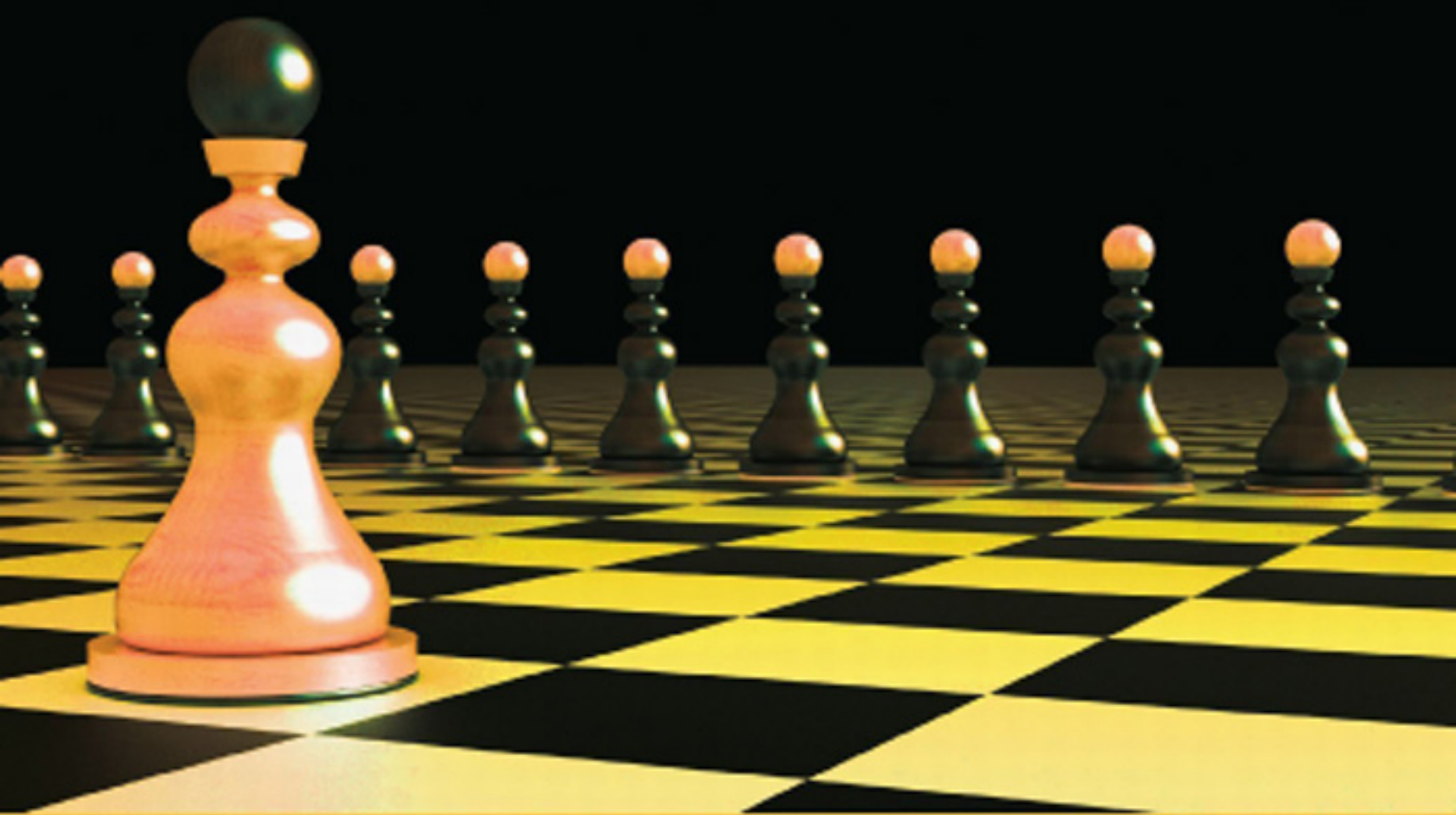


ITIL® Service Manager Exam Preparation Course

in a Book for Passing the ITIL
Service Managers V2 Exam



*The How To Pass
on Your First Try
Certification Study Guide*

Foreword

This Exam Preparation book is intended for those preparing for the ITIL® V2 Service Managers Exams – Service Support and Service Delivery.

The Art of Service is an Accredited Training Organization for this program and has been training this course for more than 8 years. The strategies and content in this book is a result of experience and understanding of the Manager Program, and the exam requirements.

This book is **not** a replacement for completing the course, nor for the OGC ITIL® Books. This is a study aid to assist those who have completed an accredited course and preparing for the Manager exams.

