
- **General aspects of establishing a service management system**
- Roles in a service management system
- ITSM processes for service planning and delivery (SPD)



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## General aspects of establishing a service management system

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## Top management commitment & accountability (MCA)

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### Objective

To ensure that top management of the organisation(s) involved in the delivery of services is clearly committed to a service- and process-oriented approach and that they fulfil their leadership duties

## MCA: Key questions



Who is the overall owner of ITSM topics (the SMS owner)?



How to ensure sufficient top management buy-in for the implementation of ITSM?



How to ensure sufficient and broad awareness of ITSM and the ITSM goals and plans?



# MCA: Requirements according to FitSM-1

## GR1 Top Management Commitment & Accountability (MCA)

### REQUIREMENTS

- GR1.1 A member of top management of the service provider(s) involved in the delivery of services shall be assigned as the SMS owner to be accountable for the overall SMS.
- GR1.2 A general service management policy shall be defined that includes overall service management goals as well as a commitment to continual improvement and a service-oriented and process-oriented approach. The service management policy shall be approved and communicated to relevant parties by the SMS owner.
- GR1.3 The SMS owner shall conduct management reviews at planned intervals.



## MCA: Activities according to FitSM-2

### Initial setup of the SMS

- Prepare a problem statement outlining the issues caused by lack of ITSM and the consequent motivation for implementing or improving ITSM.
- Define the role of the SMS owner and assign this role to a top management representative of the organisation(s) involved in delivering services to customers.
- Define and document a general service management policy (under consideration of the problem statement mentioned above), and have it approved by top management.
- Produce a communication plan considering relevant stakeholders.
- Create a clear understanding of the topics and desired outcomes of regular management reviews.

### Operation and maintenance of the SMS

- Review and update the service management policy at regular intervals.
- Perform planned communication activities to ensure awareness within the service provider.
- Review and update the communication plan at regular intervals.
- Perform management reviews of the SMS at regular intervals.

## MCA: Outputs according to FitSM-2



Assignment of the SMS owner

General service management policy

Communication plan

Documented results and follow-up actions from management reviews



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## Documentation (DOC)

### Objective

To ensure that key elements of the SMS are sufficiently documented to support and enhance effectiveness and traceability of ITSM

## DOC: Key questions



What is useful and necessary to be documented within the SMS?



How can you ensure that documents are accessible, up to date and changes to them are controlled?

# DOC: Requirements according to FitSM-1



## GR2 Documentation (DOC)

### REQUIREMENTS

- GR2.1 The key elements of the SMS shall be documented to support effective planning. This documentation shall include the SMS scope statement (see GR3), the general service management policy (see GR1) as well as the service management plan and related plans (see GR4).
- GR2.2 Documented definitions of all service management processes (see PR1-PR14) shall be created and maintained. Each of these definitions shall include:
  - Description of the goals of the process
  - Description of the inputs, activities and outputs of the process
  - Description of process-specific roles and responsibilities
  - Description of interfaces to other processes
  - Related process-specific policies as needed
  - Related process- and activity-specific procedures as needed
- GR2.3 The key outputs of all service management processes (see PR1-PR14) shall be documented and the execution of key activities of these processes recorded.

# DOC: Requirements according to FitSM-1



## GR2 Documentation (DOC)

### REQUIREMENTS

- GR2.4 Documented information shall be controlled, addressing the following activities as applicable:
  - Creation and approval
  - Communication and distribution
  - Review
  - Versioning and change tracking

## DOC: Activities according to FitSM-2



### Initial setup of the SMS

- Agree on the specific documents to be produced (such as policies, plans, process descriptions, service catalogue(s), SLAs, etc.).
- Define the location(s) and format(s) for key ITSM documentation (such as a central online document repository or document management tool / system, along with document templates).
- Agree on the approach and mechanisms for controlling documentation (creation and approval, communication and distribution, review and updating, as well as versioning and change tracking).

### Operation and maintenance of the SMS

- Produce and maintain documentation on ITSM where required, agreed and / or defined.
- Apply document control mechanisms to all relevant pieces of documented information.

## DOC: Outputs according to FitSM-2



Understanding of the minimum required level of documentation of the SMS

Defined storage location(s) for ITSM documentation

Established document control mechanisms

Templates for key ITSM documentation



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## Scope & Stakeholders of IT Service Management (SCS)

### Objective

To understand stakeholders' needs and expectations and define the scope of the SMS

# SCS: Key questions



Who are the stakeholders of the services delivered and of the underlying SMS?



What are the needs and expectations of these stakeholders?



What are the relevant legal and contractual requirements that need to be taken into consideration?



Which activities in the context of managing IT services are under control of the SMS, and which are not?

# SCS: Requirements according to FitSM-1



## GR3 Scope & Stakeholders of IT Service Management (SCS)

### REQUIREMENTS

- GR3.1 The stakeholders of the IT services and the SMS shall be identified and their needs and expectations analysed. Relevant legal, regulatory and contractual requirements shall be considered.
- GR3.2 The scope of the SMS shall be defined taking into consideration results from the stakeholder analysis.



# Scope limitation

- Effects of restricting the scope:
  - Makes it easier to implement ITSM by not trying to implement it everywhere at once.
  - Allows exclusion of certain services from control through the SMS.
  - Makes implementation less valuable by not impacting and improving a sufficient fraction of services offered.
- Scope limitation is a balance between:
  - Practicality and ease of initial implementation
  - Impact and long-term benefit of implementation
- Types of scope limitation
  - To a certain provider organisation, part of a provider organisation or federation
  - To a subset of services or specific service catalogues
  - To a certain geographical location
  - To a certain group of customers or users

## SCS: Activities according to FitSM-2



### Initial setup of the SMS

- Identify the stakeholders of the services to be delivered (such as customers, suppliers, public authorities and individual persons).
- For each stakeholder, analyse their needs and expectations with respect to the services as well as the underlying SMS.
- Discuss the required scope of the SMS by defining to which services, technologies, geographical locations, involved organisations and customers it applies.
- Produce a (formal) scope statement.

### Operation and maintenance of the SMS

- Update the stakeholder analysis at regular intervals.
- Review the scope statement at regular intervals and consider extending or reducing the scope to align the SMS to relevant requirements.

## SCS: Outputs according to FitSM-2



Stakeholder analysis

Scope statements for the SMS



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## Planning IT Service Management (PLAN)

### Objective

To create plans for implementing and maintaining ITSM in an organisation or federation, based on the identified scope

## PLAN: Key questions



What are the ITSM-related goals to be achieved during the planning period?



What is a realistic and achievable timeline of activities towards these goals, also considering available resources?



Who is responsible for the different activities, and do they have the awareness and skills needed to carry them out?



What tools or technologies are available or needed to effectively support ITSM-related activities?

# PLAN: Requirements according to FitSM-1



## GR4 Planning IT Service Management (PLAN)

### REQUIREMENTS

- GR4.1 A service management plan shall be created and maintained. It shall include:
  - Goals and timing of implementing or improving the SMS and the related processes
  - Roles and responsibilities
  - Training and awareness activities
  - Technology (tools) to support the SMS
- GR4.2 Any process-specific plan shall be aligned to the overall service management plan



## PLAN: Activities according to FitSM-2

### Initial setup of the SMS

- Assess the maturity of current ITSM.
- Set an appropriate target level of maturity for ITSM to be achieved.
- Determine and describe the gaps between defined goals and the current baseline (gap analysis).
- Identify and specify the steps towards improvement based on the identified gaps.
- Produce a service management plan. As part of this, among other things:
  - Define the goals and activities of implementing the SMS and the related ITSM processes, including a timeline for each planned activity and important milestones to be achieved.
  - Define and assign general and process-related roles and responsibilities in the SMS.
  - Define necessary training and awareness activities for the individuals involved in or affected by the SMS.
  - Clarify which tools are going to be used to support the implementation of the SMS and execution of the ITSM processes.
- Produce process-specific plans, as required (such as a plan covering the initial process setup activities for a given ITSM process).

### Operation and maintenance of the SMS

- Review and update the service management plan at regular intervals.
- Review process-specific plans at regular intervals and keep them aligned to the overall service management plan.

## PLAN: Outputs according to FitSM-2



Service management plan

Process-specific plans, as required



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## Implementing IT Service Management (DO)

### Objective

To implement ITSM according to plans and ensure ITSM processes are followed in practice as defined



## DO: Key question



How is compliance with plans, defined processes, policies and procedures encouraged, supported and enforced?

# DO: Requirements according to FitSM-1



## GR5 Implementing IT Service Management (DO)

### REQUIREMENTS

- GR5.1 The service management plan shall be implemented.
- GR5.2 Within the scope of the SMS, the defined service management processes shall be followed in practice, and their application, together with the adherence to related policies and procedures, shall be enforced.



## DO: Activities according to FitSM-2

### Initial setup of the SMS

- Distribute and communicate the initial service management plan.
- Define how to minimise potential deviations from plans, including managing any resistance.

### Operation and maintenance of the SMS

- Implement and operate the SMS according to the current version of the service management plan.
- Respond to unforeseen obstacles or issues arising in the implementation of the service management plan.
- Identify and perform actions to support and enforce the application of defined ITSM processes in practice, such as effective communication, awareness and training activities as well as disciplinary measures as a last resort for those not adhering to processes, related policies or procedures.

## DO: Output according to FitSM-2



Implementation progress according to plans



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## Monitoring & Reviewing IT Service Management (CHECK)

### Objective

To examine the level of conformity, effectiveness and efficiency of the SMS, and assess its organisational maturity

## CHECK: Key questions



To what extent does implementation progress of the SMS match plans?



How effective and efficient are the ITSM processes in achieving defined goals?



How can measurements, assessments and audits be utilised to evaluate the SMS?

# CHECK: Requirements according to FitSM-1



## GR6 Monitoring & Reviewing IT Service Management (CHECK)

### REQUIREMENTS

- GR6.1 The effectiveness of the SMS and its service management processes shall be measured and evaluated based on suitable key performance indicators in support of defined or agreed goals.
- GR6.2 Assessments or audits of the SMS shall be conducted at planned intervals to evaluate the level of maturity and conformity.

# CHECK: Activities according to FitSM-2



## Initial setup of the SMS

- Define measurable key performance indicators in support of the most relevant goals to monitor effectiveness and efficiency of the SMS. For each key performance indicator, define target values and the means of collection and reporting.
- Define an SMS assessment or audit program taking into account the status and importance of the ITSM processes to be evaluated.

## Operation and maintenance of the SMS

- Regularly monitor the defined key performance indicators and evaluate results against targets.
- Perform assessments and audits according to plans.
- Report on the results of measurements, assessments and audits to all relevant parties, including the SMS owner.
- Review and update the definitions of key performance indicators as well as the assessment and audit program based on previous results and the current maturity of the SMS.



## Effective use of KPIs

- Key Performance Indicators (KPIs) are:
  - **Effective** when they are clearly measurable factors that can be collected with reasonable effort.
  - **Ineffective** when they are subjective, qualitative or very costly to collect.
  - **Effective** when they reflect provider performance, so can be impacted by changing provider behaviour.
  - **Ineffective** when they are situations you cannot impact with your processes, e.g. having a KPI for how many sunny days you experience, how do you improve it?
  - **Effective** when they measure progress toward a goal you want to achieve (a critical success factor).
  - **Ineffective** when you simply make the KPIs things that you can easily measure.



## Effective use of KPIs

- Creating KPIs:



- KPIs should generally be set for:

- The SMS as a whole
- Processes
- Services

## CHECK: Outputs according to FitSM-2



Definitions of key performance indicators

Assessment or audit program

Results and reports of measurements,  
assessments and audits

Identified nonconformities, deviations from goals and  
opportunities for improvement



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## Continually Improving IT Service Management (ACT)

### Objective

To establish a culture of continual improvement of the SMS and enable the Continual Service Improvement process to act upon identified nonconformities and deviations from goals

## ACT: Key questions



How do we ensure that all potential opportunities for improvement are overseen or considered as an input to the CSI process?



