

ITIL® 4 Release Management | Official Practice Guide

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ITIL[®] 4 Release Management

Global Best Practice



Unlocking your potential to achieve more

Welcome to the ITIL® 4 Release Management Official Practice Guide.

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Welcome





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Information icons



Key message



Definition



Tip



Chapter 1

About this guide

This guide provides practical guidance for the release management practice. It is split into seven main sections, covering:

- general information about the practice
- the practice's processes and activities and their roles in the service value chain
- the organizations and people involved in the practice
- the information and technology supporting the practice
- considerations for partners and suppliers for the practice
- information on assessing and developing the capability of the practice
- recommendations for succeeding in the practice.

ITIL® 4 qualification scheme

Selected content from this guide is examinable as a part of the following syllabi:

- **ITIL® 4 Specialist:** Create, Deliver, and Support
- **ITIL® 4 Specialist:** High-velocity IT
- **ITIL® 4 Practitioner:** Release Management
- **ITIL® 4 Specialist:** Plan, Implement, and Control

Please refer to the respective syllabus documents for details.

Chapter 2

General information

2.1 Purpose and description



Key message

The purpose of the release management practice is to make new and changed services and features available for use.

The release management practice ensures that services are available to use in line with the organization's policies and agreements between the organization and its service consumers.

It should be noted that the term 'release' is often used to describe transfer of a new or changed set of components from a development team to a service operations team. In ITIL terms, this transfer is a form of deployment. The term 'release' is reserved for making the new and changed services and features available for use. See sections 2.2.1 and 3.2.2 for more information.

Traditionally, service components are visible and accessible for users including infrastructure, software, and documentation. As infrastructure and documentation are increasingly digitized, software management methods and approaches become more applicable to these types of service components. This affects the release management practice and other practices with significant focus on changes in IT resources, such as change enablement, service validation and testing, deployment management, software development and management, and infrastructure and platform management.

From the customer and user journey perspective, release management supports onboarding and offboarding. For users, this practice may support the very first touchpoints and interactions with the service provider. After initial onboarding is complete, this practice supports the delivery of service updates, which is important for the success of service delivery and consumption.

The release management practice is beneficial for both IT service providers and their service consumers.

Benefits for the service provider include:

- Controlled enablement of new and changed services for users
- Ability to experiment and test hypotheses with different user groups
- Reduced risks and losses resulting from releases
- Better image due to smooth and timely release of IT services
- Higher user and customer satisfaction.

Benefits for the service consumer include:

- Controlled enablement of new and changed business services for users
- Reduced risks and losses resulting from releases
- Better image due smooth and timely release of business services
- Higher client and employee satisfaction.

2.2 Terms and concepts

2.2.1 Release management and deployment management



Release

A version of a service or any other configuration item, or a collection of configuration items, that is made available for use.

Organizations should define a high-level approach to release and deployment management practices and their role in organization's value streams and service relationships.

One approach is to combine release and deployment to the live environment. Once moved to the live environment, service components become available to users. Co-existence of different versions of one component in the live environment is rare and does not last long. In this approach, there may be no clear distinction between deployment to the live environment and release activities (and steps of a product and service lifecycle), especially if enabling the released version for use does not require any additional user training. This approach is typically applied to hardware service components and large monolithic software systems.

Another approach is more common to digital products and environments. In this approach, new versions of software can be deployed to the live environment before release activities start, and then released to all or some of the users. In this case, release management activities focus on enabling the use of the service and can be very simple and technical or complex and human-focused. For example, release can be as simple as changing the application's status in a repository so that it is available for download by a selected audience. A more complex example can include user communication and training aiming to reduce risks and increase effectiveness of the version changes.



Key message

CI/CD and release management

The key concepts for deployment in Agile and DevOps are continuous integration, continuous delivery, and continuous deployment. These can be defined as follows:

- Continuous integration usually refers to integrating, building, and testing codes within the software development environment.
- Continuous delivery extends this integration, covering the final stages for production deployment. Continuous delivery means that built software can be transferred to production at any time.
- Continuous deployment refers to the changes that go through the process and are automatically put into production. This enables multiple production deployments a day. Continuous delivery means that frequent deployments are possible, but deployment decisions are taken case by case, usually due to businesses preferring a slower rate of deployment. Continuous deployment requires that continuous delivery is in place.

In organizations using continuous deployment, release management as a separate practice is common and effective. New software versions, documents, and digital infrastructure are deployed to live environments as soon as they are ready, and then the release management practice is used to 'switch them on' for users.

If continuous delivery is used without continuous deployment, deployment to live environment and release for users may be synchronized and managed as a single step in respective value streams.

Similarly, if an organization uses neither continuous delivery nor continuous deployment, release management activities are likely to be combined with deployment to the live environment.

Organizations can define the approach for release and deployment management practices for all products and services, or per product. This usually depends on the organization's product architecture (and its consistency across products), and on the organization's approaches to management of software lifecycles.

2.2.2 Release management approaches, models, and plans

If an organization manages products of different architectures, it is likely that several approaches for release management will be defined. A product-specific release management model can be agreed for a specific product.