Do not underestimate the value of your own notes and study aids. The more you have, the more prepared you will be.

Like the Manager's Course, this book is divided into 2 Sections – Service Delivery and Service Support, followed by a Practice Exam (created by The Art of Service).

Each Process Section contains a summarized overview of key and required knowledge for the Manager Exam, as well as Inter-process relationships. These overviews and relationships are designed to help you to reference the knowledge gained through the course.

Due to licensing rights, we are unable to make specific references to the EXIN Case Studies and Exams. However, the strategies in this book will allow you to more easily reference your responses to any case study.

Ivanka Menken
Executive Director
The Art of Service

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Exam Specifics

The ITIL V2 Service Managers certification Exams:

- 2 exams – Service Delivery and Service Support.
- Both exams are 3 hour essay based exams.
- 100 possible marks can be achieved per exam
- 5 Major questions per exam, broken into 1 or more sub questions, each totaling 20 marks
- Feedback has shown that 4/5 questions are process/function specific, with last question a general/combined processes question
- Minimum 50%, or 50/100 required to pass each exam
- You need to pass both exams to achieve ITIL Service Manager Certification
- Once booked, and prior to sitting exam, notification will be given regarding which case study will be used for your exam.

Advice

- Do not do 2 exams in 1 day – 3 hours is a long time, and you need to be alert for your exams
- Depending on your area of expertise, one exam will be easier. Consider this when booking your exam. (you may prefer to do the weaker one first for example)
- The likelihood of having both exams relating to the same case study is increased if you book your exams with the same week of each other. (saving your “case study” study time)

It is possible to type your exams. Make sure you enquire about this with your Accredited Examination Centre (this would be subject to certain conditions).

Also consider your bio-rhythm; are you more alert in the morning or the afternoon? If possible - book your exam accordingly.

Exam MUST DO's!

The following points are the basis for the information in this book. Consider these carefully:

1. **Know the ITIL V2 Theory.** A bit of a no-brainer really but it still amazes me how many people don't know the theory apart from a high level understanding. For our current students, it is a little bit confusing as there is a lot of emphasis on the ITIL V3 theory and most of our current Foundation courses are V3 courses. So it is a bit of a change to start talking about the ITIL V2 model. Don't mix them when you do your exam!!! There is no portfolio management in ITIL V2...
2. **Understand the difference between ITIL and IT Service Management** The exam tests you on your ability to differentiate between verbatim 'parrot fashion' theory regurgitation and understanding how ITIL fits in with the larger IT Service Management concepts. When you write your answers, put them into a Service Management context. Don't write about ITIL processes for ITIL's sake. There has to be a reason for it!
3. **No process exists in isolation** For each of the 12 concepts in ITIL V2 you **MUST** know how they link in with the other processes in the framework. What information is needed for the process to be effective and efficient and what information does this process give to the others?
 - *As an example: Service Level Management needs information on availability options and resilience capability to be able to offer service options to the clients as part of the SLA negotiation. In return, Availability Management needs Service Level targets to identify the rigor to which availability management needs to be run.*

4. **Dive deeply into the process.** Not only do you need to know the name and goal/objective of each process, you also need to understand the various sub-processes and/or activities in the process. What are the inputs and outputs for the various activities?
5. **CSF anyone?** This is where implementation issues come into play. In order for this process to be successful - what needs to be in place, what is the order of implementation and what level of commitment do you need to have to make a process successful? List the CSF for each process, as there may be different focus areas for each process. CSFs need to be listed and managed from the moment you start talking about implementing the process.
6. **KPI? What KPI? Didn't we just do that??** No - KPIs are not the same as CSFs. Know your definitions and know the difference between a KPI (Key Performance Indicator, which implies that you are already running the process when you start looking for these indicators). Example of KPIs are # of changes per release, or % decrease in major incidents per timeframe. A KPI has to be measurable!
7. **Link your answers to the case study.** Each Manager exam is based on a case study and most of the questions will challenge you to link the ITIL theory to something that happens in this organization. When they ask for a corporate objective - **PICK ONE**. Don't do too much, stick with the one objective and focus how this process helps to achieve this objective.
8. **Don't generalize your answers.** When you can do a 'search and replace' with the name of the company and add any other company name and the answer would still be correct - it is probably too fluffy! Make the answer specific to this organization!
9. **Show off that you know your stuff.** But don't 'waffle' ... don't keep writing in the hope that something good will come out of your pen eventually. Keep your answers concise and to the point. Show that you know the ITIL theory, the process interaction and how the theory links to the case study but don't write too much!