How do we ensure that all potential sources for improvement are exploited for the CSI process?

# ACT: Requirements according to FitSM-1



## GR7 Continually Improving IT Service Management (ACT)

### REQUIREMENTS

- GR7.1 Nonconformities and deviations from goals shall be identified and actions shall be taken to prevent them from recurring.
- GR7.2 The service management policy, service management plan and all service management processes shall be subject to continual improvement. Respective improvements shall be identified, evaluated and implemented according to the Continual Service Improvement Management process (see PR14).

## ACT: Activities according to FitSM-2



### Initial setup of the SMS

- Promote the idea of continual improvement of the SMS by highlighting the importance of everyone's contribution to it.
- Support the establishment of the Continual Service Improvement Management process and connect the process to all evaluation activities as part of the SMS that may result in improvements.

### Operation and maintenance of the SMS

- Ensure that identified nonconformities and deviations are prioritise, approved or rejected, and implemented according to the Continual Service Improvement Management process.

## ACT: Outputs according to FitSM-2



Incremental progress in the effectiveness and maturity of the SMS



## Training agenda

- FitSM Foundation wrap-up & ITSM basics
- General aspects of establishing a service management system
- **Roles in a service management system**
- ITSM processes for service planning and delivery (SPD)



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## Roles in a service management system

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## Role makeup and types

- Roles are made up of a context, a definition and an assignment
  - If they have all three, they have been implemented
- General roles
  - Address the whole SMS
  - They are mainly related to the General Requirements (GR 1-7) in FitSM-1
- Process specific roles
  - Address one process or a case within the process
  - They are mainly related to the Process Requirements (PR1-14) in FitSM-1

### Role context



Entity the role impacts

### Role definition



Responsibilities & tasks

### Role assignment



Name of individual assigned



## Key roles in an SMS according to FitSM-3

- General roles
  - SMS owner
  - SMS manager
  - Other possible general roles e.g. Documentation officer
- Process level roles: common role types
  - Process owner
  - Process manager
  - Case owner e.g. Service owner, Incident owner
  - Process staff member

## SMS owner: General tasks according to FitSM-3



Role	Tasks	Number of implemented roles
<b>SMS owner</b>	<ul style="list-style-type: none"><li>• Senior accountable owner of the entire service management system (SMS).</li><li>• Overall accountability for all ITSM-related activities.</li><li>• Act as the primary contact point for concerns in the context of governing the entire SMS.</li><li>• Define and approve goals and policies for the entire SMS.</li><li>• Nominate the process owners and/or managers, and ensure they are competent to fulfil their roles.</li><li>• Approve changes to the overall SMS.</li><li>• Decide on the provision of resources dedicated to ITSM.</li><li>• Based on monitoring and reviews, decide on necessary changes in the goals, policies and provided resources for the SMS.</li></ul>	<p>1 for the overall SMS</p> <p>Often, the person taking over the SMS owner role may also take over the process owner role for the entirety or a subset of the ITSM processes.</p>

# SMS manager: General tasks according to FitSM-3



Role	Tasks	Number of implemented roles
SMS manager	<ul style="list-style-type: none"><li>• Act as the primary contact point for all operational concerns (including planning and development) in the context of the entire SMS.</li><li>• Maintain the service management plan and ensure it is available to relevant stakeholders.</li><li>• Ensure IT service management processes are implemented according to approved goals and policies.</li><li>• Maintain an adequate level of awareness and competence of the people involved in the SMS, particularly the process managers.</li><li>• Monitor and keep track of the suitability, effectiveness and maturity of the entire SMS.</li><li>• Manage risks across the SMS (unless there is an SMS-level Risk Manager role defined for this SMS).</li><li>• Report and, if necessary, escalate to the SMS owner.</li><li>• Identify opportunities for improving the effectiveness and efficiency of the SMS.</li></ul>	1 for the overall SMS



## Common role type: Process owner according to FitSM-3

Common role type	Common tasks
<b>Process owners</b> of the 14 processes	<ul style="list-style-type: none"><li>• Act as the primary contact point for concerns in the context of governing one specific ITSM process.</li><li>• Define and approve goals and policies in the context of the process according to the overall SMS goals and policies.</li><li>• Nominate the process manager, and ensure they are competent to fulfil this role.</li><li>• Approve changes / improvements to the operational process, such as (significant) changes to the process definition.</li><li>• Decide on the provision of resources dedicated to the process and its activities.</li><li>• Based on process monitoring and reviews, decide on necessary changes in the process-specific goals, policies and provided resources.</li></ul>

**Note:** Common role types provide sets of tasks which are implemented in multiple roles, in different processes



## Common role type: Process manager according to FitSM-3

Common role type	Common tasks
<b>Process managers</b> of the 14 processes	<ul style="list-style-type: none"><li>• Act as the primary contact point for operational concerns in the context of the process.</li><li>• Maintain the process definition / description and ensure it is available to relevant persons.</li><li>• Maintain an adequate level of awareness and competence of the people involved in the process.</li><li>• Monitor and keep track of the process execution and results (incl. process reviews).</li><li>• Manage risks that involve this process (unless there is a process-specific role that manages risks in this context).</li><li>• Report on process performance to the process owner.</li><li>• Escalate to the process owner, if necessary.</li><li>• Identify opportunities for improving the effectiveness and efficiency of the process.</li></ul>



## Common role type: Case Owner according to FitSM-3

Common role type	Common tasks
Case owner	<ul style="list-style-type: none"><li>• Overall responsibility for one specific case occurring in a process context (e.g. one specific incident to be resolved).</li><li>• Act as the primary contact point for all concerns in the context of that specific case.</li><li>• Coordinate all activities required to handle / resolve the specific case.</li><li>• Escalate exceptions to the process manager, where required.</li><li>• Additional tasks – depending on the specific process (see process-specific role models).</li></ul>

**Note:** The role of a case owner is usually required in a process, if occurrences (e.g. incidents, service requests, problems, changes, releases, ...) or logical entities / objects (e.g. services different types of agreements, reports or plans, ...) are managed by the process, and the process manager themselves does not take over specific responsibility for all of these occurrences or entities.

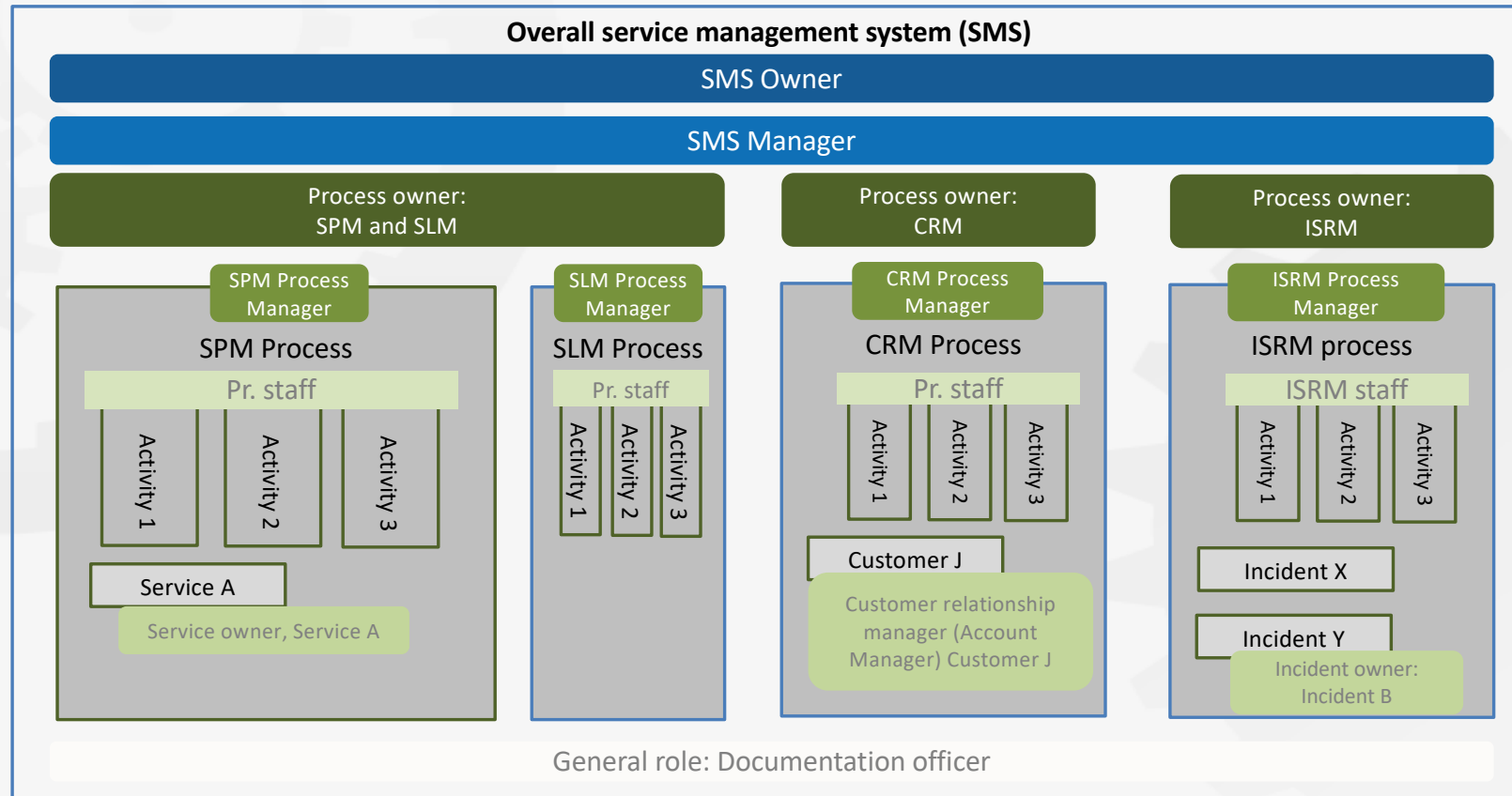


## Common role type: Process staff member according to FitSM-3

Common role type	Common tasks
<b>Process staff member</b>	<ul style="list-style-type: none"><li>• Carry out tasks according to the defined / established process and, as applicable, its activities and procedures (e.g. the procedure of prioritising an incident).</li><li>• Report to case owners and / or process managers, as appropriate.</li><li>• Contribute to the effectiveness and continual improvement of the process.</li></ul>



# Key roles in an SMS – Visualisation



# Example process manager: Process manager SPM

according to FitSM-3



Role	Tasks	Number of implemented roles
<b>Process manager SPM</b>	<i>Generic tasks of a process manager (see previous slides), plus:</i> <ul style="list-style-type: none"><li>• Maintain the service portfolio.</li><li>• Manage updates to the service portfolio.</li><li>• Ensure the lifecycle of new or changed services are managed and appropriate plans are created and maintained.</li><li>• Review the service portfolio at planned intervals.</li></ul>	1 in total



## Example case manager: Service owner according to FitSM-3

Role	Tasks	Number of implemented roles
<i>Case owner:</i> <b>Service owner</b>	<ul style="list-style-type: none"><li>• Overall responsibility for one specific service that is part of the service portfolio.</li><li>• Act as the primary contact point for all (process-independent) concerns in the context of that specific service.</li><li>• Act as an “expert” for the service in both technical and non-technical concerns.</li><li>• Maintain the core service documentation, such as the service specification / description.</li><li>• Be kept informed of every event, situation or change connected to the service.</li><li>• Be involved in tasks significantly related to the service as part of selected ITSM processes, in particular SPM and SLM (see process-level role templates).</li><li>• Report on the service to the SMS owner.</li></ul>	1 per service



## Training agenda

- FitSM Foundation wrap-up & ITSM basics
- General aspects of establishing a service management system
- Roles in a service management system
- **ITSM processes for service operation and control (SOC)**



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## ITSM processes for service operation and control (SOC)

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# Common structure of the presentation of ITSM processes in this training material



- **Objective** according to FitSM-0
- **Key questions**
- **Important terms & concepts** according to FitSM-0
- **Process-specific requirements** according to FitSM-1
- **Activities for initial process setup** according to FitSM-2
- **Inputs and outputs** according to FitSM-2
- **Process chart** according to FitSM-2
- **Activities during ongoing process execution** according to FitSM-2
- **Roles** according to FitSM-3
- **Interfaces with other ITSM processes** according to FitSM-2



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## Incident & Service Request Management (ISRM)

### Objective

To restore agreed service operation after the occurrence of an incident and to respond to user service requests

## ISRM: Key questions



How are incidents and service requests handled?



