ITIL® 4 CREATE, DELIVER AND SUPPORT (CDS)

YOUR COMPANION TO THE ITIL 4 MANAGING PROFESSIONAL CDS CERTIFICATION

Claire Agutter



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Your companion to the ITIL 4 Managing Professional CDS certification

Audiobook accompanying material

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IT Governance Publishing

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Table 6: Building a Shift-left Approach

Step	*Activities*
Identify shift-left opportunities and goals	*Review data from a variety of sources, including:* • *Customer and other stakeholder feedback, on time, cost, or quality metrics* • *Delays in the flow of work due to handovers between teams* • *Project interruptions for repetitive incident support* • *Rework to fix bugs or defects, or other service quality concerns* • *Staff frustration/feedback*
Clarify the costs and benefits of improvement	*Data is needed to support a business case and communicate expectations by, for example:* • *Cost, time, quality, or experience metrics* • *Results from a high-level cost-benefit analysis* • *Identifying affected areas, including practices, processes, people, teams, structures, policies, training, recruitment, roles, and remuneration*
Set targets	*Define new targets based on the type of work and the goals. For example:*

	• *Resolution/fulfilment times* • *Number of escalations/interruptions* • *Number of deployments/day* • *Customer or other stakeholder satisfaction ratings* • *Number of audit failures*
Set up the improvement initiative	*Activities include:* • *Deciding on actions and building them into a coherent strategy* • *Planning the work required* • *Working with key people to sell benefits and impact* • *Communication with employees and stakeholders* • *Establishing rapid feedback channels*
Progress incrementally with feedback	*This step can include any of the four dimensions of service management. For example:* • *Pilot specific tasks to leverage quick wins* • *Periodically analyze quantitative or qualitative feedback, and adjust the shift-left approach* • *Move a percentage or number of tasks per month* • *Benchmark current performance* • *Retrain or redeploy staff*

	• *Review changing roles and responsibilities* • *Adopt new processes or work instructions* • *Implement or change automation* • *Review and modify contracts with partners and suppliers* • *Update the service catalogue* • *Define new measurements to track benefits*
Review outcomes	*On a periodic basis, or when the initiative ends, it is important to:* • *Identify the achieved benefits, as well as the lessons learned* • *Communicate the achieved benefits to employees, customers, and other stakeholders*