Release model

A repeatable approach to the management of particular types of releases.

This model usually includes, but is not limited to:

- agreed high-level approach
- target user audience of releases and rules for user enablement
- push/pull conditions
- verification and acceptance criteria
- terms and conditions of release usage for hypothesis verification and experimentation.

It is possible to have more than one release management model for a product, such as when a product is used to provide services in different markets or to business and individual service consumers.

One of the factors that usually affects the development of the release management model and the practice is the organization's scope of control of the product. When the organization controls the full product lifecycle, including development, testing, and deployment, it has more freedom in defining release management models. In contrast, if the organization's services are based on third-party components, or the development and deployment are managed by a supplier, it usually introduces constraints that the organization should consider. It still may be able to decide whether to include updated components in its services, but only to a certain extent (for example, until the components' vendor allows the organization to keep using the previous versions).

2.2.3 Push/pull considerations

One of the decisions to make during the development of a release management model is whether new versions of service components will be pushed to users, pulled by users, or there will be a mix of both approaches.

A 'push' approach implies that new or changed components of services are enabled for users without their specific consent (or the users consent to the updates by continuing to use the service), and users are obliged to use these versions. In contrast, the 'pull' approach makes new components and services available to users, but users can decide whether they prefer to use these new versions, stick to older ones, or not use the service at all.

Typically, organizations do not apply a single approach; they define conditions where the 'pull' or 'push' approach would work better. Common considerations for both internal and external service providers include:

- the benefits of having a single version across the user base (maintainability, compatibility)
- the benefits of allowing users to have more freedom (better image, flexible pricing options)
- technical and organizational ability to manage multiple versions in a live environment
- emergency changes (an update addressing a critical security vulnerability is likely to be 'pushed')
- functional and other customer's requirements (if a required new functionality is implemented, customers may mandate the update for all users)
- regulatory requirements.

2.2.4 Hypothesis testing and experimentation

Release management may be used to validate a hypothesis and to experiment. When an organization needs to test a hypothesis with a sample user audience, new or updated services may be released to sample user groups (sometimes called treatment groups). This approach is widely used by providers of mass services, such as social networks, but also applied to small user groups. Related techniques include blue/green releases, canary releases, and A/B testing.

These experiments require the involvement of other practices. This includes, but is not limited to:

- infrastructure and platform management
- software development and management
- service validation and testing
- deployment management
- architecture management
- service desk
- incident management.

2.3 Scope

The scope of the release management practice includes the following:

- Development and maintenance of the organization's approach to release new and changed services¹ and components.
- Management and coordination of all release instances in line with the defined approach, from planning, to implementation, to review.

There are a number of activities and areas of responsibility that are closely associated with release management, but not part of the scope of this practice.

Some of those key areas are listed in Table 2.1 and include references to the practices in which they can be found. It is important to remember that ITIL practices are merely collections of tools to use in the context of value streams, and they should be combined as necessary depending on the situation.

Table 2.1 Activities related to the release management practice described in other practice guides

Activity	Practice guide
Authorization of changes/releases	Change enablement
Deployment of new and changed components and services to live environment	Deployment management
Development of software	Software development and management
Development and building of infrastructure components	Infrastructure and platform management
User training	Workforce and talent management
Support and operational staff training	
Testing and validating the services and service components	Service validation and testing
Naming, versioning, and control of the service components	Service configuration management
Management of organizational changes related to large-scale releases	Organizational change management
Management of projects	Project management

2.4 Practice success factors



Practice success factor (PSF)

A complex functional component of a practice that is required for the practice to fulfil its purpose.

A PSF is more than a task or activity, as it includes components of all four dimensions of service management. The nature of the activities and resources of PSFs within a practice may differ, but together they ensure that the practice is effective.

The release management practice includes the following PSFs:

- establishing and maintaining effective approaches to the release of services and service components across the organization
- ensuring an effective release of services and service components in the context of the organization's value streams and service relationships.

2.4.1 Establishing and maintaining effective approaches to the release of services and service components across the organization

The release management practice includes defining and agreeing approaches and models to follow for the release of new and changed services and service components. Organizations are likely to combine several approaches and to define several release management models for every product they manage.

Apart from an organization's and product's specific characteristics, release models are defined by the service relationships between the organization and its service consumers. This includes factors such as:

- internal or external service consumers
- individual or corporate service consumption
- out-of-the-box or tailored services.

See ITIL® 4 Drive Stakeholder Value for more details on how these factors influence service provision.

The approaches and models for release management should have enough flexibility to adapt to changing circumstances, such as scale, urgency, or complexity. A plan for every release instance may be developed based on one of the agreed models to reflect the specifics of the release instance.

Release approaches, models, and the practice in general, should be subject to continual improvement, constantly looking for ways to eliminate waste and increase effectiveness and efficiency.

2.4.2 Ensuring an effective release of services and service components in the context of the organization's value streams and service relationships

Ensuring an effective release may require organizing resources in all four dimensions of service management.

