Module 1 Study Guide

Introduction to OSA

ITIL® Capability Courses - Operational Support and Analysis

Introduction to OSA

Welcome to your Study Guide. This document is supplementary to the information available to you online, and should be used in conjunction with the videos, quizzes and exercises.

After your subscription to the course has finished online, you will still have the Study Guide to help you prepare for the OSA exam - if you've not taken the exam by the time your subscription expires.

Each Module of your course has its own study guide, including a review of the Module information, exercise answers and any additional diagrams or material mentioned. By the end of the course, you'll have 10 chapters that build up into the full guide.

This Chapter contains the Study Guide information for **Module 1 – Introduction to OSA.**

Use this Study Guide in conjunction with your own notes that you make as you progress through the course. You may prefer to print it out, or use it on-screen.

After each Lesson, you can consolidate what you have learnt whilst watching the videos and taking the quizzes by reading through the chapter of the Study Guide. If you progress on to do the OSA exam, your Study Guide will provide you with vital revision information.

Remember, your Study Guide is yours to keep, even after your subscription to the OSA Course has finished.

Table of Contents

Study Guide Icons

Watch out for these icons as you use your Study Guide. Each icon highlights an important piece of information.

	**Tip – this will remind you of something you need to take note of, or give you some exam guidance.**
	**Definition – key concept or term that you need to understand and remember.**
	**Role – a job title or responsibility associated with a process or function.**
	**Exercise Solution – suggested solution to one of the exercises you will complete throughout the course.**
	**Purpose or Objective – for a particular process or core volume.**

Module Contents

This Module studied the role that the operational support and analysis processes have within the service lifecycle.

We studied:

- The value to the business of OSA activities
- The context of OSA activities within the service lifecycle and how these activities support the lifecycle
- How to optimise Service Operation performance

Syllabus reference

The information in this Module relates to the syllabus section OSA01

Service Operation Purpose

We started by looking at Service Operation in some detail, and then examining how it interacts with the other stages of the service lifecycle.

Service Operation Purpose

"The purpose of the Service Operation (SO) stage of the service lifecycle 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 on-going management of the technology that is used to deliver and support services.

The SO lifecycle stage ensures that the service being delivered is presented to the customer as agreed in Service Strategy and Service Design.

Successful Service Operation is critical for successful business outcomes. Processes designed in other lifecycle stages are carried out in the Operation phase, so failure to manage and control these will prevent the objectives of the other stages from being achieved. CSI in particular is dependent on Service Operation monitoring performance, assessing metrics and gathering operational data.

Staff involved in the Service Operation stage of the service lifecycle need to understand the end-to-end performance of the service rather than just the separate components, such as hardware, software applications and networks.

Processes and tools must show this end-to-end service (which is what the business actually experiences) and detect any threats or failures to service quality early, so that action can be taken.

As part or all of some services may be provided by one or more 3rd party suppliers, the Service Operation view of the end-to-end service must extend across these elements too. When necessary, shared or interfacing processes and tools should be deployed to manage workflows involving other organisations.

Scope and Objectives

Scope

The scope of Service Operation includes:

- The services themselves, and the activities that form part of these services, whether performed by the service provider, an external supplier or the user of that service
- The service management processes that are performed in service operation - although a number of ITIL processes such as Change and Capacity Management originate in other lifecycle stages
- Managing the technology that delivers services is an integral part of the management of the services themselves
- The people who manage the technology, processes and services

Objectives

The objectives of Service Operation are *"to maintain business satisfaction and confidence in IT by delivering and supporting the agreed IT services effectively and efficiently."*

Another objective is to minimize the impact of service outages on day-to-day business activities.

The final objective is to ensure that access to agreed IT services is provided to authorised users only.

The OSA processes we studied all support these objectives.

The Business Value of OSA

OSA processes and the Service Desk provide value to the business. We also considered how these benefits are achieved.

It is in the interest of the business to have efficient IT services, delivered to a consistent standard. By adopting and adapting the guidance in the ITIL Service Operation volume, organizations can implement improvements to their processes and improve the efficiency of their Service Desk to deliver greater value to the business.