What information can be used to support the effective handling and resolution of incidents?



How are customers involved?



How are major incidents distinguished from other incidents and handled accordingly?



## ISRM: Important terms according to FitSM-0

Definition following FitSM-0:

### **Incident:**

Unplanned disruption of operation in a service or service component, or degradation of service quality versus the expected or agreed service level or operational level according to service level agreements (SLAs), operational level agreements (OLAs) and underpinning agreements (UAs)

Definition following FitSM-0:

### **Service request:**

User request for information, advice, access to a service or a change

Note: Service requests are often handled by the same process and tools as incidents.

# ISRM: Requirements according to FitSM-1



## PR9 Incident & Service Request Management

### REQUIREMENTS

- PR9.1 All incidents and service requests shall be registered, classified and prioritised in a consistent manner, taking into account service targets from SLAs.
- PR9.2 Incidents shall be resolved and service requests fulfilled, taking into consideration information from SLAs and on known errors, as relevant.
- PR9.3 Functional and hierarchical escalation of incidents and service requests shall be carried out in a consistent manner.
- PR9.4 Customers and users shall be kept informed of the progress of incidents and service requests, as appropriate.
- PR9.5 Closure of incidents and service requests shall be carried out in a consistent manner.
- PR9.6 Major incidents shall be identified based on defined criteria, and handled in a consistent manner.



## Initial process setup part 1

- Set up a **tool** (e.g. ticket / workflow tool) supporting the **recording and handling** (including classification, prioritisation, escalation, closure) of reported incidents and service requests.
- Define a standardised and repeatable way (procedure) of **recording incidents and service requests** that specifies the sources and channels through which incidents and service requests may be raised, the required format of an incident report or service request, and the way in which the incident or service request is recorded in the recording system.
- Define a standardised and repeatable way (procedure) of **classifying incidents and service requests** that specifies a suitable classification scheme and describes how it should be applied.
- Define a standardised and repeatable way (procedure) of **prioritising incidents and service requests** that specifies a **suitable prioritisation scheme** and describes **how the priority of an incident or service request should be calculated**.
- Define a standardised and repeatable way (procedure) of **escalating incidents and service requests** that specifies **functional** and **hierarchical** escalation paths.

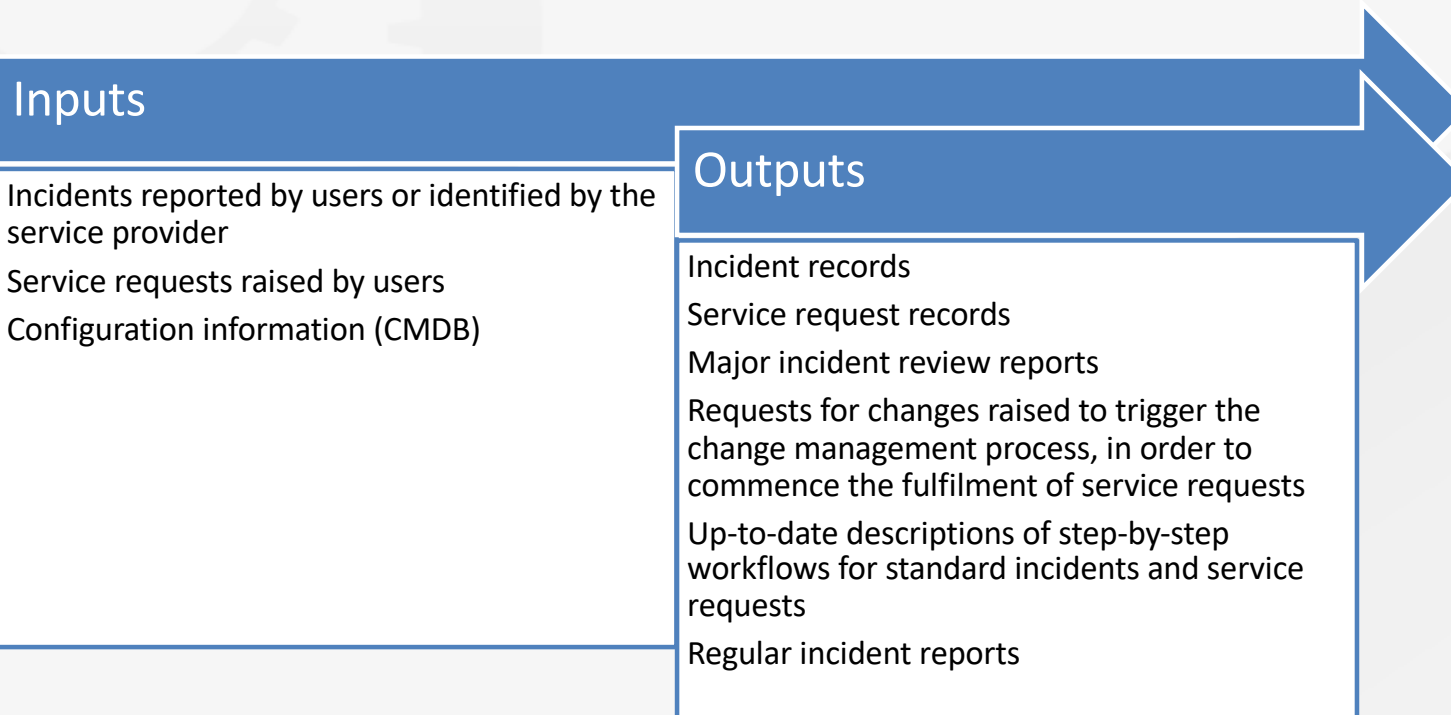


### Initial process setup part 2

- Define a standardised and repeatable way (procedure) of **closing incidents and service requests** that specifies how incidents and service requests are closed, including **required user communication and confirmation**.
- Define the criteria for **identifying a major incident**, as well as a standardised and repeatable way (procedure) of **dealing with major incidents** from recording to closure, including a major incident **review**.
- Identify **well-known and recurring incidents**, and for each of them describe, where required, the concrete **steps to be carried out** in response to the respective incident in order to manage it effectively from recording to closure.
- Identify **standardised service requests** based on service descriptions and SLAs, and for each of them describe, where required, the **concrete steps** to be carried out in response to the respective service request in order to manage it effectively from recording to closure.

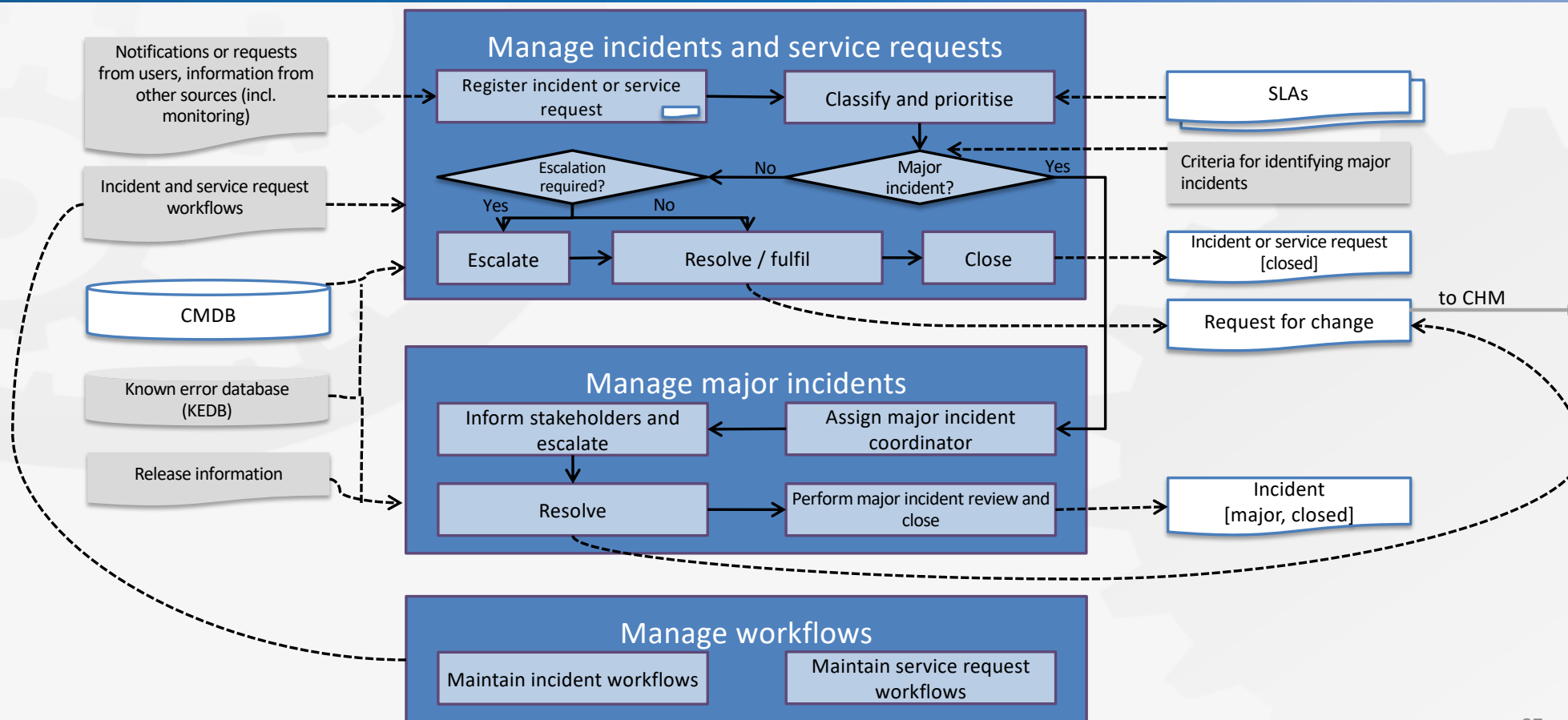


# ISRM: Inputs and outputs according to FitSM-2





# ISRM: Process chart according to FitSM-2





## Ongoing process execution

- **Manage incidents and service requests**

- Register an incident or service request
- Classify and prioritise an incident or service request including checking against major incident criteria
- Escalate an incident or service request as required
- Resolve an incident or fulfil a service request
- Close an incident or service request

- **Manage major incidents**

- Identify an incident as a major incident based on agreed criteria
- Assign a major incident coordinator for the incident
- Handle major incident with highest priority
- Inform stakeholders and escalate major incident as required
- Resolve the major incident
- Perform a major incident review and close the major incident

- **Manage workflows needed to resolve incidents and fulfil service requests**

- Maintain the step-by-step workflows for well-known and recurring incidents taking into account the KEDB
- Maintain workflows for standardised service requests