Depending on the release management model, activities and resources that are required to implement a release instance vary significantly:

- A release of a new version of a mobile application for all users in a certain country or region may be performed by changing the status of the previously deployed version of the software, related release notes, and user documentation. Relevant stakeholders should be informed within the service provider organization. No further actions may be required.
- A release of a new custom-made ERP system with on premises installation and a need for user equipment upgrade may be managed as a large-scale project, involving many teams and practices across and from outside of the organization.

In any case, effective coordination, use of automation, and good planning of the release model from the early steps of product lifecycle are crucial for the success of release.

This practice is focused on identifying the tasks and coordinating the participants. It also provides recommendations on procedures and techniques to use during release implementation. Therefore, an effective combination of practices and cooperation from teams is necessary during the implementation.

Effective coordination of software development and management, infrastructure and platform management, deployment management, service validation and testing, and release management is especially important. This coordination is usually within the scope of the change enablement practice.

2.5 Key metrics

The ITIL practices are means or tools for the management of products and services. Like the performance of any tool, practice performance can be assessed only in the context of that tool's application. However, tools can differ in quality. This difference defines the tool's potential or capability to be effective when used according to their purpose.

The same applies to practices: their performance should be assessed in the context of value streams, but their potential is defined by their design and the quality of the resources. Further guidance on metrics, key performance indicators (KPIs), and other techniques that can help with this can be found in the measurement and reporting practice guide.

Key metrics for the release management practice are mapped to its PSFs. They can be used as KPIs in the context of value streams to assess the contribution of the practice to the effectiveness and efficiency of those value streams. The key metrics are listed in Table 2.2.

Table 2.2 Key metrics for release management

Practice success factors	Key metrics
Establishing and maintaining effective approaches to the release of services and service components across the organization	Stakeholders' satisfaction with the way new and changed services are introduced to users Adoption of the agreed approach to release management across the organization Key partners and service consumers' alignment with release management approaches and models Audit findings and external compliance issues caused by releases
Ensuring an effective release of the services and service components in the context of the organization's value streams and service relationships	Stakeholders' satisfaction with release instances Percentage of successful release instances/number of release errors/failures Number and percentage of incidents related to release Timeliness/adherence to release schedule Release backlog throughput

The correct selection and aggregation/segregation of metrics into composite/hierarchical indicators will make it easier to use them for the ongoing management of value streams and for the periodic assessment and continual improvement of the deployment management practice. There is no single best solution; metrics will be based on the overall context, service strategy, and priorities of an organization, as well as on the goals of the value streams to which the practice contributes.

¹ Removal of services and components from users is included in 'new and changed' here.

Chapter 4

Organizations and people

4.1 Roles, competencies, and responsibilities

The practice guides do not describe the practice management roles such as practice owner, practice lead, or practice coach. The practice guides focus on specialist roles specific to each practice. The structure and naming of each role may differ from organization to organization, so any roles defined in ITIL should not be treated as mandatory, or even recommended. Remember, roles are not job titles. One person can take on multiple roles and one role can be assigned to multiple people.

Roles are described in the context of processes and activities. Each role is characterized with a competence profile based on the model shown in Table 4.1.

Table 4.1 Competency codes and profiles

Competency code	Description
L	Leader: Decision-making, delegating, overseeing other activities, providing incentives and motivation, and evaluating outcomes
A	Administrator: Assigning and prioritizing tasks, record-keeping, ongoing reporting, and initiating basic improvements
C	Coordinator/communicator: Coordinating multiple parties, maintaining communication between stakeholders, and running awareness campaigns
M	Methods and techniques expert: Designing and implementing work techniques, documenting procedures, consulting on processes, work analysis, and continual improvement
T	Technical expert: Providing technical (IT or other subject matter) expertise and conducting expertise-based assignments

There is one practice-specific role in release management that may be found in the organizations: release manager. This role is often introduced in organizations where there is a significant volume of releases, especially if they need manual planning and execution. In other organizations, the responsibilities of a release manager may be taken by product or service owners, or by change managers.

4.1.1 Release manager role

Where a release manager role is defined, it is usually assigned to specialists that have strong knowledge of the organization's business, products and services, technology, platforms, frameworks, and processes. The role will require strong planning and project management skills, ability, and authority to coordinate teamwork.

The competence profile for this role is CTMA. This role is usually responsible for planning, managing, and coordinating release management as a practice as well as individual release instances, including:

- reviewing and developing the release approaches and models
- promoting the adoption of the agreed release management approaches and models across the organization
- planning complex releases
- managing and communicating the release schedule
- ensuring the practice is aligned and coordinated with other practices
- reviewing and continually developing the practice.

In some complex organizations, part of the release manager's responsibilities may be delegated to the role of release coordinators.

4.1.2 Roles involved in the release management activities

Examples of other roles which can be involved in the release management activities are listed in Table 4.2, together with the associated competency profiles and specific skills.