The first benefit to the business comes from how outages are managed. All IT services will suffer outages from time to time. The best practice guidance provided by ITIL delivers value when outages occur in two ways:

- The duration of the outage is kept to a minimum by efficient Incident Management, which concentrates on the importance of service restoration. A workaround may be implemented by the Service Desk to restore the service

- Problem Management provides workarounds that are used by Incident Management to restore service. The use of Problem Management to deliver these workarounds ensures that the service can be restored quickly. The process will then carry out investigation to uncover the root cause and resolve it, avoiding a recurrence of the fault. As a result, the interruption to the business is kept to a minimum, and the users are able to exploit the value of the IT services they are receiving to achieve their business goals

This reduction in both the duration and the frequency of outages also reduces any resultant costs in materials or labour as a consequence of any outage. Other business benefits that OSA capabilities provide include:

- Effective Service Operation will provide good quality data to the other lifecycle processes, enabling them to assess their effectiveness. For example, understanding what outages were caused by poorly implemented changes will be useful for the continual improvement of the transition processes. The data may also be used to form part of a business case for investment in new software or equipment, where it can be used to validate the benefits of implementing improvements to the technology used

- Implementing the Service Operation Access Management process ensures that the security policy of the organisation is actually implemented in practice. This means protecting data and services from unauthorised access, and validating the credentials of all those seeking access ensures that services are protected from misuse, whilst

ensuring that authorised users have the access they require granted quickly and efficiently

- The Service Operation processes contained within the ITIL guidance are valuable to the business as they help the IT service provider deliver business requirements efficiently. The Request Fulfilment process in particular provides a fast and efficient method of gaining access to standard services. This process allows the business to order equipment and software, and to request access to IT services through an efficient interface and have these requests fulfilled quickly, often by the Service Desk staff. This ensures that the business receives the benefit of these services without undue delay, improving their productivity

- The final benefit to the business comes from the opportunity these processes provide for automation. As routine operations tasks are automated, the staff costs associated with providing the service are reduced, and staff time is freed up to define new ways to exploit the capabilities of the existing technology and investigate possible technical improvements. The gains resulting from these efforts will improve business productivity and may even lead to new business services being developed, resulting in the business improving the market position for its products

Exercise – Benefits and value of OSA

This Lesson included an Exercise to look at the benefits and value of OSA. If you didn't have time to complete the exercise during the Lesson, why not attempt it now?

Exercise

Consider the value to the business and the benefits to IT of efficient and effective OSA processes and activities.

Describe the effects that Seylon Ordnax would experience if each of the various OSA processes and activities were poorly implemented. What would the effect on the business and the IT department be if they were improved?

Exercise Solution

The solution should cover these key areas:

Event Management:

- Poorly implemented Event Management would mean that there would be very little early warning of incidents. Seylon Ordnax's IT department would be unaware of any issues until notified by the users. This would prolong the downtime. Improved Event Management would cut downtime
- Without Event Management it would not be possible to automatically monitor by exception – thus requiring expensive and resource-intensive real-time monitoring. This would also increase downtime. Improved Event Management would allow the monitoring to be more efficient and reduce downtime
- There would be little or no automated notification of status changes or exceptions which would make the management of other processes such as availability or capacity management more difficult, again delaying the response. Improved Event Management would cut downtime resulting from this
- Without automation through Event Management Seylon Ordnax's IT department could not implement efficiency improvements by freeing staff for more innovative work, such as designing new or improved functionality or defining new ways in which the business can exploit

technology for increased competitive advantage. Improved Event Management would allow the IT department to be more efficient and reduce costs

Based on SO 4.1.3

Incident Management:

- Without efficient Incident Management Seylon Ordnax would suffer unplanned labour and costs for both the business and IT support staff caused by incidents. Improved Incident Management would cut downtime and the associated costs
- Without efficient Incident Management Seylon Ordnax would struggle to detect and resolve incidents, resulting in downtime to the business. This prevents the business from exploiting the functionality of the service as designed. Improved Incident Management would cut downtime and allow the business to gain maximum value from the services provided
- Without efficient Incident Management Seylon Ordnax's IT department may not allocate resources in accordance with business priorities. Efficient Incident Management enables IT activity to be aligned to real-time business priorities as it identifies business priorities and dynamically allocates the resources as necessary
- Without effective Incident Management there would be insufficient data to identify potential improvements to services. Improving Incident Management would provide this data