## ISRM: Roles according to FitSM-3



Role	Tasks	Number of implemented roles
<b>Process owner ISRM</b>	<i>Generic tasks of a process owner applied in the context of ISRM</i>	1 in total
<b>Process manager ISRM</b>	<i>Generic tasks of a process manager, plus:</i> <ul style="list-style-type: none"><li>• Ensure that all incidents and service requests are recorded, and that records are of sufficient quality to enable traceability and long-term analysis.</li><li>• Monitor the overall progress of incident resolution and service request fulfilment and identify potential violations of target response and resolution times.</li></ul>	1 in total

## ISRM: Roles according to FitSM-3

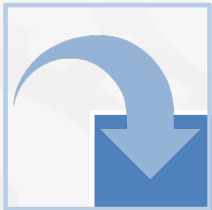


Role	Tasks	Number of implemented roles
<b>Case owner: Incident owner / service request owner</b>	<ul style="list-style-type: none"><li>• Coordinate and take over overall responsibility for all activities in the lifecycle of a specific incident or service request.</li><li>• Monitor the progress of incident resolution or request fulfilment taking into account agreed timeframes.</li><li>• Trigger reminders to those involved in incident resolution or request fulfilment and escalate to the process manager as required.</li><li>• In case of a (potential) SLA violation, trigger communication and escalation as defined in the SLM process.</li><li>• Ensure an adequate level of documentation for the specific incident or service request.</li></ul>	1 per incident / service request

# ISRM: Interfaces according to FitSM-2

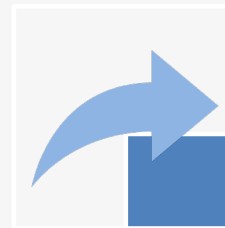


## Incoming



- **SLM:** SLAs containing information on agreed service targets to enable prioritisation of incidents and service requests
- **PM:** Known error database (KEDB) containing information on known errors and related workarounds to support the resolution of incidents caused by known error
- **CONFM:** CMDB containing information on configuration items and their relationships to support the classification, prioritisation, escalation and resolution of incidents and the fulfilment of service requests
- **RDM:** Information on planned or recently deployed releases to support incident resolution (e.g. to understand if incidents are potentially related to releases)

## Outgoing



- **PM:** Trend information on incidents, including information from incident tickets and reports, to enable pattern and trend analysis
- **CHM:** Requests for changes required to resolve incidents or to fulfil service requests



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## Problem Management (PM)

### Objective

To identify and investigate problems in order to reduce their impact or prevent them from causing further incidents

## PM: Key questions



How are problems identified?



How are problems investigated and handled in a way that their impact is minimised?



What information on known errors and workarounds need to be maintained?



## PM: Important terms according to FitSM-0

### Definition following FitSM-0:

**Problem:**

Underlying cause of one or more incidents that requires further investigation to prevent incidents from recurring or reduce the negative impact on services

### Definition following FitSM-0:

**Known error:**

Problem which has not (yet) been resolved, but for which there are documented workarounds or measures to reduce or prevent negative impact on services

### Definition following FitSM-0:

**Workaround:**

Means of circumventing or mitigating the symptoms of a known error that helps to resolve incidents caused by this known error, while the underlying root cause is not permanently eliminated

Note 1: Workarounds are often applied in a situation, when the actual root cause of (recurring) incidents cannot be resolved due to lack of resources or ability.

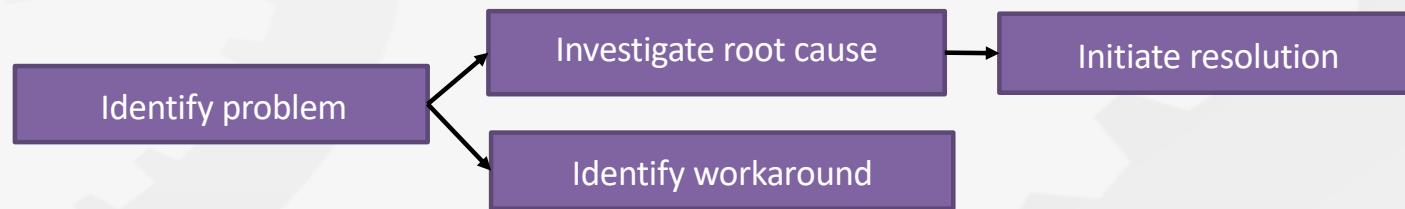
Note 2: A workaround may consist of a set of actions to be carried out by either the service provider or the user of the service.

Note 3: A workaround is also referred to as a temporary fix or temporary solution.

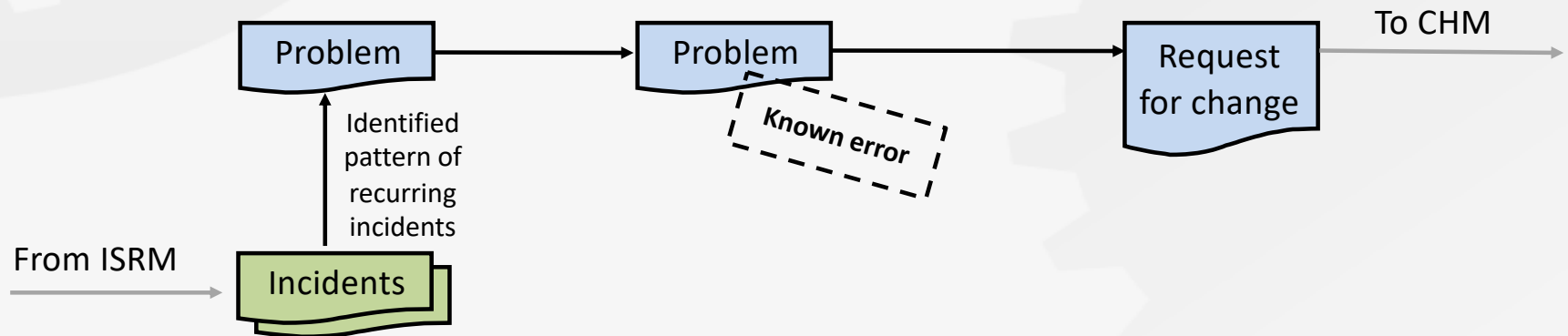
# PM: Important terms – Visualisation



Activities



Tickets (records)



# PM: Requirements according to FitSM-1



## PR10 Problem Management

### REQUIREMENTS

- PR10.1 Problems shall be identified and registered in a consistent manner, based on analysing patterns and trends in the occurrence of incidents.
- PR10.2 Problems shall be investigated to identify actions to resolve them or reduce their impact on services.
- PR10.3 If a problem is not permanently resolved, a known error shall be registered together with actions such as effective workarounds and temporary fixes.
- PR10.4 Up-to-date information on known errors and effective workarounds shall be maintained.

## PM: Activities according to FitSM-2



### Initial process setup

- Define a standardised and repeatable way to register problems, known errors and related workarounds, and set up an initial known error database (KEDB) using a suitable tool or other form of documentation.
- Set up a tool (e.g. ticket / workflow tool) supporting the recording and handling (including classification, prioritisation, escalation, closure) of identified problems.
- Make sure relevant information on incidents, including incident records and reports, and the CMDB are accessible to process staff performing problem identification and investigation.
- Ensure process staff involved in both ISRM and PM are aware of the different goals and perspectives of these processes, even when in practice some activities may overlap or happen almost in parallel.



## PM: Inputs and outputs

### Inputs

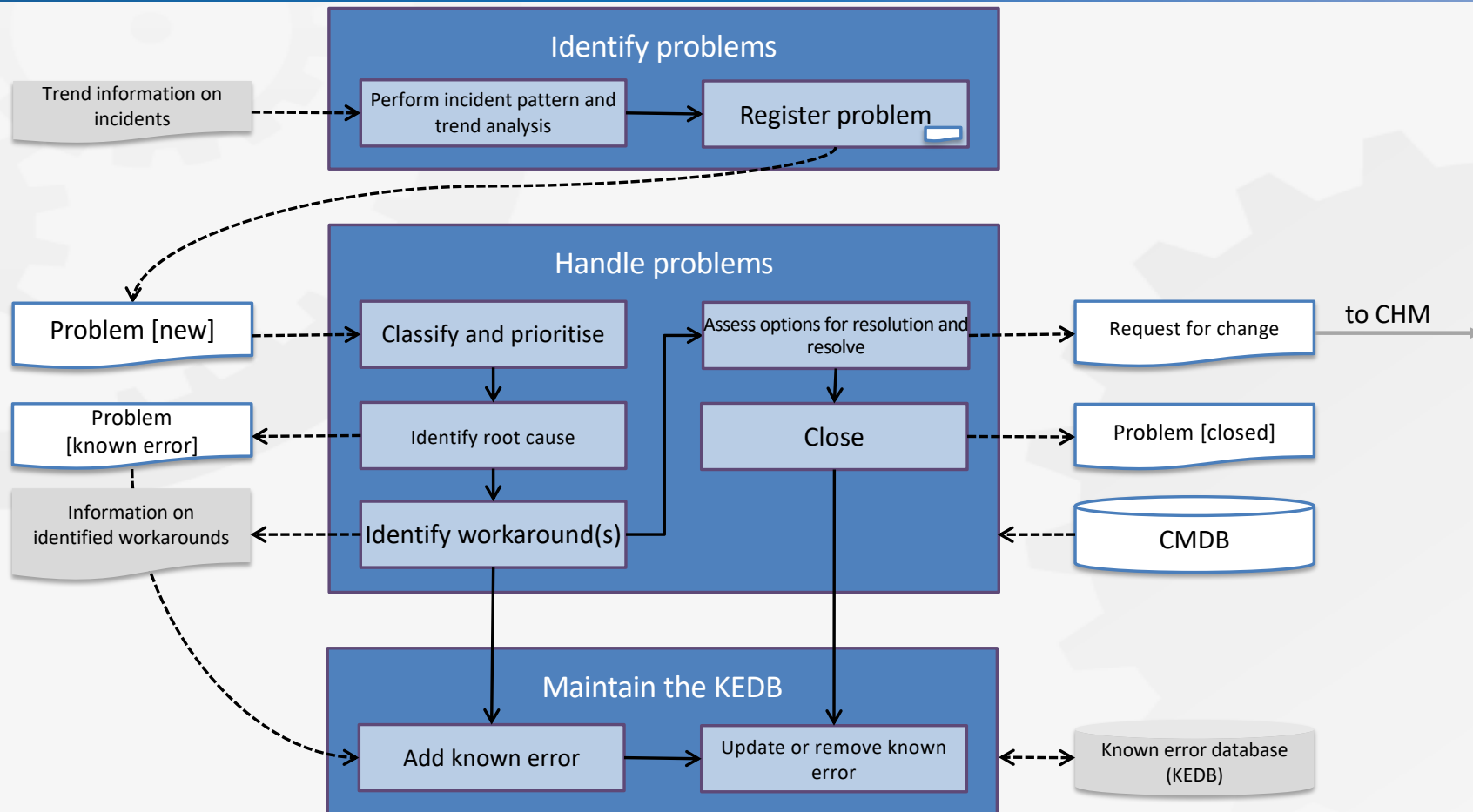
- Statistics on incidents and service requests (for trend analysis)
- Incident and service request records
- Other relevant sources of information to identify (new) problems, including change and release records
- Configuration information (CMDB)

### Outputs

- Up-to-date KEDB with information (records) on problems, known errors and related workarounds
- Requests for changes raised to trigger the change management process, in order to resolve the underlying root cause(s) of identified problems / known errors