Table 4.2 Examples of roles with responsibility for release management activities

Activity	Responsible roles	Competency profile	Specific skills
Release model development and improvement			
Product architecture and service relationship analysis	Release manager Service owner Product owner Development team member	TCA	Knowledge of service relationship Business analysis Knowledge of service architecture Knowledge of release and deployment approaches and models Good knowledge of the organization's products and services Communication skills
Release management approach review and development	Service owner Product owner Release manager Development team member	MTCA	Good knowledge of service relationship Knowledge of release and deployment methods Good knowledge of the organization's products and services Communication skills
Release model review and development	Service owner Product owner Development team member Release manager	MTCA	Knowledge of service relationship Knowledge of release and deployment methods Good knowledge of the organization's products and services Communication skills
Release model communication	Service owner Product owner Release manager	CA	Knowledge of service relationship Communication skills Marketing knowledge
Release planning and coordination process			
Identification of applicable model	Service owner Product owner Development team member Release manager	TM	Knowledge of release models Good knowledge of the organization's products and services Knowledge of the value stream context
Release instance planning	Release manager Product owner Service owner	TMA	Knowledge of release models Good knowledge of the organization's products and services Knowledge of the value stream context
Verification of the service components	Release manager Resource owner Product owner Service owner	TA	Knowledge of release models and plans Good knowledge of the organization's products and services Knowledge of the value stream context Technical knowledge of the service components
Verification of the release procedures	Release manager Resource owner Product owner Service owner	MTA	Knowledge of release models and plans Good knowledge of the organization's products and services Knowledge of the value stream context
Release execution	Resource owner Systems administrator Information security specialist	T	Technical knowledge of service/product Knowledge of the value stream context Knowledge of release models and plans
Release verification	Release manager Resource owner Product owner Service owner	AT	Technical knowledge of service/product Knowledge of the value stream context Knowledge of release models and plans
Release review	Release manager Product owner Service owner	MTA	Knowledge of release models and plans Good knowledge of the organization's products and services Knowledge of the value stream context

4.2 Organizational structures and teams

A designated release management team is typically found in large organizations with significant volumes and complexity of releases. In some cases, such teams tend to act in isolation, adopting a bureaucratic, siloed approach which may prevent effective integration of the practice into the service provider's value streams.

Usually, release management does not need a dedicated team; either these activities are highly automated, or releases are managed by members of product teams, or a temporary project team is built for a large-scale complex release.

However, the role (and a dedicated job position) of a release manager may still be relevant in many cases. This role acts as a coach to ensure the practice is adopted across the organization. Depending on the organization's approach to release management, this role may be combined with the role of change and/or deployment manager.

Chapter 5

Information and technology

5.1 Information exchange

The effectiveness of release management is dependent on the quality of information used. This information includes, but is not limited to, information about:

- product architecture
- service consumer organizations and users
- software development and management practice
- planned and ongoing deployments
- ongoing and past incidents
- emerging release management techniques.

This information may take various forms. The key inputs and outputs of the practice are listed in chapter 3.

5.2 Automation and tooling

Release management in a digital environment is highly automated. But even in legacy environments the work of the release management practice can significantly benefit from automation. The term automation is used in this and other ITIL publications to refer to the use of digital technology to enable, support, or enhance various activities. This includes, but is not limited to, the full automation of activities where technology solutions remove the need for human intervention. Where this is possible and effective, it may involve the solutions outlined in Tables 5.1 and 5.2.

Table 5.1 Automation solutions for the release management practice

Automation tools	Application in release management
Workflow management and collaboration tools	Management of release records Support and automation of release models Communications between specialists involved in release planning and coordination Integration of practices into service value streams
Enterprise architecture tools	Analysis of the product and service architecture
Monitoring and event management tools	Verification of releases
Work planning and prioritization tools	Release instance planning
Analysis and reporting tools	Analysis of the release records and reporting of the release models performance
Service configuration tools	Release model development Release instance planning Verification of releases
CI/CD toolchain	Automation of the release coordination activities and integration in the CI/CD pipeline
Deployment management tools	Verification of components and procedures Execution of the release models

Table 5.2 Details of automation of the release management activities

Process activity	Means of automation	Key functionality	Impact on the effectiveness of the practice
Release model development and improvement process			
Product architecture and service relationship analysis	Enterprise architecture tools Workflow management and collaboration tools Service configuration tools	Visualization of the product/service architecture and relationships, connections, and constraints	Medium
Release management approach review and development	Workflow management and collaboration tools CI/CD toolchain	Design and management of workflow models	Medium to High
Release model review and development	Workflow management and collaboration tools CI/CD toolchain	Design and management of workflow models	Medium to High
Release model communication	Workflow management and collaboration tools	Automated communications, messaging, status updates	High
Release planning and coordination process			
Identification of applicable model or plan	Workflow management and collaboration tools CI/CD toolchain	Design and management of workflow models	Medium
Release instance planning	Workflow management and collaboration tools CI/CD toolchain Work planning and prioritization tools	Design and management of workflow models Resource planning and work scheduling	High
Verification of the service components	Deployment management tools CI/CD toolchain Service configuration tools	Automated release coordination based on pre-planned, developed scripts Configuration items verification	High
Verification of the release procedures	Deployment management tools CI/CD toolchain Workflow management and collaboration tools	Automated release coordination based on pre-planned, developed scripts Design and management of workflow models	High
Release execution	Deployment management tools CI/CD toolchain Workflow management and collaboration tools	Automated release execution based on pre-planned, developed scripts Coordination of multiple workflows and interdependencies	High
Release verification	Deployment management tools CI/CD toolchain Service configuration tools Workflow management and collaboration tools Monitoring and event management tools	Automated release verification based on pre-planned, developed scripts Configuration items verification Coordination of multiple workflows and interdependencies	High
Release review	Workflow management and collaboration tools Analysis and reporting tools	Generating and presenting reports based on the release records Knowledge sharing Analysis of the release models and plans performance	Medium