Based on SO 4.2.3

Request Fulfilment:

- Without an efficient Request Fulfilment process, Seylon Ordnax's IT department would be slow in providing access to standard services that business staff need to improve their productivity or the quality of business services and products. The process may also be labour-intensive. Implementing good Request Fulfilment would provide a fast and streamlined way of delivering what the business needs, when it needs it, at minimum cost
- Efficient Request Fulfilment, including the use of request models would reduce the bureaucracy which would otherwise be involved in requesting and receiving access to existing or new services, thus reducing the cost of

providing these services

- Uncoordinated fulfilment of requests reduces the possibility of reducing costs through centralised negotiation with suppliers. Improvements to the process would enable this, provide more control of what is being provided and facilitate the enforcement of standards. As a result Seylon Ordnax's IT department may be able to reduce the cost of support

Based on SO 4.3.3

Problem Management:

- Without effective Problem Management the number and duration of incidents would not reduce. By working on identifying underlying causes of incidents, and implementing a permanent solution, Problem Management ensures that IT service availability and quality are increased
- Inefficient or non-existent Problem Management means that IT staff are constantly fire-fighting repeat incidents. By implementing or improving the process, Seylon Ordnax's IT department could improve the productivity of IT staff
- Without Problem Management documenting known errors and workarounds, repeat incidents would need to be diagnosed and resolved every time, delaying the resumption of the service to the user, and involving expensive technical resources. Improved Problem Management would provide a known error database and workarounds allowing the Service Desk to resolve a higher % of incidents at first line, improving availability and customer satisfaction. It would also achieve a more efficient use of IT staff resources.

Based on SO 4.4.3

Access Management:

- Poor Access Management would put Seylon Ordnax at risk of breaches of data confidentiality. Effective Access Management would ensure that controlled access to services will allow the organization to maintain effective confidentiality of its information
- Poor Access Management may mean issues arise where employees do not have the right level of access to execute their jobs effectively. Improving the process would reduce this, and the impact on business efficiency

	▪ Poor Access Management may mean access is granted to staff without the required skills, leading to errors. Effective Access Management would ensure that controls were in place to check that access to services is limited to authorised staff with the requisite skills ▪ Poor Access Management would make it difficult to audit the use of services and to trace the abuse of services - improving the process in accordance with best practice would overcome this ▪ Poor Access Management would make it difficult to revoke access rights when needed on a timely basis – an important security consideration - improving the process in accordance with best practice would overcome this ▪ Poor Access Management would make it difficult to demonstrate compliance with regulatory requirements (e.g. SOX, HIPAA and COBIT) - improving the process in accordance with best practice would overcome this. **Based on SO 4.5.3** The Service Desk ▪ A poor Service Desk at Seylon Ordnax would lead to unhappy customers. An improved Service Desk would lead to improved customer service, perception and satisfaction ▪ A poor Service Desk at Seylon Ordnax would mean that users may have multiple confusing sources of support. An improved Service Desk would lead to increased accessibility through a single point of contact, communication and information ▪ A poor Service Desk at Seylon Ordnax would mean poor handling of requests. An improved Service Desk would lead to better quality and faster turnaround of customer or user requests ▪ A poor Service Desk Seylon Ordnax may provide poor customer service. An improved Service Desk would lead to an enhanced focus and a proactive approach to service provision ▪ A poor Service Desk would have a low first time fix rate, meaning incidents were passed to second line staff that could have been resolved at the desk. Improving the Service Desk would improve the usage of IT support resources and increased productivity of business personnel by improving resolution time. This would also reduce the negative business impact of incidents

	▪ An improved Service Desk would overcome poor collection of meaningful management information for decision support ▪ An efficient Service Desk can, during its handling of incidents, identify additional service or training requirements found in IT or the business which would not be possible if the Service Desk was inefficient and poor at logging every incident. **Based on SO 6.3.1**

OSA within the Service Lifecycle

We considered the context of OSA activities within the service lifecycle and how these activities support the lifecycle, by looking at each stage of the lifecycle in turn.