Figure 1: The ITIL service value chain

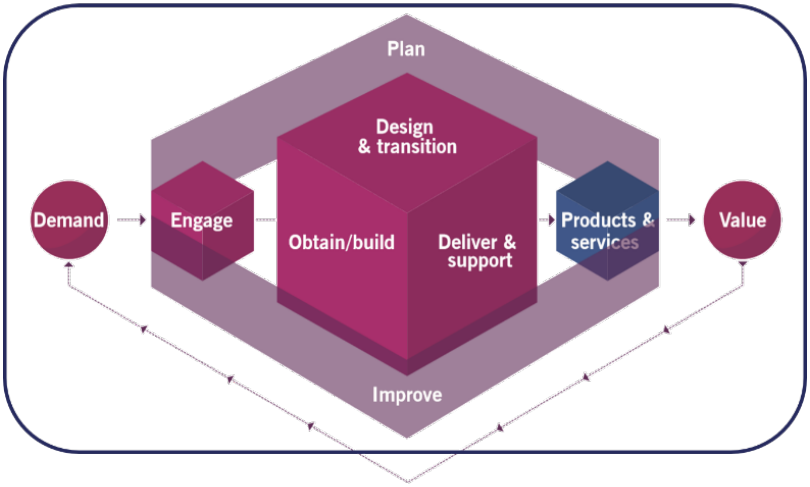


Figure 2: Value streams activity hierarchy

Figure 3: Process timing

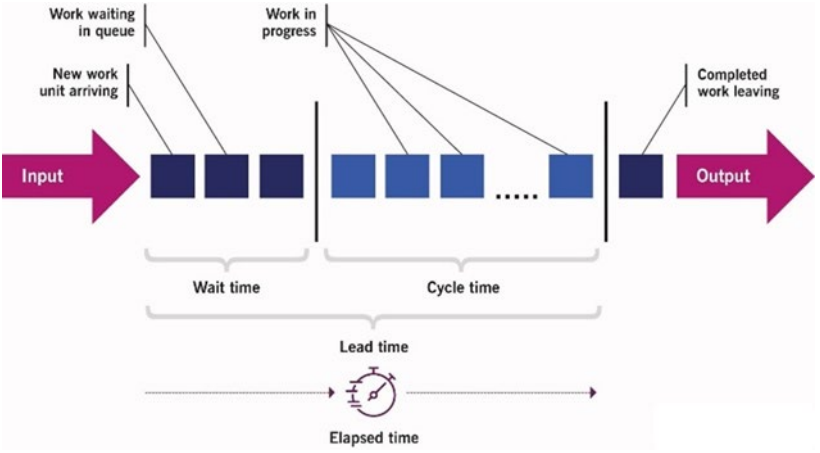


Figure 4: Changes are needed in all business situations

Table 7: Activities Related to the Service Validation and Testing Practice Described in Other Practice Guides

Activity	*Practice Guide*
Establishing detailed requirements for the utility and warranty of the new or changed product or service *Analyzing new requirements for services outside of existing utility and warranty options*	*Business analysis*
Maintaining financial control over testing *Defining a testing budget*	*Financial management*
Developing and managing software	*Software development and management*
Developing and managing infrastructure	*Infrastructure and platform management*
Operational communications with users and feedback gathering	*Service desk*
Deploying services and components	*Deployment management*

Releasing services	*Release management*
Ongoing management and implementation of improvements	*Continual improvement*
Establishing detailed requirements for the utility and warranty of the new or changed product or service *Analyzing new requirements for services outside of existing utility and warranty options*	*Business analysis*

Table 8: Release Management

Activity	*Practice Guide*
Authorization of changes/releases	*Change enablement*
Deployment of new and changed components and services in live environment	*Deployment management*
Development of software	*Software development and management*
Development and building of infrastructure components	*Infrastructure and platform management*
User training *Support and operational staff training*	*Workforce and talent management*
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	*Organizational change management*

related to large-scale releases	
Management of projects	*Project management*

Table 9: Deployment Management

Activity	*Practice Guide*
Authorizing changes/releases	*Change enablement*
Making services and components in the live environment available to users	*Release management*
Developing software	*Software development and management*
Developing and building infrastructure components *Preparing and maintaining target environments for deployments*	*Infrastructure and platform management*
Providing IT assets to be deployed *Maintaining authorized repositories of service components*	*IT asset management*
Testing and validating services and service components	*Service validation and testing*

Naming, versioning, and controlling the service components	*Service configuration management*