5.2.1 Recommendations for the automation of release management

The following recommendations can help when applying automation to release management:

- **Automate the value stream:** Automation of releases should be integrated into the value streams including deployment management, change enablement, service validation and testing, and, where relevant, activities of other management practices. Lack of integration complicates the value streams and reduces their effectiveness and efficiency. Consider implementing a CI/CD toolchain to support the end-to-end flow from development to operations but maintain the end-to-end approach to other value streams as well.
- **Allow for a variety of release models:** Do not try to squeeze all releases in one universal workflow. Ensure that the software tools support different release models and allow to plan a release instance based on a model.
- **Automate release management for all product architectures used by the organization:** Different models apply to products developed in-house, products developed for the organization by a third party, and products based on the off-the-shelf solutions. Make sure that release models relevant for these and other configurations are supported by the automation tools.
- **Communication is important:** Informing relevant people about planned, ongoing, and completed releases, both on the service consumer side and within the service provider, is a crucial part of release management. Relevant and proactive communication significantly helps to optimize resources and improve user and customer satisfaction.
- **Ensure effective measurement and reporting from the beginning:** In all value streams where release management is involved, release timeliness and effectiveness significantly affect the overall value stream performance. Make sure that the key metrics of the practice are captured and reported correctly and, wherever possible, automatically.

Chapter 6

Partners and suppliers

Very few services are delivered using only an organization's own resources. Most, if not all, depend on other services. These are often provided by third parties outside the organization.

As previously mentioned, the role of partners and suppliers is connected to the level of control an organization has over its product and services, or their components. When an organization controls a full product or service lifecycle, including development and deployment, it has more freedom in making a full range of decisions about release management. In contrast, if an organization's products or services are based on third-party components, or development and deployment are managed by a supplier, it usually introduces constraints that an organization must consider. It still may be able to decide whether to include updated components in its services, but only to a certain extent.

Partners and suppliers may contribute to the release management practice, usually, in the release planning and coordination process, and particularly in release execution. Examples include the setup and activation of service components, user training and other activities, especially involving release of physical infrastructure components in multiple and/or remote locations. The same partners and suppliers are likely to be involved in deployment activities.

For the products and services based on third-party solutions, vendors or suppliers can be involved in development and improvement of the release models. This contribution may be limited to the initial development of the release models or include participation in the regular reviews.

Apart from the product-specific competencies, third parties may assist service providers in development and improvement of the release management practice. This advice is often combined with wider scope of consulting on the change lifecycle management, CI/CD, product lifecycle management and automation of the related activities.

Naturally, consulting on automation of the practice may be combined with provision of the relevant tools listed in section 5.2.

Chapter 7

Capability assessment and development

7.1 The practice capability levels

The practice success factors described in section 2.4 cannot be developed overnight. The ITIL maturity model defines the following capability levels applicable to any management practice:

- Level 1** The practice is not well organized; it's performed as initial or intuitive. It may occasionally or partially achieve its purpose through an incomplete set of activities.
- Level 2** The practice systematically achieves its purpose through a basic set of activities supported by specialized resources.
- Level 3** The practice is well defined and achieves its purpose in an organized way, using dedicated resources and relying on inputs from other practices that are integrated into a service management system.
- Level 4** The practice achieves its purpose in a highly organized way, and its performance is continually measured and assessed in the context of the service management system.
- Level 5** The practice is continually improving organizational capabilities associated with its purpose.

For each practice, the ITIL maturity model defines criteria for every capability level from level 2 to level 5. These criteria can be used to assess the practice's ability to fulfil its purpose and to contribute to the organization's service value system.

Each criterion is mapped to one of the four dimensions of service management and to the supported capability level. The higher the capability level, the more comprehensive realization of the practice is expected. For example, criteria related to the practice automation are typically defined at levels 3 or higher because effective automation is only possible if the practice is well-defined and organized.