Service Strategy

The strategy stage is at the core of the lifecycle. It is the responsibility of this stage to understand what the business needs in terms of IT services, in order to achieve its business objectives. Strategy prioritises opportunities, and ensures that the IT service provider delivers the necessary services to the business. The services to be delivered and supported as part of operational support and analysis are decided upon in this stage. Strategy considers "why?" services are required.

Service Design

The second lifecycle stage, Service Design, considers how the services should be designed to ensure that they deliver the required business value. This stage plans how the services decided upon as part of strategy should be delivered. It considers the design of new services, and improvements to existing services.

Effective Service Design takes into account not only the functional requirements of services that deliver the business benefits, but also how these services will operate. It ensures that considerations about required service levels, security and continuity of the service are taken into account. Ignoring these aspects during the design stage would risk the service provider delivering a service to live operation that was not fit for use. The operational support and analysis processes help deliver these non-functional requirements.

Service Transition

Service Transition is the third stage of the lifecycle, and is concerned with delivering the design as an effective service in the operational environment. Whether the design was for a new service, or an improvement to an existing service, transition ensures that the necessary knowledge is passed to the operational staff and the implementation is achieved with minimum risk.

This stage also includes the management of information regarding the configuration of services, so that the operational staff understand the various relationships and dependencies of the

items. The Service Knowledge Management System is invaluable to operational support processes.

Service Operation

The Service Operation stage is the part of the lifecycle most closely related to the operational support and analysis activities. It is concerned with ensuring that services deliver the benefits that were identified in the strategy stage. To achieve these, the service must be delivered consistently, to the required service level, and within the forecast cost. Failure to deliver these aspects could jeopardise the potential benefits, and have a serious negative effect on the business being able to achieve its objectives.

In this course, we study how the operational support processes of Event Management, Incident Management, Request Fulfilment, Problem Management and Access Management assist in delivering the service effectively and efficiently, and how the Service Desk function helps to deliver an effective support service to the business.

Continual Service Improvement

The final lifecycle stage is concerned with continual improvement. It ensures ever improving strategy, design, transition and operation. The improvements may be large or small, but they ensure that the service provider stays aligned to the business requirement.

Many of the measurements needed for establishing a baseline, and then comparing the results of the improvement initiative are gathered as part of operational support and analysis.

Optimising Service Operation Performance

The final part of this lesson examines how the operational support and analysis processes contribute to optimising the delivery of services. Improvements to service can be one of two types:

- Long-term incremental improvements
- Short-term, on-going improvements

Long-Term Incremental Improvements

Long-term incremental improvements are implemented as a result of undertaking an analysis of service operations over a period of time. The processes, technologies, functions and outputs will all be measured and analysed to identify areas in need of improvement. The agreed improvements will then be designed and transitioned.

It was stated previously that the design and transition lifecycles stages were concerned with improvements to existing services, as well as the implementation of new ones; incremental improvements could include implementing new tools, or reconfiguring existing tools, re-engineering processes to be more effective, or making technical changes to improve the performance of the infrastructure. The guidance provided in the Continual Service Improvement volume covers this sort of improvement in more detail.

Short-Term, On-Going Improvements

The other approach to optimizing Service Operation concentrates on short-term, on-going improvements. These improvements are identified by analysing the service operation processes, functions and technologies. Although each improvement may be relatively small - "tweaking" rather than re-engineering a process or the technology in use - the effect of these actions can combine to deliver real benefits.

Examples of the sorts of short-term on-going improvements would include load-balancing to avoid bottlenecks which would affect the service or identifying staff training requirements and ensuring that these are met so that the staff are used most effectively. As part of operational support and analysis, improvements are identified and implemented.

The CSI volume is helpful in providing guidance in regards to how improvements should be identified and implemented, as part of the on-going effort to ensure the optimal delivery of

services which meet the changing needs of the business. The actual implementation of any changes should be governed by the Change Management process, which is explained in detail in the Service Transition volume.