# PM: Process chart according to FitSM-2





## Ongoing process execution

- **Identify problems**
  - Perform regular incident pattern and trend analysis to identify (potential) problems
  - Register a problem
- **Handle problems**
  - Classify and prioritise a problem
  - Identify the root cause and categorise the problem as a known error
  - Identify one or more workarounds where possible
  - Assess options for resolution of a problem, and resolve a problem where appropriate
  - Close a problem (following resolution or when no longer relevant)
- **Maintain the KEDB**
  - Add a known error (including one or more workarounds) to the KEDB
  - Update or deactivate a known error record in the KEDB



## PM: Roles according to FitSM-3

Role	Tasks	Number of implemented roles
<b>Process owner PM</b>	<i>Generic tasks of a process owner applied in the context of PM</i>	1 in total
<b>Process manager PM</b>	<i>Generic tasks of a process manager, plus:</i> <ul style="list-style-type: none"><li>• Ensure that incident trends are regularly analysed to identify problems.</li><li>• Ensure that identified problems are recorded, and that records are of sufficient quality.</li><li>• Ensure that problems are analysed, information on known errors recorded and problems brought to closure.</li></ul>	1 in total

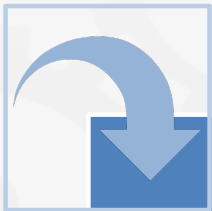
## PM: Roles according to FitSM-3



Role	Tasks	Number of implemented roles
<i>Case owner:</i> <b>Problem owner</b>	<ul style="list-style-type: none"><li>• Coordinate and take over overall responsibility for all activities in the lifecycle of a specific problem, including problem analysis and identification of options to handle the problem.</li><li>• Monitor the progress of problem resolution and ensure that the problem is escalated effectively, if required.</li><li>• Ensure the information in the KEDB on this problem / known error are up to date, including appropriate descriptions of potential workarounds.</li><li>• Communicate the problem / known error and potential workarounds to relevant stakeholders (e.g. ISRM staff and users).</li><li>• Depending on the selected option for dealing with the problem / known error, raise requests for changes or trigger the CSI process as required.</li></ul>	1 per problem

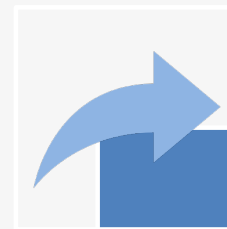


### Incoming



- **ISRM** Trend information on incidents, including information from incident tickets and reports, to enable pattern and trend analysis
- **CONFM** CMDB containing information on configuration items and their relationships to support the classification, prioritisation and investigation of problems

### Outgoing



- **CHM** Requests for changes to resolve / eliminate problems
- **ISRM** Known error database (KEDB) containing information on known errors and related workarounds to support the resolution of incidents caused by known errors



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## Configuration Management (CONFM)

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### Objective

To provide and maintain a logical model of configuration items in support of other service management activities

## CONFM: Key questions



For the services offered: What is considered a CI, and what is not?



What information needs to be maintained in the CMDB for each CI?



How to ensure that the information in the CMDB is correct and up-to-date?



## CONFM: Important terms according to FitSM-0

### Definition following FitSM-0:

#### **Configuration item (CI):**

Element that contributes to the delivery of one or more services or service components, therefore requiring control of its configuration

Note 1: CIs can vary widely, from technical components (e.g. computer hardware, network components, software) to non-technical items such as documents (e.g. service level agreements, manuals, license documentation).

Note 2: The data necessary for effective control of a CI is stored in a CI record. In addition to attributes of the CI, the CI record likely includes information on relationships it has with other CIs, service components and services. CI records are stored in a configuration management database (CMDB).

### Definition following FitSM-0:

#### **Configuration management database (CMDB):**

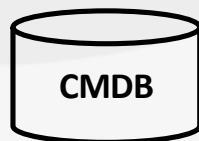
Store for data about configuration items (CIs)

Note: A CMDB is not necessarily a single database covering all configuration items (CIs). It may rather be composed of multiple data stores.



## CONFM: Key concepts – the CMDB

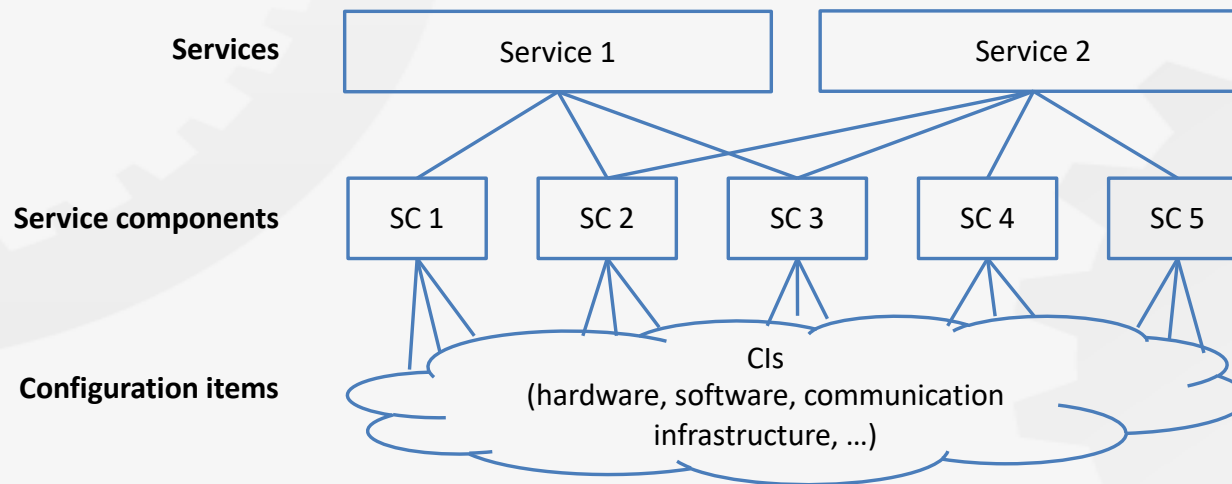
- Configuration Management is not about configuring resources
- Configuration Management is about understanding (and documenting) CIs, their attributes and relationships
- Select the adequate level of detail for your CMDB:
  - Too little detail = not enough control
  - Too much detail = excessive bureaucracy
- Most important output from this process:



### Logical CMDB:

- Information on CIs, their attributes and relationships
  - Based on information from various sources (physical databases, asset inventories)
- The CMDB is a key source of information to staff involved in many other ITSM processes.

# CONFM: Key concepts – Services, service components and CIs



# CONFM: Requirements according to FitSM-1



## PR11 Configuration Management

### REQUIREMENTS

- PR11.1 The scope of configuration management shall be defined together with the types of configuration items (CIs) and relationships to be considered.
- PR11.2 The level of detail of configuration information shall be sufficient to support effective control over CIs.
- PR11.3 Information on CIs and their relationships with other CIs shall be maintained in a configuration management database (CMDB).
- PR11.4 CIs shall be controlled and changes to CIs tracked in the CMDB.
- PR11.5 The information stored in the CMDB shall be verified at planned intervals.

## CONFM: Activities according to FitSM-2



### Initial process setup

- Define the scope of the configuration management process and the integrated configuration management database (CMDB).
- Agree the level of detail of configuration information to be collected
- Identify and define CI types (including their attributes) and relationship types.
- Based on the defined scope, identify all existing sources of configuration information in the environment of the service provider.
- Define the concept for integrating available sources of configuration information and add missing configuration information to the integrated CMDB, including the selection of appropriate supporting technology / tools.

# CONFM: Inputs and outputs according to FitSM-2



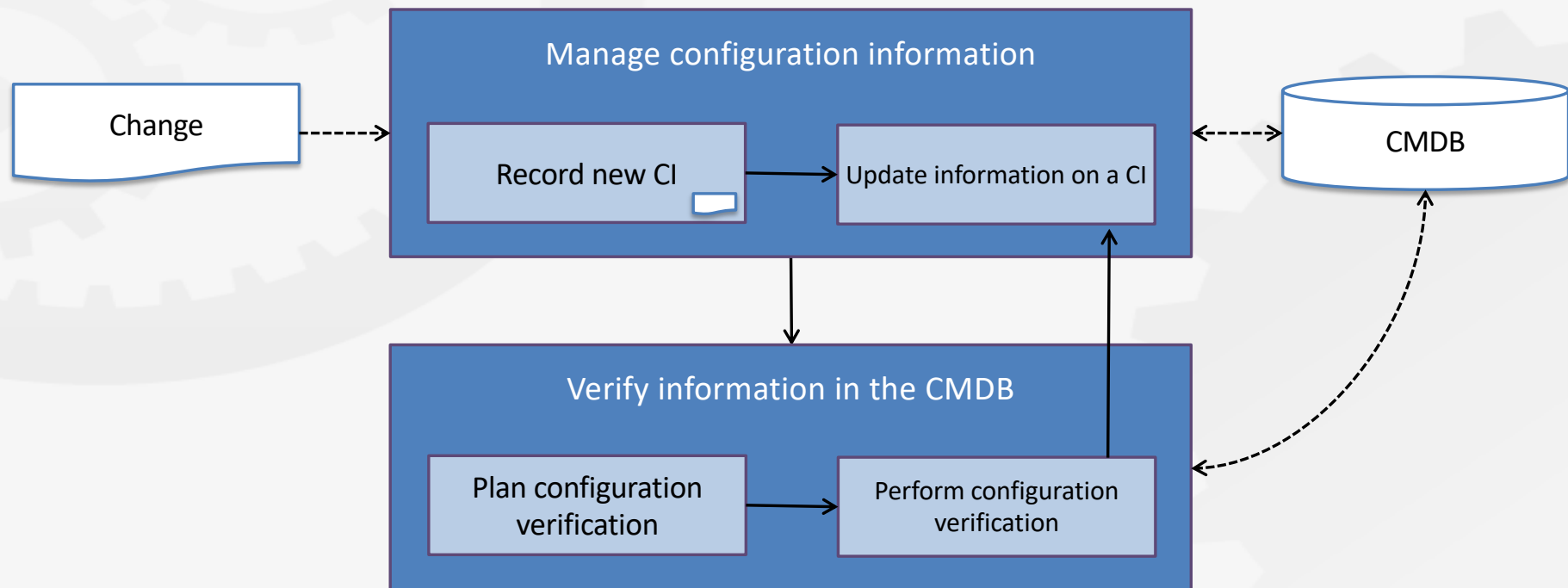
## Inputs

Relevant information / data on configuration items (CIs) and their relationships  
Information on changes to CIs

## Outputs

Up-to-date logical model of all relevant CIs and their attributes and relationships, reflected by the information / records stored in the configuration management database (CMDB)  
Configuration verification reports

# CONFM: Process chart according to FitSM-2





### Ongoing process execution

- **Maintain configuration information**
  - Record new CI in the CMDB (create a configuration record)
  - Update information on a CI
- **Verify configuration information**
  - Plan configuration verification
  - Perform configuration verification (to identify errors or inconsistencies in configuration information and trigger corrective actions)

# CONFM: Roles according to FitSM-3

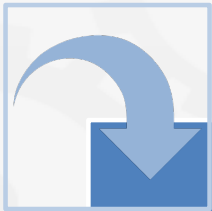


Role	Tasks	Number of implemented roles
<b>Process owner CONFM</b>	<i>Generic tasks of a process owner applied in the context of CONFM</i>	1 in total
<b>Process manager CONFM</b>	<i>Generic tasks of a process manager, plus:</i> <ul style="list-style-type: none"><li>• Maintain and periodically review the scope and granularity of the CMDB.</li><li>• Maintain the definitions of all CI and relationship types.</li><li>• Plan regular verifications of the configuration information held in the CMDB.</li><li>• Ensure that configuration verifications are conducted and identified nonconformities addressed.</li></ul>	1 in total
<i>Case owner:</i> <b>CI owner</b>	<ul style="list-style-type: none"><li>• Ensure that the information on a specific CI in the CMDB is accurate and up to date.</li><li>• Collaborate with the process manager and other CI owners to ensure that all information on the relationships from / to a specific CI are accurate and up to date.</li></ul>	1 per CI

## CONFM: Interfaces according to FitSM-2

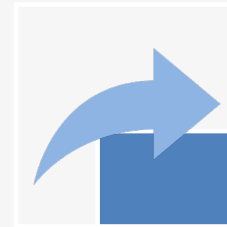


### Incoming



- **CHM** Information on the deployment of releases (and the changes to CIs included in the releases) required to update the CMDB and (if necessary) introduce new CI types

### Outgoing



- **Any** Configuration information from the CMDB to support process activities



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## Change Management (CHM)

### Objective

To plan, approve and review changes in a controlled manner to avoid adverse impact on services

## CHM: Key questions



What types of changes are considered, and how are changes classified accordingly?



