2.4 Service Operation fundamentals

2.4.1 Purpose/goal/objective

The purpose of Service Operation is to coordinate and carry out the activities and processes required to deliver and manage services at agreed levels to business users and customers. Service Operation is also responsible for the ongoing management of the technology that is used to deliver and support services.

Well-designed and well-implemented processes will be of little value if the day-to-day operation of those processes is not properly conducted, controlled and managed. Nor will service improvements be possible if day-to-day activities to monitor performance, assess metrics and gather data are not systematically conducted during Service Operation.

2.4.2 Scope

Service Operation includes the execution of all ongoing activities required to deliver and support services. The scope of Service Operation includes:

- **The services themselves.** Any activity that forms part of a service is included in Service Operation, whether it is performed by the Service Provider, an external supplier or the user or customer of that service
- **Service Management processes.** The ongoing management and execution of many Service Management processes are performed in Service Operation, even though a number of ITIL processes (such as Change and Capacity Management) originate at the Service Design or Service Transition stage of the Service Lifecycle, they are in use continually in Service Operation. Some processes are not included specifically in Service Operation, such as Strategy Definition, the actual design process itself. These processes focus more on longer-term planning and improvement activities, which are outside the direct scope of Service Operation; however, Service Operation provides input and influences these regularly as part of the lifecycle of Service Management.
- **Technology.** All services require some form of technology to deliver them. Managing this technology is not a separate issue, but an integral part of the management of the services themselves. Therefore a large part of this publication is concerned with the management of the infrastructure used to deliver services.
- **People.** Regardless of what services, processes and technology are managed, they are all about people. It is people who drive the demand for the organization's services and products and it is people who decide how this will be done. Ultimately, it is people who manage the technology, processes and services. Failure to recognize this will result (and has resulted) in the failure of Service Management projects

2.4.3 Value to business

Each stage in the ITIL Service Lifecycle provides value to business. For example, service value is modelled in Service Strategy; the cost of the service is designed, predicted and validated in Service Design and Service Transition; and measures for optimization are identified in Continual Service Improvement. The operation of service is where these plans, designs and optimizations are executed and measured. From a customer viewpoint, Service Operation is where actual value is seen.

There is a down side to this, though:

- Once a service has been designed and tested, it is expected to run within the budgetary and Return on Investment targets established earlier in the lifecycle. In reality, however, very few organizations plan effectively for the costs of ongoing management of services. It is very easy to quantify the costs of a project, but very difficult to quantify what the service will cost after three years of operation.
- It is difficult to obtain funding during the operational phase, to fix design flaws or unforeseen requirements – since this was not part of the original value proposition. In many cases it is only after some time in operation that these problems surface. Most organizations do not have a formal mechanism to review operational services for design and value. This is left to Incident and Problem Management to resolve – as if it is purely an operational issue.
- It is difficult to obtain additional funding for tools or actions (including training) aimed at improving the efficiency of Service Operation. This is partly because they are not directly linked to the functionality of a specific service and partly because there is an expectation from the customer that these costs should have been built into the cost of the service from the beginning. Unfortunately, the rate of technology change is very high. Shortly after a solution has been deployed that will efficiently manage a set of services, new technology becomes available that can do it faster, cheaper and more effectively.
- Once a service has been operational for some time, it becomes part of the baseline of what the business expects from the IT Services. Attempts to optimize the service or to use new tools to manage it more effectively are seen as successful only if the service has been very problematic in the past. In other words, some services are taken for granted and any action to optimize them is perceived as ‘fixing services that are not broken’.

This publication suggests a number of processes, functions and measures which are aimed at addressing these areas.

2.4.4 Optimizing Service Operation performance

Service Operation is optimized in two ways:

- **Long-term incremental improvement.** This is based on evaluating the performance and output of all Service Operation processes, functions and outputs over time. The reports are analysed and a decision made about whether improvement is needed and, if so, how best to implement it through Service Design and Transition. Examples include the deployment of a new set of tools, changes to process designs, reconfiguration of the infrastructure, etc. This type of improvement is covered in detail in the Continual Service Improvement publication.
- **Short-term ongoing improvement** of working practices within the Service Operation processes, functions and technology itself. These are generally smaller improvements that are implemented without any change to the fundamental nature of a process or technology. Examples include tuning, workload balancing, personnel redeployment and training, etc.

Although both of these are discussed in some detail within the scope of Service Operation, the Continual Service Improvement publication will provide a framework and alternatives within which improvement may be driven as part of the overall support of business objectives.