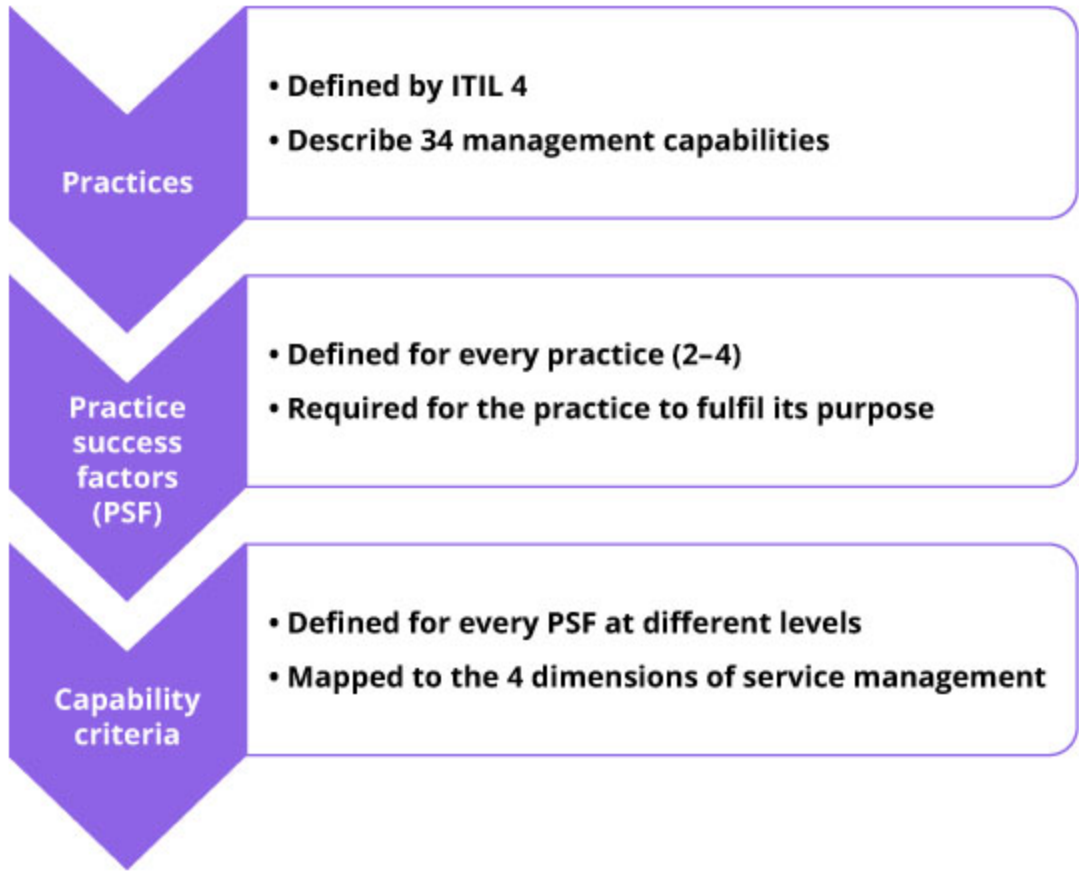


Figure 7.1 Design of the capability criteria

This approach results in every practice having up to 30 capability criteria based on the practice PSFs and mapped to the four dimensions of service management. The number of criteria at each level differs; the four dimensions are comprehensively covered starting from level 3, so this level typically has more criteria than others.

The following capability criteria are defined in the ITIL maturity model for the release management practice.

Table 7.1 Release management capability criteria

PSF	Criterion	Dimension	Capability level
Establishing and maintaining effective approaches to the release of services and service components across the organization	The approach to release management is defined, discussed, and agreed at the relevant level of the organization	Value streams and processes	3
	The responsibility for the approach to release management is clearly defined	Value streams and processes	3
	The competencies required for performing the release management are identified and skilled human resources are available	Organizations and people	3
	The release management approach is integrated with other standards and approaches adopted by the organization	Value streams and processes	4
	The effectiveness of the release management approach is measured and reported	Value streams and processes	4
	The release management approach is regularly reviewed and continually improved	Value streams and processes	5
Ensuring an effective release of services and service components in the context of the organization's value streams and service relationships	New services, changed services, and service components are successfully released into the live environments	Value streams and processes	2
	Releases are automated where reasonably possible	Information and technology	3
	The release information is tracked and managed in an integrated information system	Information and technology	3
	The releases include the required competencies and human resources, where relevant	Organizations and people	3
	The releases include the dependencies and relationships with third parties, where relevant	Partners and suppliers	3
	The releases include the required workflows and procedures, where relevant	Value streams and processes	3
	The releases include the required technologies and information flows, where relevant	Information and technology	3
	The releases are effectively integrated into the organization's value streams	Value streams and processes	4
	The effectiveness of releases is measured and reported	Value streams and processes	4
	The effectiveness of releases is regularly reviewed and continually improved	Value streams and processes	5

These capability criteria can be used by organizations for self-assessment and improvement of the practice.

7.2 Capability self-assessment

The self-assessment can be conducted by the service provider's internal audit team, if the service provider has one, or by the respective team of the parent organization. If there is no specialized team in the organization, the assessment can be done by a team of practice owners and managers responsible for other management practices of the service provider, or a mixed team of the service provider's executive leaders and managers.

To perform a quick self-assessment using the capability criteria, the following rules should be followed.