Figure 5: Restoration of a live service

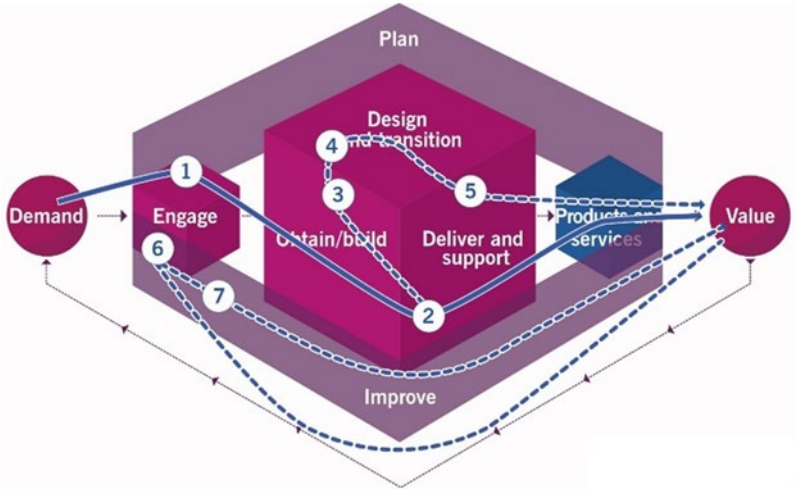


Figure 6: The service value chain

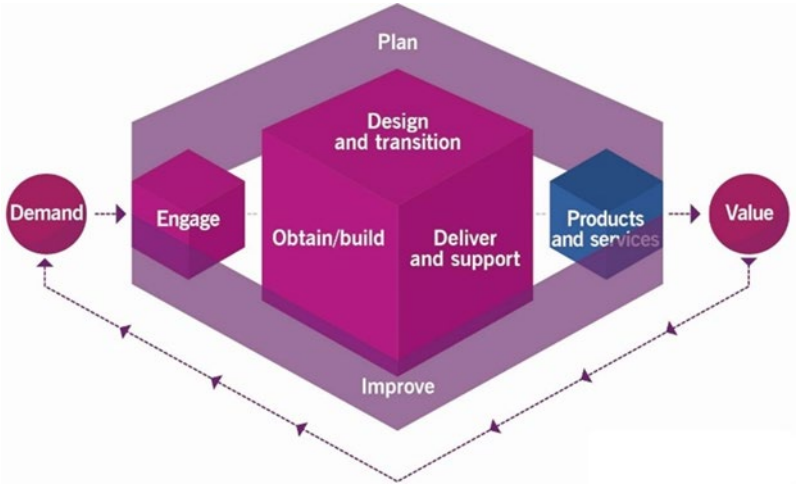


Table 10: Communication Channels

Human	Technology
Voice	Web portals
Live chat	Interactive voice menus
Email	Mobile applications
Walk-in	Chatbots

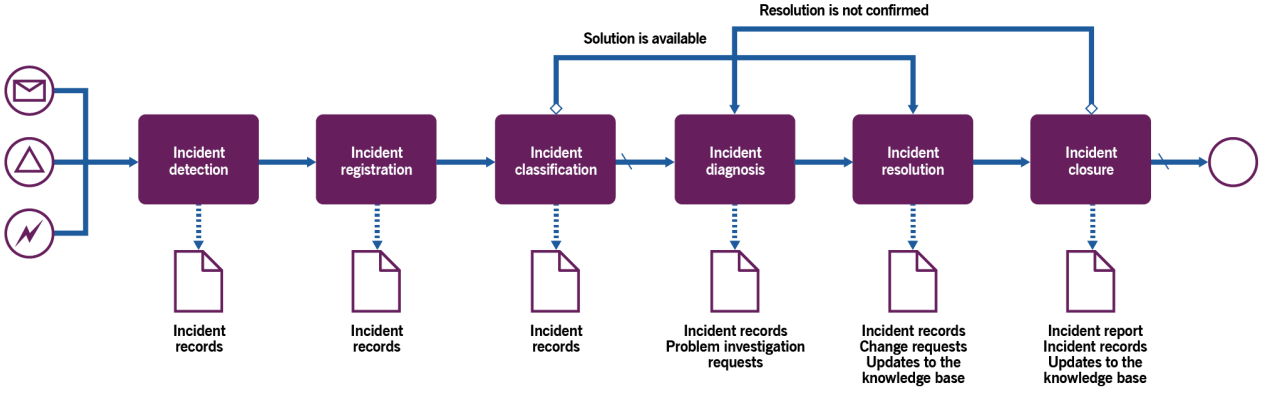


Figure 7: Workflow of the incident handling and resolution process

Table 11: Incident Management

Activity	*Manually processed user-detected incidents*	*Automatically detected and processed incidents*
Incident detection	*The user detects a malfunction in service operation and contacts the service provider's service desk via the agreed channel(s). The service desk agent performs the initial triage of the user query, confirming that the query does indeed refer to an incident.*	*An event is detected by a monitoring system and identified as an incident based on a pre-defined classification.*
Incident registration	*The service desk agent performs incident registration, adding the available data to the incident record.*	*An incident record is registered and associated with the CI where the event has been detected. Pre-defined technical data is registered. If needed, a notification is sent to the relevant*

		technical specialists.
Incident classification	*The service desk agent performs initial classification of the incident; this helps to qualify incident impact, identify the team responsible for the failed CIs and/or services, and to link the incident to other past and ongoing events, incidents, and/or problems.* *In some cases, classification helps to reveal a previously defined solution for this type of incident.*	*Based on pre-defined rules, the following is automatically discovered:* • *the incident's impact on services and users* • *the solutions available* • *the technical team(s) responsible for the incident resolution, if automated solutions are ineffective or unavailable.*
Incident diagnosis	*If classification does not provide an understanding of a solution, technical specialist teams perform incident diagnosis. This may involve escalation*	*If the automated solution is ineffective or unavailable, the incident is escalated to the responsible technical*

	of the incident between the teams, or joint techniques, such as swarming. *If classification is wrong because of an incorrect CI assignment, this information should be communicated to those responsible for configuration control (see the service configuration practice guide).*	*team for manual diagnosis. It may involve escalation of the incident between the teams, or joint techniques, such as swarming.* *If an automated solution failed because of an incorrect CI association, this information should be communicated to those responsible for the configuration control (see the service configuration practice guide).*
Incident resolution	*When a solution is found, the relevant specialist teams attempt to apply it, working sequentially or in parallel. It may require the initiation of a change. If the solution does not*	*If there is an automated solution available, it is applied, tested, and confirmed. If a manual intervention is required, a relevant specialist team attempts to apply it. It may*