How are different types of changes assessed and approved?



How do we know if a change was successful?



How are changes planned and coordinated with deployment?



How to ensure that information on planned changes are available to relevant parties?



## CHM: Important terms according to FitSM-0

Definition following FitSM-0:

### **Request for change (RFC):**

Documented proposal for a change

Definition following FitSM-0:

### **Change:**

Alteration (such as addition, removal, modification, replacement) of a configuration item (CI) or another entity that requires change control

# CHM: Requirements according to FitSM-1



## PR12 Change Management

### REQUIREMENTS

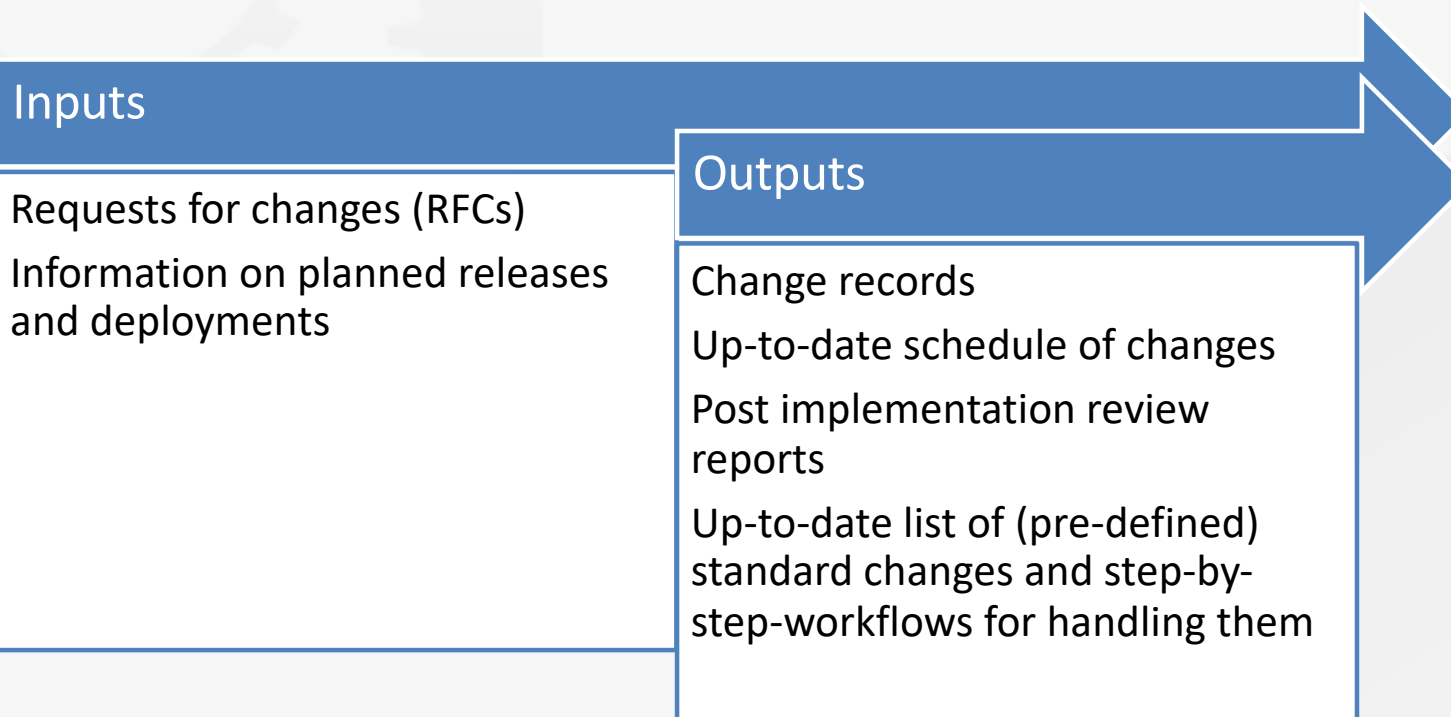
- PR12.1 All changes shall be registered and classified in a consistent manner. Classification shall be based on defined criteria and consider different types of changes, including emergency changes and major changes.
- PR12.2 For each type of change, steps shall be defined for handling them in a consistent manner.
- PR12.3 Changes shall be assessed in a consistent manner, taking into consideration benefits, risks, potential impact, effort and technical feasibility.
- PR12.4 Changes shall be approved in a consistent manner. The required level of approval shall be determined based on defined criteria.
- PR12.5 Changes shall be subject to a post implementation review as needed, and closed in a consistent manner.
- PR12.6 A schedule of changes shall be maintained. It shall contain details of approved changes and intended deployment dates, which shall be communicated to interested parties.



## Initial process setup

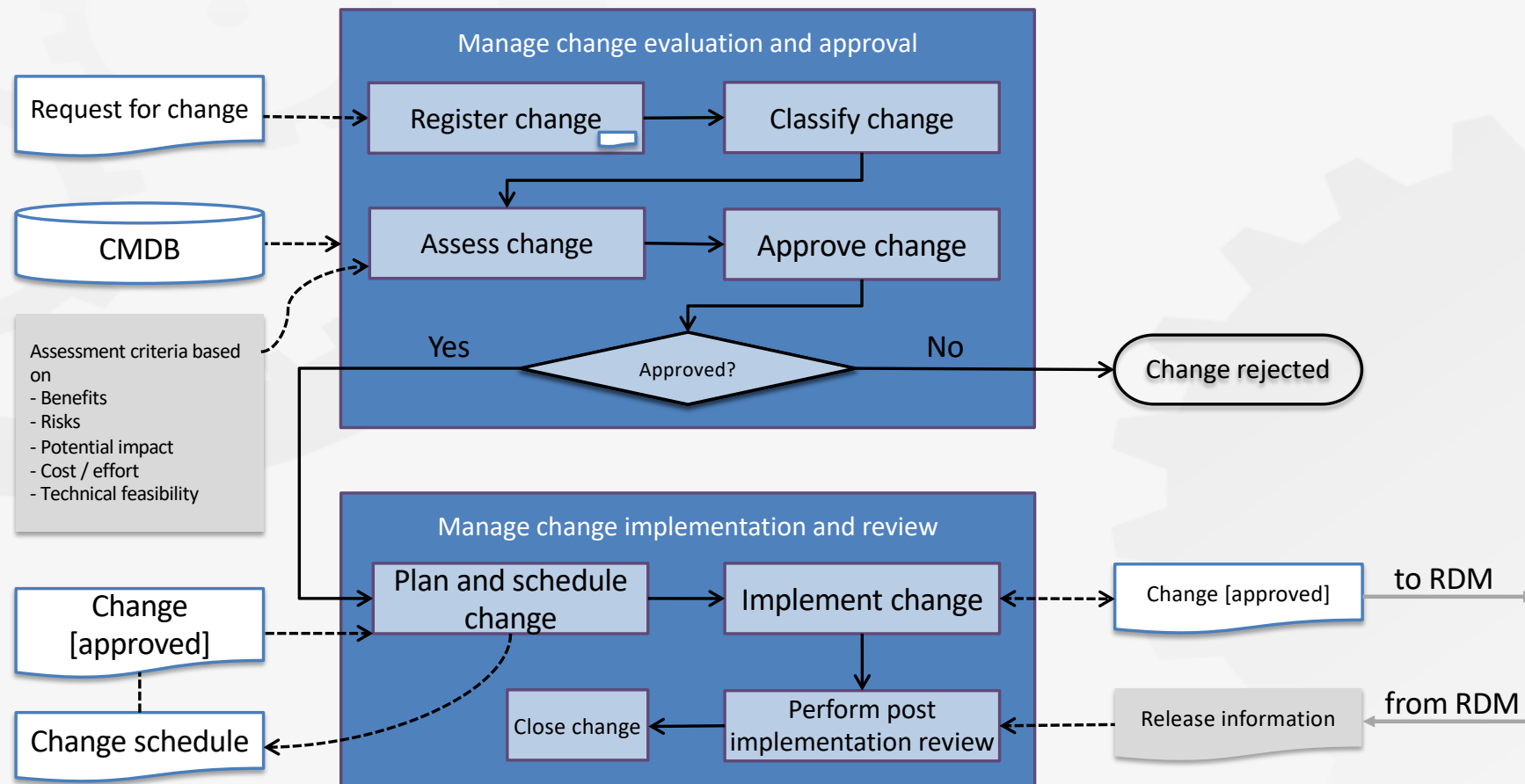
- **Set up a tool** (e.g. ticket / workflow tool) supporting the recording and handling (including classification, evaluation, approval, implementation, post implementation review) of requested and approved changes.
- Define a standardised and repeatable way of **recording requests for changes (RFCs)** and resulting approved changes that specifies the sources and channels through which RFCs may be raised, the required format of an RFC, and the way in which the RFC is recorded in the recording system.
- Define the **criteria for identifying emergency changes**, as well as a standardised and repeatable way of dealing with emergency changes from recording to closure, including an emergency change review.
- **Identify well-known and recurring changes**, and for each of them create a standardised change and describe, where required, the concrete steps to be carried out in order to manage the respective change effectively from recording to closure (including the steps for implementing the change and ensuring adequate traceability and documentation).
- Create a **schedule of changes** (including those in releases to provide an overview of change implementation).