- Start with the level 2 criteria. Based on the knowledge of your organization, answer the question, 'Is this a valid description of our organization in MOST cases?'
- If the answer to the question above is 'yes', make a list of at least three types of material evidence that could prove the answer. These can be records, documents, interviews with business stakeholders, or service provider's employees.
- If the answer is 'yes' to all criteria of level 2, this level is considered achieved. Proceed to the criteria of level 3.
- If not all criteria of level 2 are met, the practice is considered to be at level 1. Focus on the criteria that are not met; what is missing in the organization? Why? How can it affect the service consumer and the quality of the IT services? What can be done to meet the criteria that are currently missed?
- The same approach is applied at every next level; the practice is considered to be at the level where all criteria are met. It is important to focus on the missing capabilities and improvement opportunities, rather than on a formal achievement of a high capability level.

7.3 Release management capability development

Management practices should support achievement of the organization's objectives and enable creation of value for the stakeholders. Depending on the service provider's strategy, positioning, and business and operating models, some practices may be more important and therefore require a higher level of capability. There is no organization that requires all management practices to be at the capability level 5. Higher capability level provides higher assurance of the fulfilment of the practice's purpose, but it comes with a cost: cost of management, automation, and training, for example. To achieve optimal performance with sufficient level of assurance, organizations should define a target capability level for each management practice.

Figure 7.2 and Table 7.2 show the capability development model, which can be applied to every management practice. The structure of this publication is aligned with the development steps.

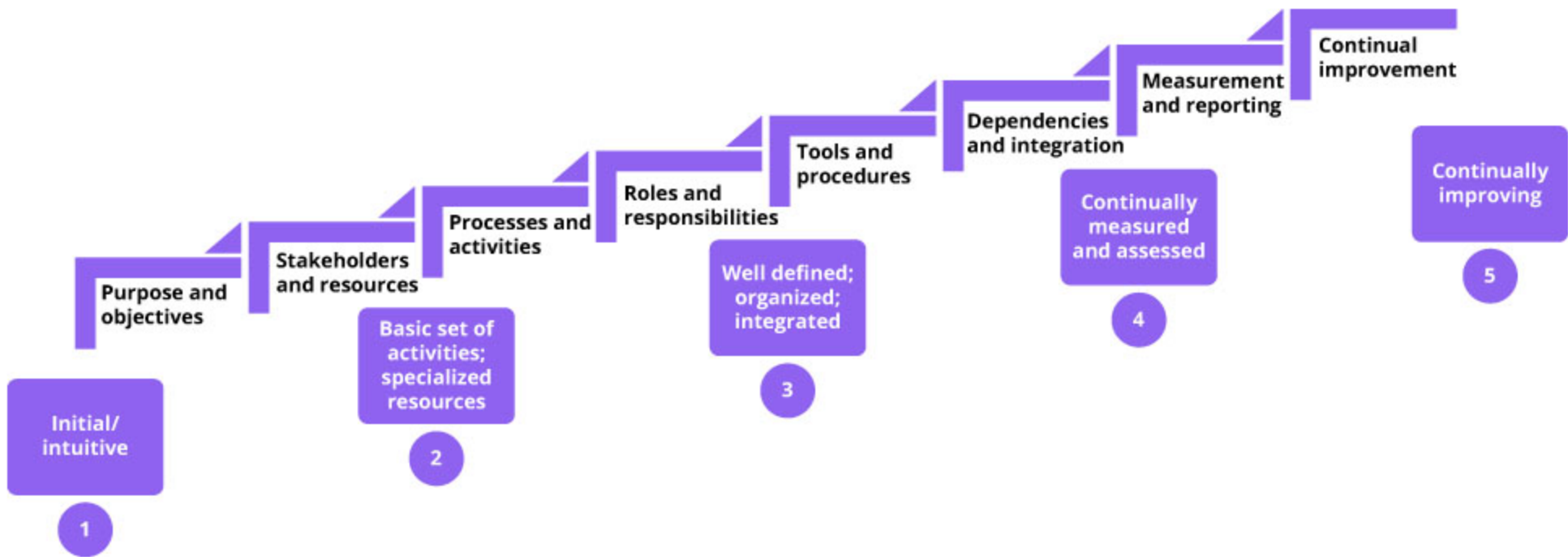


Figure 7.2 The capability development steps and levels

Table 7.2 The release management capability development steps

Capability level	Define, agree, and implement	Comment for release management	Chapter (for recommendations)
2	Purpose and objectives	Key stakeholder groups, types of releases	2.1
	Scope	The relationships between release and deployment management	2.3
	Processes and activities	Workflows, release models, roles and responsibilities	3
	Roles and responsibilities	Automation and information exchange	4
	Tools and procedures		5
3	Dependencies and integration	Integration into the service value streams	3.2
		Use of integrated information system	5
		Suppliers and other parties involved in release management	6
4	Measurement and reporting	Metrics	2.5
5	Continual improvement	Regular review of practice and the release management capability development	2.4, 2.5, 7

Chapter 8

Recommendations for practice success

Most of the content of the practice guides should be taken as a suggestion of areas that an organization might consider when establishing and nurturing their own practices. When using the content of the practice guides, organizations should always follow the ITIL guiding principles:

- focus on value
- start where you are
- progress iteratively with feedback
- collaborate and promote visibility
- think and work holistically
- keep it simple and practical
- optimize and automate.