2.4.5 Processes within Service Operation

There are a number of key Service Operation processes that must link together to provide an effective overall IT support structure. The overall structure is briefly described here and then each of the processes is described in more detail in Chapter 4.

2.4.5.1 Event Management

Event Management monitors all events that occur throughout the IT infrastructure, to monitor normal operation and to detect and escalate exception conditions.

2.4.5.2 Incident and Problem Management

Incident Management concentrates on restoring unexpectedly degraded or disrupted services to users as quickly as possible, in order to minimize business impact.

Problem Management involves: root-cause analysis to determine and resolve the cause of incidents, proactive activities to detect and prevent future problems/incidents and a Known Error sub-process to allow quicker diagnosis and resolution if further incidents do occur.

2.4.5.3 Request Fulfilment

Request Fulfilment is the process for dealing with Service Requests – many of them actually smaller, lower-risk, changes – initially via the Service Desk, but using a separate process similar to that of Incident Management but with separate Request Fulfilment records/tables – where necessary linked to the Incident or Problem Record(s) that initiated the need for the request. To be a Service Request, it is normal for some prerequisites to be defined and met (e.g. needs to be proven, repeatable, pre-approved, proceduralized).

In order to resolve one or more incidents, problems or Known Errors, some form of change may be necessary. Smaller, often standard, changes can be handled through a Request Fulfilment process, but larger, higher-risk or infrequent changes must go through a formal Change Management process.

2.4.5.4 Access Management

Access Management is the process of granting authorized users the right to use a service, while restricting access to non-authorized users. It is based on being able accurately to identify authorized users and then manage their ability to access services as required during different stages of their Human Resources (HR) or contractual lifecycle. Access Management has also been called Identity or Rights Management in some organizations.

2.4.6 Functions within Service Operation

Processes alone will not result in effective Service Operation. A stable infrastructure and appropriately skilled people are needed as well. To achieve this, Service Operation relies on several groups of skilled people, all focused on using processes to match the capability of the infrastructure to the needs of the business.

These groups fall into four main functions, listed here and discussed in detail in Chapter 6.

2.4.6.1 Service Desk

The Service Desk is the primary point of contact for users when there is a service disruption, for Service Requests, or even for some categories of Request for Change. The Service Desk provides a point of communication to the users and a point of coordination for several IT groups and processes

2.4.6.2 Technical Management

Technical Management provides detailed technical skills and resources needed to support the ongoing operation of the IT Infrastructure. Technical Management

also plays an important role in the design, testing, release and improvement of IT Services. In small organizations, it is possible to manage this expertise in a single department, but larger organizations are typically split into a number of technically specialized departments.

2.4.6.3 IT Operations Management

IT Operations Management executes the daily operational activities needed to manage the IT Infrastructure. This is done according to the Performance Standards defined during Service Design. In some organizations this is a single, centralized department, while in others some activities and staff are centralized and some are provided by distributed or specialized departments. IT Operations Management has two functions that are unique and are generally formal organizational structures. These are:

- IT Operations Control, which is generally staffed by shifts of operators and which ensures that routine operational tasks are carried out. IT Operations Control will also provide centralized monitoring and control activities, usually using an Operations Bridge or Network Operations Centre.
- Facilities Management refers to the management of the physical IT environment, usually data centres or computer rooms. In many organizations Technical and Application Management are co-located with IT Operations in large data centres.

2.4.6.4 Application Management

Application Management is responsible for managing Applications throughout their lifecycle. The Application Management function supports and maintains operational applications and also plays an important role in the design, testing and improvement of applications that form part of IT services. Application Management is usually divided into departments based on the application portfolio of the organization, thus allowing easier specialization and more focused support.

2.4.6.5 Interfaces to other Service Management Lifecycle stages

There are several other processes that will be executed or supported during Service Operation, but which are driven during other phases of the Service Management Lifecycle. These will be discussed in the final part of Chapter 4 and include:

- Change Management, which is a major process that should be closely linked to Configuration Management and Release Management. These topics are primarily covered in the Service Transition publication.
- Capacity and Availability Management, which are covered in the Service Design publication.

- Financial Management, which is covered in the Service Strategy publication.
- Knowledge Management, which is covered in the Service Transition publication.
- IT Service Continuity, which is covered in the Service Design publication.
- Service Reporting and Measurement, which are covered in the Continual Service Improvement publication.