# CHM: Inputs and outputs





# CHM: Process chart according to FitSM-2



# CHM: Activities according to FitSM-2



## Ongoing process execution

- **Manage change evaluation and approval**
  - Register a change based on a request for change (RFC)
  - Classify a change including checking against major change and emergency change criteria
  - Assess a change
  - Approve or reject a change (considering special conditions for major or emergency changes)
- **Manage change implementation and review** (in connection with the RDM process where applicable)
  - Plan and schedule a change (including technical and non-technical actions)
  - Implement a change
  - Perform a post implementation review (considering special conditions for major or emergency changes)
  - Close a change



## CHM: Change implementation

- The sub-activity “Implement a change” includes or implies the following:
  - Acquisition (e.g. purchasing) or development (e.g. programming, customisation) of required new or changed service components or CIs
    - Hardware
    - Software and licenses
    - External services, including cloud services
    - Other resources (human, informational)
  - For changes with a high (technical or organisational) complexity: Initiation of a project to manage change implementation activities

# CHM: Roles according to FitSM-3



Role	Tasks	Number of implemented roles
<b>Process owner CHM</b>	<i>Generic tasks of a process owner applied in the context of CHM</i>	1 in total
<b>Process manager CHM</b>	<i>Generic tasks of a process manager, plus:</i> <ul style="list-style-type: none"><li>• Plan, schedule, prepare and moderate change advisory board (CAB) meetings.</li><li>• Maintain the list and descriptions of standard changes, together with relevant technical experts.</li><li>• Ensure that all requests for changes are processed effectively, and in a timely manner.</li><li>• Monitor the overall progress of change evaluation, approval and implementation.</li><li>• Review the change records in regular intervals, to identify trends or nonconformities or poor documentation / traceability.</li></ul>	1 in total



## CHM: Roles according to FitSM-3

Role	Tasks	Number of implemented roles
<i>Case owner:</i> <b>Change owner</b>	<ul style="list-style-type: none"><li>• Control and coordinate all activities in the lifecycle of a specific change.</li><li>• Monitor the progress of change evaluation and implementation for this change.</li><li>• Ensure that the change record is complete and up to date at any time from recording the request for change to completion of the post implementation review.</li><li>• As applicable, communicate with the Release owner of the release containing this change.</li></ul>	1 per change

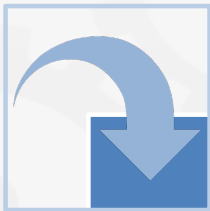
# CHM: Roles according to FitSM-3



Role	Tasks	Number of implemented roles
<b>Change advisory board (CAB)</b>	<ul style="list-style-type: none"><li>• Evaluate non-standard changes, taking into account at least:<ul style="list-style-type: none"><li>○ Benefits</li><li>○ Risks</li><li>○ Potential impact</li><li>○ Technical feasibility</li><li>○ Effort / cost</li></ul></li><li>• Decide on the approval of non-standard changes, based on the evaluation results.</li><li>• Decide which changes can be considered pre-approved in the future.</li></ul> <p>Important notes:</p> <ul style="list-style-type: none"><li>• The CAB should be composed of (all) relevant stakeholders of the changes that are currently subject to evaluation and approval.</li><li>• CAB meetings should take place in regular intervals, although the specific composition of the CAB may / will vary.</li></ul>	1 board for a certain number of changes

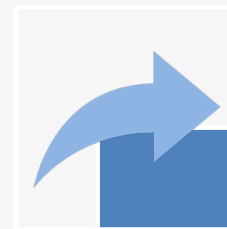


## Incoming



- **Any** Request for change to trigger the CHM process

## Outgoing



- **CONFM** Information on planned, approved and / or implemented changes to Cis to be reflected in the CMDB
- **RDM** Approved and planned changes that are ready for deployment to be considered for future / upcoming releases (depending on defined criteria and applicable release and deployment strategies)
- **RDM** Change schedule with proposed deployment dates for planned and approved changes / Basis for planning and scheduling releases



Standards for lightweight  
IT service management

## Release & Deployment Management (RDM)

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### Objective

To bundle changes into appropriate types of releases and to effectively deploy them

# RDM: Key questions



How are different release and deployment strategies applied to different CIs?



Which changes are included in which kinds of releases?



How can releases be planned and tested prior to deployment?



How do we know if a release was successful?



How can unsuccessful deployments be reversed?



## RDM: Important terms according to FitSM-0

Definition following FitSM-0:

### **Release:**

Set of one or more changes that are grouped together and deployed as a logical unit

Definition following FitSM-0:

### **Release and deployment strategy:**

Approach taken to manage releases and their deployment for a given set of service components and related configuration items (CIs), including organisational and technical aspects of planning, building, testing, evaluating, accepting and deploying releases

Note: Typical release and deployment strategies include continuous integration (a DevOps practice where changes to software source code are regularly merged into a central repository, followed by running automated builds and tests) and fixed release cycles (where minor and major releases are planned according to a long-term schedule, with emergency releases being deployed between release cycles as necessary).

# RDM: Requirements according to FitSM-1



## PR13 Release & Deployment Management

### REQUIREMENTS

- PR13.1 Release and deployment strategies shall be defined, together with the service components and CIs to which they are applied. Strategies shall be aligned with the frequency and impact of releases as well as the technology supporting deployment.
- PR13.2 Criteria for including approved changes in a release shall be defined, taking into consideration the applicable release and deployment strategy.
- PR13.3 Deployment of releases shall be planned, including acceptance criteria, as needed.
- PR13.4 Releases shall be built, tested and evaluated against acceptance criteria prior to being deployed. The extent of release testing shall be appropriate to the type of release and its potential impact on services.
- PR13.5 Deployment preparation shall consider steps to be taken in case of unsuccessful deployment.
- PR13.6 Deployment activities shall be evaluated for success or failure.

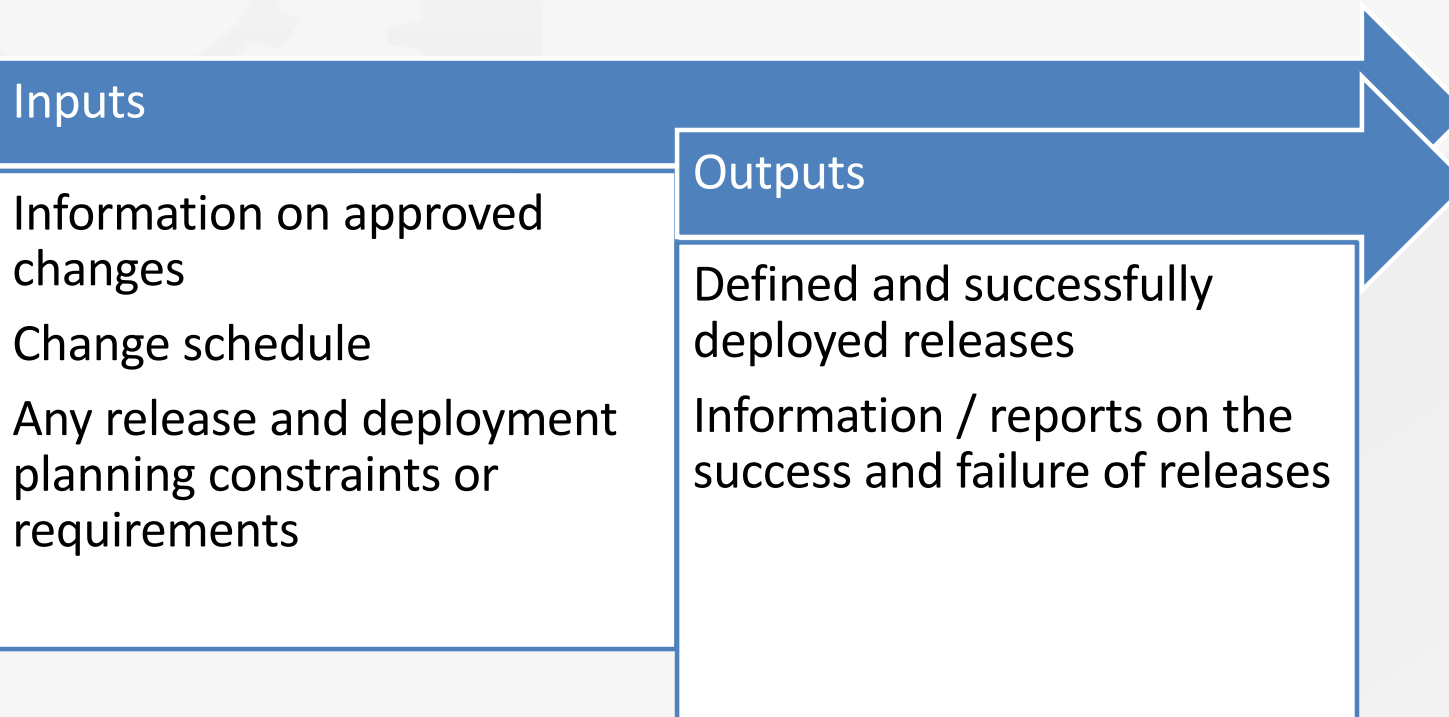


### Initial process setup

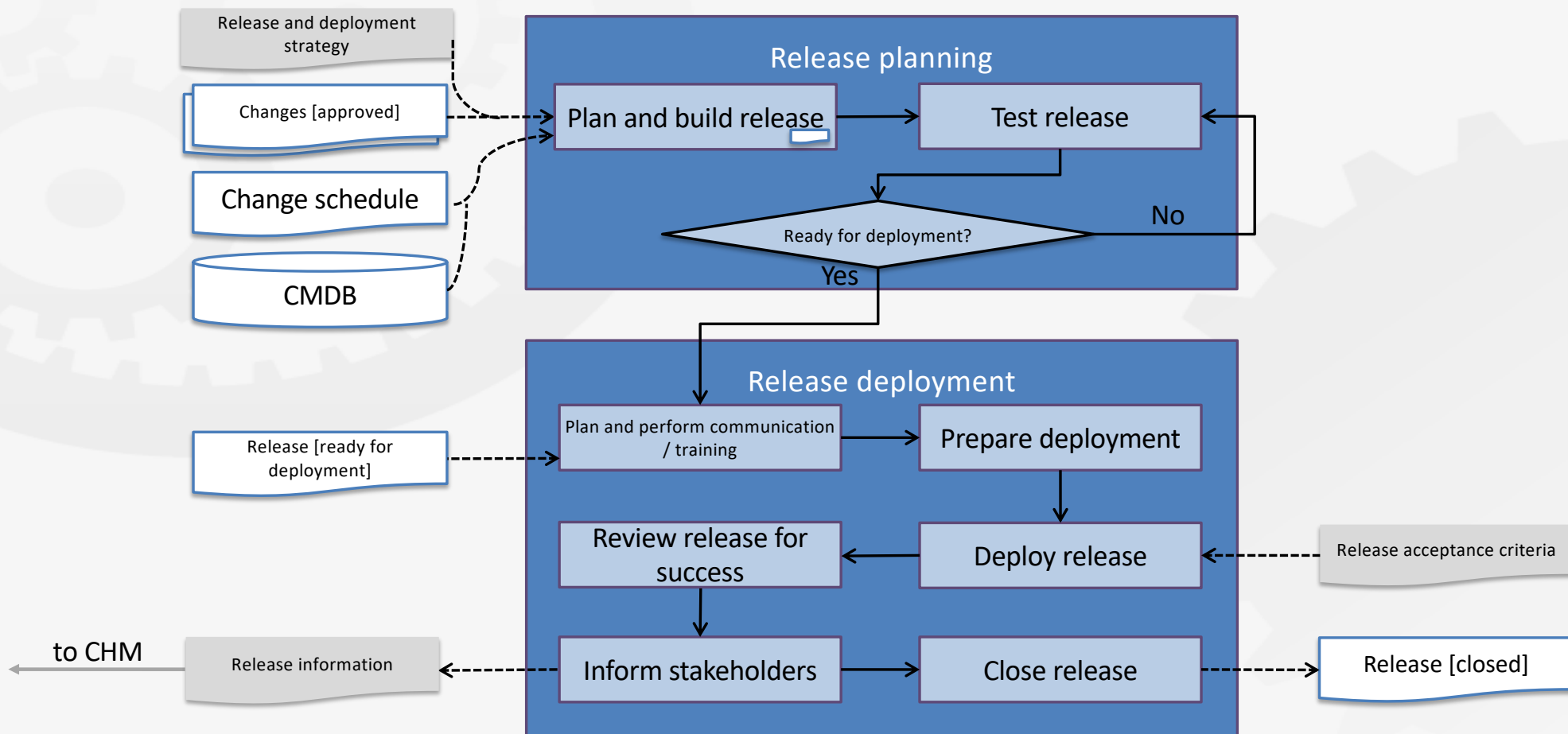
- Define a standardised and repeatable way of **defining and planning releases**, based on approved changes and the schedule of changes.
- Define **criteria for identifying different types of releases**, such as major releases, minor releases or emergency releases.
- Define **release and deployment strategies** for all CIs under control of the change management process, ensuring the approach for deploying changes to a CI or a set of CIs is understood.
  - Define the service components and CIs which the strategy applies to, and under what conditions
  - Define the frequency of releases and manner of release for the strategy
  - Define the testing to be performed under this strategy
- Define a way to **record the results of release and deployment testing and evaluation** of acceptance criteria.