In Table 8.1, recommendations for success of the release management practice are linked to the relevant guiding principles.

Table 8.1 Recommendations for the success of release management

Recommendation	Comments	ITIL guiding principles
Design and optimize the practice for the value streams	Release management is a part of change lifecycle but changes always have a purpose defined by the value streams. Understanding of the value stream context helps to plan and coordinate releases with the maximum value for the organization.	Focus on value Think and work holistically
When release involves interactions with users, ensure the best user experience possible	Release management is not a purely technical practice, it is a part of user journey and impacts user experience. Service providers should understand and continually improve the release-related experience of the users, even if this means making releases invisible to users.	Focus on value Collaborate and promote visibility
Review the effectiveness of release models	Do not limit release reviews to major or unsuccessful releases. Make it a regular activity and a part of continual improvement of the practice. Include stakeholder feedback (including user feedback) in the reviews.	Progress iteratively with feedback Collaborate and promote visibility
Start with the most important products and services	Different products and services may need different release models. It is not possible to develop comprehensive release models for all of them at once. Start with the products and services that are the most important for the organization, and with those updated more often. But don't stop there: continue developing release models for the most common product architectures.	Start where you are Progress iteratively with feedback
Don't overcomplicate the practice	Don't aim to create a model for every possible scenario. Keep them practical and applicable to a wide range of products and services. Use ad-hoc planning for release instances where relevant, especially for releases of physical components.	Keep it simple and practical
Integrate release management in the CI/CD pipeline for digital products	Where applicable, harvest the benefits of CI/CD techniques and technologies. But remember that it is very likely to have products and services to which these techniques are not applicable. Consider other automation tools for such products and services.	Optimize and automate
Demonstrate business value	Measure the practice and produce regular reports and dashboards for internal (within the service provider) and external (service consumer) stakeholders. Use dashboards for the current status and regular reports for analysis and highlights.	Focus on value Collaborate and promote visibility



Glossary

continuous delivery

Continuous delivery means that built software can be released to production at any time. Frequent deployments are possible, but deployment decisions are taken on a case-by-case basis, usually because organizations prefer a slower rate of deployment.

continuous deployment

Changes go through the pipeline and are automatically put into the production environment, enabling multiple production deployments per day. Continuous deployment relies on continuous delivery.

continuous integration

Integrating, building, and testing code within the software development environment.

four dimensions of service management

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

information and technology

One of the four dimensions of service management. It includes the information and knowledge used to deliver services, and the information and technologies used to manage all aspects of the service value system.

ITIL continual improvement model

A model which provides organizations with a structured approach to implementing improvements.

ITIL guiding principles

Recommendations that can guide an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure.

ITIL maturity model

A tool that organizations can use to objectively and comprehensively assess their service management capabilities and the maturity of their service value system.

ITIL service value chain

An operating model for service providers that covers all the key activities required to effectively manage products and services.

metric

A measurement or calculation that is monitored or reported for management and improvement.

organization

A person or a group of people that has its own functions with responsibilities, authorities, and relationships to achieve its objectives.

organizations and people

One of the four dimensions of service management. It ensures that the way an organization is structured and managed, as well as its roles, responsibilities, and systems of authority and communication, is well defined and supports its overall strategy and operating model.

output

A tangible or intangible deliverable of an activity.

partners and suppliers

One of the four dimensions of service management. It encompasses the relationships an organization has with other organizations that are involved in the design, development, deployment, delivery, support, and/or continual improvement of services.

practice

A set of organizational resources designed for performing work or accomplishing an objective. These resources are grouped into the four dimensions of service management.

practice success factor

A complex functional component of a practice that is required for the practice to fulfil its purpose.

process

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

release

A version of a service or any other configuration item, or a collection of configuration items, that is made available for use.

release model

A repeatable approach to the management of particular types of releases.

service provider

A role performed by an organization in a service relationship to provide services to consumers.

service provision

Activities performed by an organization to provide services and/or supply goods. Service provision includes:

- management of the provider's resources, configured to deliver the service
- ensuring access to these resources for users
- fulfilment of the agreed service actions
- service level management and continual improvement.

service relationship

A cooperation between a service provider and service consumer. Service relationships include service provision, service consumption, and service relationship management. Relationships can be basic, cooperative or collaborative (also known as a partnership).

service value system

A model representing how all the components and activities of an organization work together to facilitate value creation.

stakeholder

A person or organization that has an interest or involvement in an organization, product, service, practice, or other entity.

supplier

A stakeholder responsible for providing services that are used by an organization.

user

A person who uses services.

value

The perceived benefits, usefulness, and importance of something.

value stream

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

value streams and processes

One of the four dimensions of service management. It defines the activities, workflows, controls, and procedures needed to achieve the agreed objectives.



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