10. **Get in - answer the question - get out!** When the question asks for 2 examples... don't give 4! Don't waste time on stuff that might not be marked anyway... make sure your 2 examples are spot on and can not be argued...
11. **Read the question!** Many people lose points because they don't answer the question. Don't answer the question with a counter question! Make sure you understand the question and make it easy for the examiner to understand what you want to achieve with your answer.
12. **Don't forget to read the Appendices.** These, as well as chapters on Implementing Service Management and Tools are important to know, and you will be tested in them. (Expect a general question focusing on Service Management as a whole)

When you stick to this strategy you should be able to plan and prepare for a successful exam!

Useful Shortcuts

Costs

P – People Costs

A – Accommodation Costs

S – Software Costs

H – Hardware Costs

E – Education/Training and awareness costs

T – Transfer Costs

Common implementation considerations

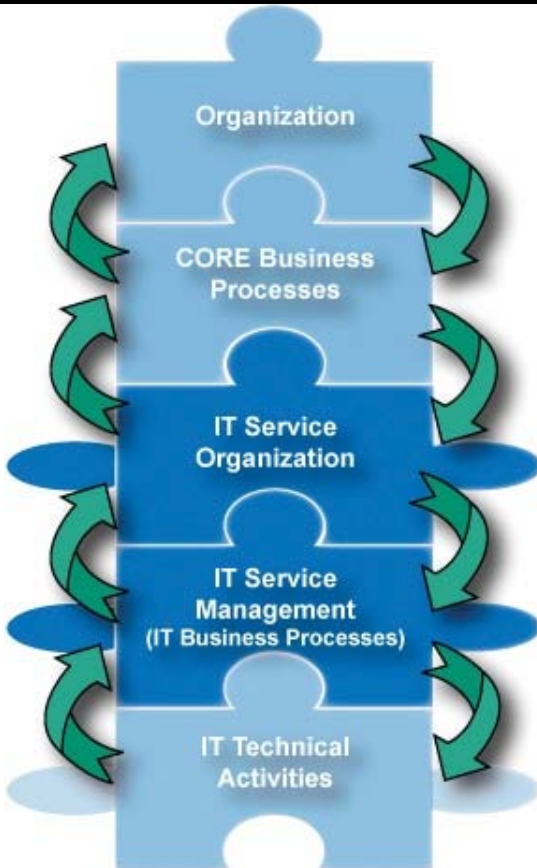
- Management Commitment
- Roles and Responsibilities
- Scope
- Process Owner
- Goals
- Objectives
- Budget and Resources allocated

The Art of Service Objective Tree

This Objective Tree is a very useful tool for “tunneling” down into how ITSM and in particular, each process can contribute to achieving a corporate objective. Use this when linking the case study to ITIL and also to assist to be specific...

Advice

“Your aim here is to be The BIG BAD WOLF – not Little Red Riding Hood – first to Grandma’s house wins!”



The aim of the Objective tree is to walk down the tree saying **HOW** the sections are going to achieve their objective by receiving support from the section below.

Once you get to the bottom, you then walk back up the tree, giving example of **WHY** each would be of benefit to the one above in achieving its objectives.

Advice

Consider your target audience – if addressing CEO – non-technical, CIO – more technical. Identify “what’s in it for them!”

Objective Tree Example – Capacity Mgt Process

Rece's Company Vision (Organizational Objective) – extend global scope with more retail outlets and manufacturing sites;

To achieve this the Core business processes of Retailing and Logistics will be involved.

They rely heavily on **PAYPOINT** system, which will need to be upgraded to achieve this. In order to assist with the upgrades and new POS systems, numerous processes within the IT department will need to be utilized. One particular Process that can assist with this is Capacity Management.

This process will need to ensure that the current IT Infrastructure can handle the upgraded PAYPOINT System as well as new POS Hardware. To achieve this it will model the effect that this extended service will have on the Infrastructure as well as the hardware requirements for the new upgraded PAYPOINT System.

By doing this the IT department will be able to upgrade new system without affecting the other Business systems and processes.

This will then allow the Business units to focus on the vision of opening more retail outlets, knowing that the IT Department is ready. – Which is in line with the Corporate Vision.

A good IT Service Manager will be able to use this objective tree for all Processes and Functions. Again – be specific – cite an example (corporate objective) and stick to it!

This can then be used in exams to tie case study in - no matter what the process.

Advice

The Big Bad wolf takes the quickest path – Little Red Riding Hood takes her time.... (And frustrates the blazes out of the Business!)

Service Delivery

Advice

To help understand each process, it is good to be able to attach 1 key word or phrase to “sum” up how it contributes to good IT Service Management. These are ours – you may identify your own key word

Overall ITSM

Service Management

Processes

Service Level Management
Financial Management for IT Services
Capacity Management
Availability Management
IT Service Continuity Management

Key Word!