## RDM: Inputs and outputs according to FitSM-2



# RDM: Process chart according to FitSM-2





### Ongoing process execution

- **Release planning**

- Build a release, based on the applicable release and deployment strategy
- Test a release

- **Release deployment**

- Plan and perform communication and training for users and support staff
- Prepare deployment of a release
- Deploy a release
- Review a release for success
- Inform stakeholders of the results of the release
- Close a release

# RDM: Important considerations



## Release and deployment strategy

- Defines the approach for planning and deployment of a given release

## Testing approach

- Defines the approach for testing a given release before making all changes / functionalities available to all service users



## RDM: Typical release and deployment strategies

- **Big bang deployment**
  - Entire system or application is released and deployed all at once.
  - Involves a single, significant release with all the changes implemented together.
- **Phased rollout**
  - Involves releasing and deploying the changes in phases or stages.
  - Allows for incremental deployment, starting with a smaller subset of users or specific functionalities and gradually expanding to a larger user community or additional features.
- **Rolling deployment**
  - Involves gradually deploying changes across different servers or components while keeping the system operational.
  - Ensures continuous availability and minimises downtime as the deployment progresses.
- **Continuous deployment**
  - Changes are automatically deployed to the production environment as soon as they pass the necessary tests and quality checks.
  - Requires a high degree of automation and continuous integration practices.



## RDM: Release and deployment testing approaches

- **Canary testing**
  - Changes are deployed to a small subset of users or servers while the majority of users continue using the existing system.
  - Allows for testing and validation of changes in a controlled environment before wider deployment.
- **A/B testing / split testing**
  - Releasing and deploying multiple versions of a feature or design to different user groups
  - Allows for comparing and analysing the performance and user response to determine the optimal solution.
- **Blue-green testing**
  - Two identical environments (blue and green) are maintained, with one serving as the production environment while the other is used for testing and deployment.
  - Changes are deployed to the non-production environment, and once validated, the traffic is switched to the updated environment.

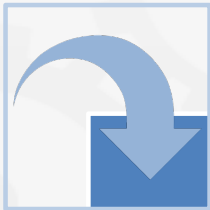
## RDM: Roles according to FitSM-3



Role	Tasks	Number of implemented roles
<b>Process owner RDM</b>	<i>Generic tasks of a process owner applied in the context of RDM</i>	1 in total
<b>Process manager RDM</b>	<i>Generic tasks of a process manager, plus:</i> <ul style="list-style-type: none"><li>• Maintain the overall release planning, including release cycles.</li><li>• Manage the release and deployment strategies defined for the SMS.</li><li>• Apply the release and deployment strategies to defined groups of components, as appropriate.</li><li>• Review deployed releases for success.</li></ul>	1 in total
<b>Case owner: Release owner</b>	<ul style="list-style-type: none"><li>• Identify the appropriate release and deployment strategy for a specific release.</li><li>• Control and coordinate the activities in the lifecycle of a specific release, including planning, building, testing and deploying.</li><li>• Ensure that the required documentation of the release (including release plans) is complete and of adequate quality.</li><li>• Act as a single point of contact for the release for all stakeholders of this release, including the change manager, affected change owners, developers, problem manager and customer representatives.</li></ul>	1 per release

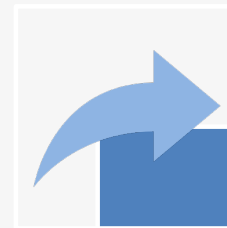


## Incoming



- **CHM** Approved and planned changes that are ready for deployment to be considered for future / upcoming releases (depending on defined criteria and applicable release and deployment strategies)Change schedule with proposed deployment dates for planned and approved changes / Basis for planning and scheduling releases
- **CONFM** Configuration information (CMDB) as a basis for informed decisions in deployment planning

## Outgoing



- **CHM** Information on deployed releases (release records) to allow for post implementation review of the bundled changes
- **CONFM** Information on the deployment of releases (and the changes to CIs included in the releases) required to update the CMDB and (if necessary) introduce new CI types
- **ISRM** Information on planned or recently deployed releases to support incident resolution (e.g. to understand if incidents are potentially related to releases)



Standards for lightweight  
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## Continual Service Improvement Management (CSI)

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### Objective

To identify, prioritise, plan, implement and review improvements to services and service management

## CSI: Key questions



How are opportunities for improving services and processes identified and evaluated?



How is the implementation of actions for improvement controlled and monitored?

## CSI: Important terms according to FitSM-0



Definition following FitSM-0:

### **Improvement:**

Action or set of actions carried out to increase the level of conformity, effectiveness or efficiency of a management system, process or activity, or to increase the quality or performance of a service or service component

Note: An improvement is usually implemented after an opportunity for improvement has been identified, for instance during a service review, audit or management review.

# CSI: Requirements according to FitSM-1



## PR14 Continual Service Improvement Management

### REQUIREMENTS

- PR14.1 Opportunities for improvement of services and processes shall be identified and registered, based on reports as well as results from measurements, assessments and audits of the SMS.
- PR14.2 Opportunities for improvement shall be evaluated in a consistent manner and actions to address them identified.
- PR14.3 The implementation of actions for improvement shall be controlled in a consistent manner.



### Initial process setup

- Identify all relevant sources of potential suggestions for improvement.
- Define a standardised way to record suggestions for improvements from the identified sources.
- Set up a tool (e.g. ticket / workflow tool) supporting the recording and handling (including prioritisation, evaluation approval) of suggestions for improvement.



## CSI: Inputs and outputs according to FitSM-2

### Inputs

Suggestions for improvements

Results from measurements, assessments and audits of the SMS, including:

- Identified nonconformities as well as deficiencies in effectiveness and efficiency of ITSM processes, and resulting opportunities for improvement
- Identified deficiencies in the performance of services or supporting service components, and resulting opportunities for improvement

Customer feedback from service reviews, complaints and satisfaction analysis / surveys

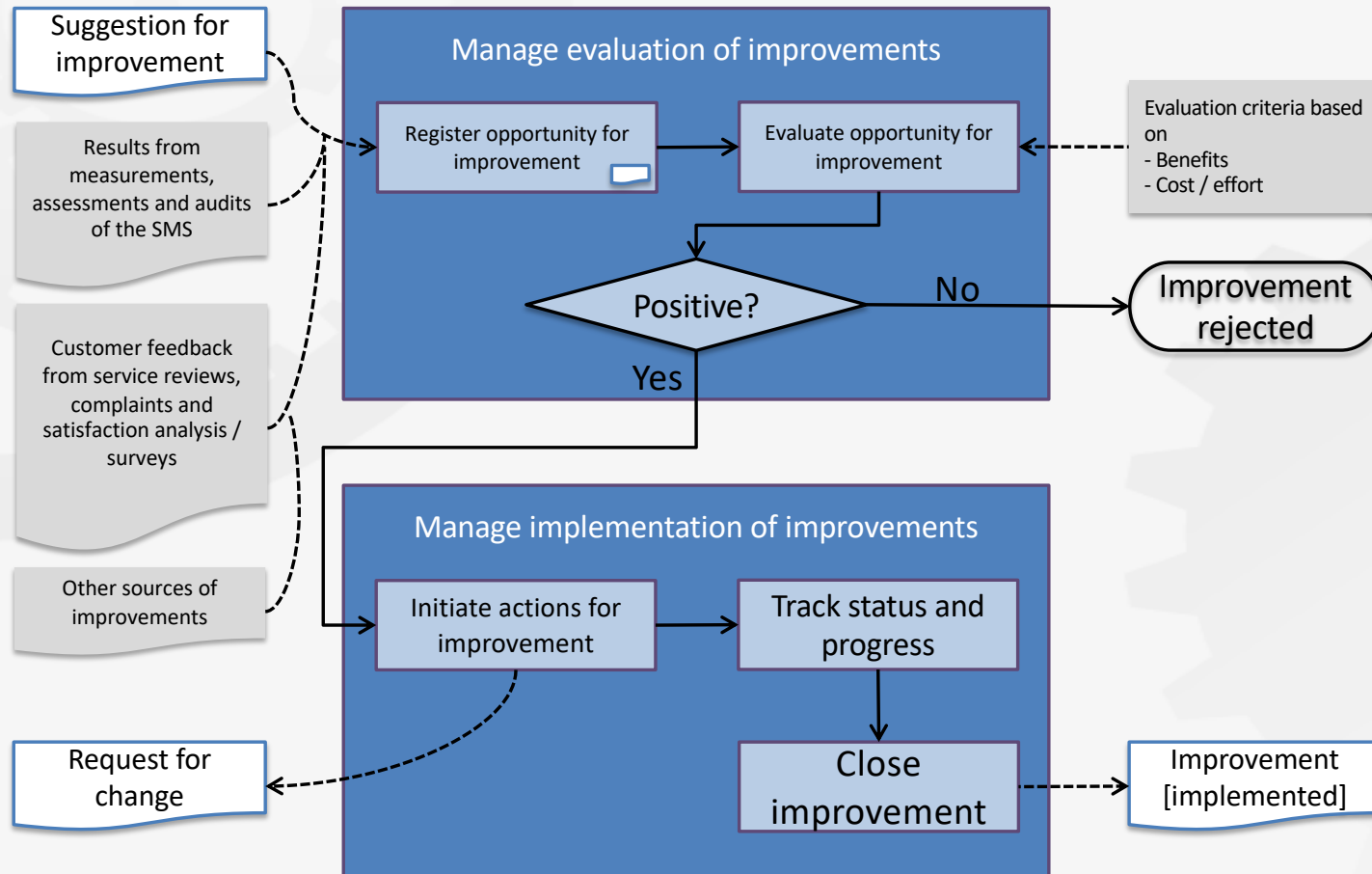
Other sources of improvements

### Outputs

Improvements to services or the SMS

Requests for changes

# CSI: Process chart according to FitSM-2





### Ongoing process execution

- **Manage evaluation of improvements**
  - Identify and register an opportunity / suggestion for improvement
  - Evaluate an opportunity / suggestion for improvement
- **Manage implementation of improvements**
  - Initiate an action to address an improvement
  - Track the status and progress of improvement actions

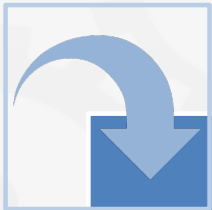


## CSI: Roles according to FitSM-3

Role	Tasks	Number of implemented roles
<b>Process owner CSI</b>	<i>Generic tasks of a process owner applied in the context of CSI</i>	1 in total
<b>Process manager CSI</b>	<i>Generic tasks of a process manager, plus:</i> <ul style="list-style-type: none"><li>• Review the status and progress of ongoing improvements in regular intervals.</li></ul>	1 in total
<b>Case owner: Improvement owner</b>	<ul style="list-style-type: none"><li>• Maintain the improvement under their ownership.</li><li>• Coordinate the activities to implement the improvement.</li></ul>	1 per improvement

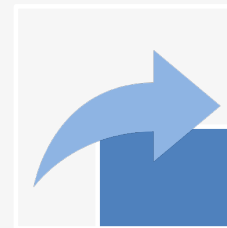


### Incoming



- **Any:** Suggestions for improving services and the SMS that require control and coordination through the CSI process
- **SRM:** Service reports as an information basis related to opportunities for improving services and the SMS

### Outgoing



- **CHM:** Requests for changes to trigger the change management process, in order to implement improvements (where needed)



## FitSM Advanced Level exam

- Closed book, i.e. no aids are allowed
- Duration: 60 minutes
- 30 multiple choice questions:
  - Four possible answers for each question: A, B, C or D
  - One correct answer per question
- At least 70% correct answers (21 of 30) are required to pass the examination





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