	work, additional diagnosis is performed.	*require the initiation of a change. If the solution proves not to work, additional diagnosis is performed.*
Incident closure	*After the incident is successfully resolved, a number of formal closure procedures may be needed:* • *user confirmation of service restoration* • *resolution costs calculation and reporting* • *resolution price calculation and invoicing* • *problem investigation initiation* • *incident review.* *After all the required actions are completed and the incident records*	*If the automated solution proves effective, incident records are automatically updated and closed. A report is sent to the responsible technical team. If information about the incident has been communicated to other stakeholders at any of the previous steps, the closure of the incident should also be communicated.*

	are updated accordingly, the incident is formally closed. This can be done by the product owner, service owner, incident manager, or service desk agent, depending on the agreed incident model.	

Table 12: Problem Management

Key Inputs	*Activities*	*Key Outputs*
• *Error information from vendors and suppliers* • *Information about potential errors submitted by specialist teams* • *Information about potential errors submitted by external user and professional communities* • *Information about potential errors submitted by users* • *Monitoring data* • *Service configuration data*	• *Review of the submitted information* • *Problem registration* • *Initial problem categorization and assignment*	• *Problem records* • *Feedback to the problem initiator*

Figure 8: Workflow of the proactive problem identification process

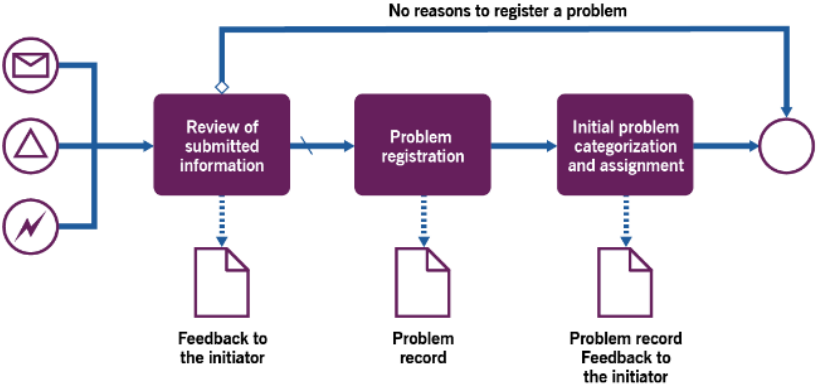


Figure 9: Workflow of the reactive problem identification process

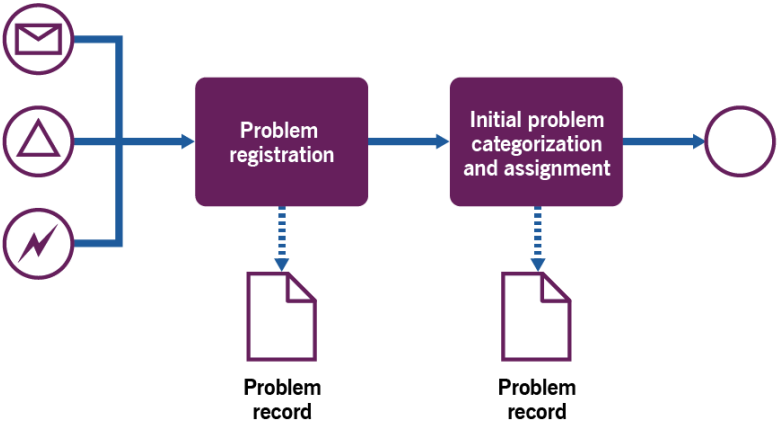


Table 13: Problem Management

Key Inputs	*Activities*	*Key Outputs*
• *Information about ongoing incidents* • *Incident records and reports* • *Monitoring data* *Service configuration data* *Service level agreements (SLAs)*	• *Problem registration* • *Initial problem categorization and assignment*	• *Problem records*