Agreements!
Costs!
Performance!
Sustained!
Disaster!

Service Management

Benefits

- **S** – System led benefits eg – improvement in security, availability
- **E** – Enhanced customer satisfaction. As a Service Provider you know what is expected of them
- **R** – Reliable business support provided due to improved quality of service
- **V** – Motivated staff – improved job satisfaction
- **I** – ITSC Procedures more focused – more confident in ability to follow when required
- **C** – Clearer view of IT Capability
- **E** – Better information on current services

Planning to Implement Service Management

- “A Service Management Project”
- Feasibility Study
- Assess current situation
- Project Plan
- Project review and management reporting

Implementing

- Quick wins
- Phased approach
- Involve customers
- Involve external suppliers
- Education/awareness
- Communication
- Benchmarking
- Improvement – seeking continuously

Service Level Management

Goal

To maintain and improve IT Service Quality through a constant cycle of agreeing, negotiating, monitoring and reporting upon IT Service achievements and instigation of cost-justifiable improvements.

Terminology

SLA:	Written agreements between an IT Service Provider and an IT customer documenting the agreed service targets and responsibilities of both parties.
OLA:	Agreements with the internal IT groups documenting the specific back-to-back targets for each of the elements in the delivery and support of services.
UCs:	Agreements with external suppliers documenting the specific back-to-back targets and responsibilities for each of the elements in the delivery and support of services.
SLRs	The customer requirements that should form part of the service design and testing criteria for new services.
SIP	Service Improvement Programs: Plans that identify and implement actions necessary to overcome difficulties and improve service quality.
SQP	Supporting OLAs: The written plan and specification of internal targets designed to guarantee the agreed service levels.

Benefits

- IT Services designed to meet Service Level Requirements
- Improved relationships with customers
- Clearer view of roles and responsibilities
- Specific targets to aim for that can be used to monitor, measure and report against.
- IT is focused on the areas the business thinks are key
- Weak areas are identified
- Improvement actions are documented and implemented

Costs

- **P:** cost of SLM staff
- **A:** accommodation costs for SLM staff and documentation.
- **S:** software needed for SLM
- **H:** hardware needed for SLM
- **E:** Education and awareness of the process and documents for staff, customers and users.
- **T:** Transfer

Challenges

- Monitoring of pre-SLA achievements
- Expectations that are not reasonable
- Ensuring targets are achievable before agreeing to them
- Inadequate seniority of SLM
- Inadequate focus, resources and time
- Responsibilities of parties not defined
- SLAs not customer focused (too lengthy, not concise)
- Lack of communication
- Absence of OLAs and UCs.

Planning SLM Activities

- Initial planning activities
 - Appointing SLM staff
 - Production of a mission statement
 - Definitions of objectives and scope for process
 - Awareness campaign
 - Definition of R&R
- Plan monitoring capabilities
 - How will monitoring be performed, measured, reported and reviewed. Eg. Tools and software to support.
- Establish initial perception of services
 - Gather perceptions from all customers about the quality and priority of services.
- Planning of OLAs and UCs
 - Awareness and communication of how they will be involved/affected

Implementing SLM Activities

- Produce a Service Catalogue
- Manage expectations
- Plan SLA structure
- Establish SLRs and draft SLA
- Seek agreement
- Establish monitoring capabilities
- Review UCs and OLAs
- Define reporting and review procedures
- Publicize the existence of SLAs

Ongoing SLM Activities

- Monitoring and reporting
- Service Review Meetings
- Service Improvement Programs
- Maintenance of SLAs, OLAs and UCs

SLA Contents and Key Targets

- Introduction
 - Title, brief description
 - Signatories
 - Dates
 - Scope
 - Responsibilities
 - Description of services
- Service Hours
 - Service hours
 - Arrangement for requesting service extensions
 - Special hours
 - Service calendar
- Availability Targets
- Reliability, (MTBF or MTBSI)
- Support
- Transaction Response Times
- Security
- Charging
- Service Reporting and reviewing
- Incentives and penalties

KPIs

- What number or percentage of services covered by SLAs?
- Are service review meetings held on time and minuted?
- What percentage of service targets are being met?
- Are service level achievements improving
- Are customer perception statistics improving
- Are IT costs decreasing with stable service level achievements?