Figure 10: Key activities of the service level management practice

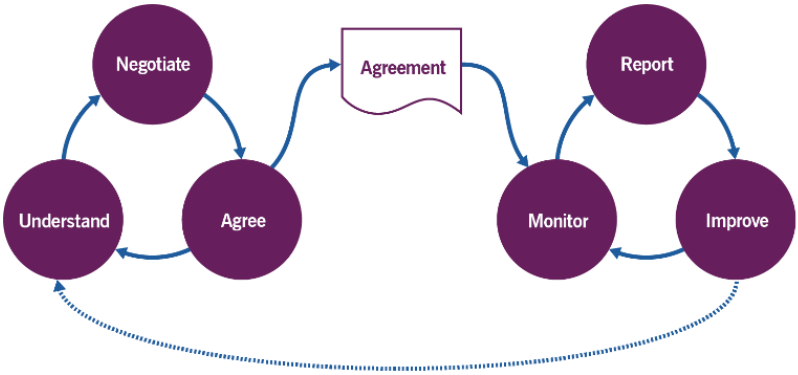


Table 14: Service Level Management

Activity	*Practice Guide*
Strategic communications with customers and sponsors	*Relationship management*
Operational communications with users	*Service desk*
Establishing and managing of contracts with suppliers and partners	*Supplier management*
Identification and documentation of services	*Service catalogue management*
Design of products and services	*Service design*
Analysis of innovation opportunities and new requirements for services outside of existing utility and warranty options	*Business analysis*
Design and control of financial models for commercial service delivery	*Service financial management*

Ongoing management and implementation of improvements	*Continual improvement*
Implementation of changes to products and services	*Change enablement* *Project management* *Other practices*
Monitoring technology, team and supplier performance	*Monitoring and event management*

Table 15: Build or Buy?

Build the service component in-house	Buy the service component
Service component relies heavily on organisation-specific knowledge	Scarce in-house resources
Customer demands personalisation	Creating the component is predictable and repetitive
Service environment is volatile (customer can change provider with little financial impact, change business models, etc.)	Skills/competencies to create, operate and support are highly specialised and need to be developed
Service components are not used across the mass market	Demand for the component is low or subject to variation (holidays, specific events, etc.)
Compliance to standards	Components are highly commoditised

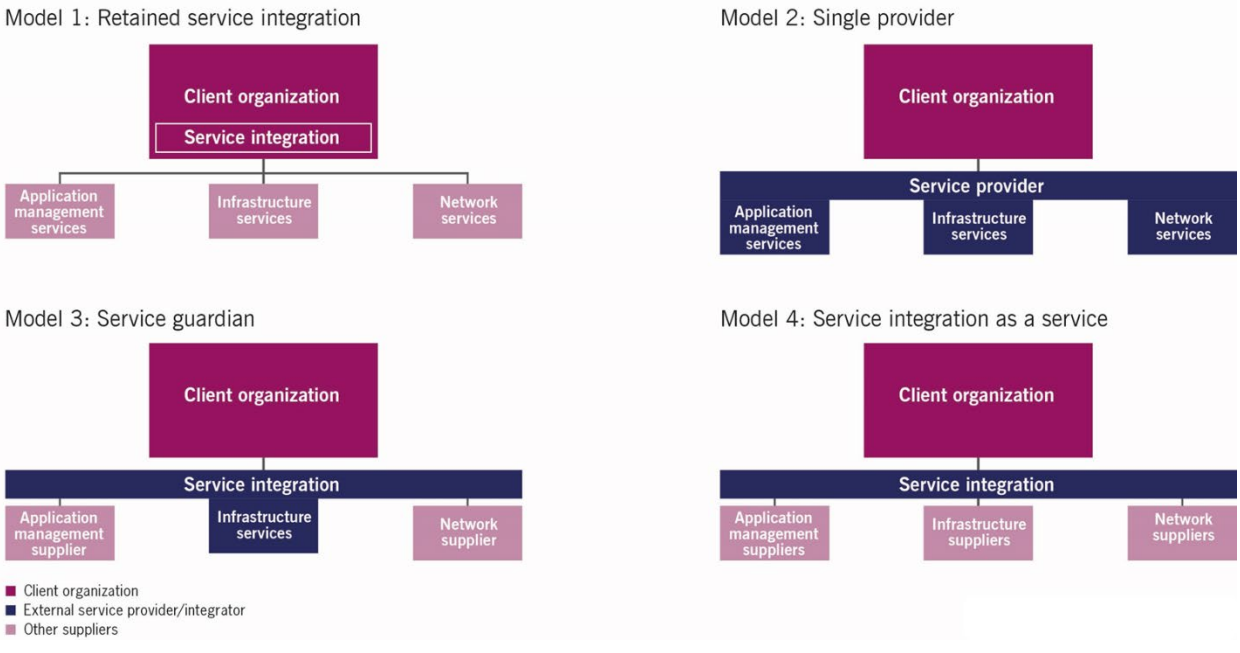


Figure 11: Service integration models