Inter-Process Relationships

Service Level Mgt	Contributes to (OUT)	Utilizes from (IN)
FMIT	<ul style="list-style-type: none"> o SLA o SLR 	<ul style="list-style-type: none"> o Cost/service o Financial Reports
Capacity Mgt	<ul style="list-style-type: none"> o SLA o SLR 	<ul style="list-style-type: none"> o Capacity Reports o Drafting OLAs - resourcing
Availability Mgt	<ul style="list-style-type: none"> o Availability Requirements o VBF 	<ul style="list-style-type: none"> o Availability Parameters o Availability Reports
ITSCM Mgt	<ul style="list-style-type: none"> o SLR o BCM 	<ul style="list-style-type: none"> o ITSCM Plan o Reports
Security Mgt	<ul style="list-style-type: none"> o SLA, SC, OLA, UC o 	<ul style="list-style-type: none"> o Security Policy considerations for service specs
Incident Mgt	<ul style="list-style-type: none"> o SLA Targets o Service Catalog 	<ul style="list-style-type: none"> o Incident Reports
Problem Mgt	<ul style="list-style-type: none"> o Poor Service Issues o SLA Response Times, Targets 	<ul style="list-style-type: none"> o Major Problem Review o Known Error Reports
Configuration Mgt	<ul style="list-style-type: none"> o Service Catalog o SLA coverage relevant to Config inc OLA, UC 	<ul style="list-style-type: none"> o Config status Reports
Change Mgt	<ul style="list-style-type: none"> o RFC – new Service o Business Critical times – Freeze Periods 	<ul style="list-style-type: none"> o Change Reports o PIR Reports
Release Mgt	<ul style="list-style-type: none"> o Release Schedule o Live Service Readiness 	<ul style="list-style-type: none"> o Service Catalog o Signed Acceptance
Service Desk	<ul style="list-style-type: none"> o SLA, OLA, UC o SC 	<ul style="list-style-type: none"> o User Satisfaction Reports/Surveys o Status Reports

Financial Management for IT Services

Goal

- To provide **cost-effective stewardship** of the IT assets and resources used in providing IT Services
- To be able **to account fully for the spend** on IT services and to **attribute these costs** to the services delivered to the organization's customers.
- To assist **management decisions**, eg cost-benefit analysis

Terminology

	Description	Case Study tie-in
Budgeting	The sub-process predicting and controlling the spending of money within the IT organization and consist of: <ul style="list-style-type: none">• Periodic budget setting (usually annually)• Day-to-day monitoring of the current budgets.	<ul style="list-style-type: none">• Predict the money required to deliver and support services for given period• Can compare the actual spend to predicted spend• Reduces risk of overspending
IT Accounting	The process that enables the IT organization to account fully for the way money is spent. Usually overseen by someone trained in accountancy.	<ul style="list-style-type: none">• Calculate the cost of providing services to customers• Perform cost-benefit analysis• Identify cost of changes• Understand the cost of not proceeding with changes.

Charging	The set of processes required to bill Customers for the services supplied to them. This requires sound IT accounting for support analysis, billing and reporting.	<ul style="list-style-type: none"> • Recover the costs of IT services • Operate IT organization as business if required • Influence customer and user behavior.
Cost Models	Cost by: <ul style="list-style-type: none"> • Customer • Service • Location 	
Cost Types	PASHET	
Cost Elements	Further sub-division of Cost Types	
Capital Costs	Identification of Cost Element as a physical (tangible) asset of the organization. One off costs.	
Operational Costs	Cost elements are ongoing – eg staff costs, maintenance, consumables etc.	
Total Cost of Ownership	The total lifecycle costs of an item rather than just capital expenditure.	Gives clear understanding of actual cost of ownership for IT services and resources.

Charging

To limit risk in implementing charging, the IT organization should:

- Publicize the program and work with business to define charging policy
- Ensure SLAs are in place and representative of actual service
- Ensure benefits are quantifiable and can be reported.

Four factors that govern the design of charging policies:

- Level of recovery of expenditure required (eg. 100%, 75% etc)
- Desire to influence Customer and User behavior
- Ability to recover costs according to usage
- Control of internal market (requires effective and efficient ITSM)

Pricing Methods:

- Cost
- Cost-plus
- Going rate
- Market rate
- Fixed rate

Differential Charging: used to manage demand for services (reducing Capacity required)

Benefits

- Increased confidence in setting and managing IT budgets
- Accurate cost information to support IT investment decisions
- Accurate determination for cost of ownership
- More efficient use of IT resources throughout the organization

Challenges

- Lack of understanding of IT accounting and charging, leading to over-complex or ineffective systems.
- Experience of staff in both IT and Financial activities
- The monitoring tools used are inaccurate, irrelevant or cost too much to develop or maintain.

Costs

P: people (Financial Management staff or those involved in data collection)

A: accommodation

S: software required for the automation of IT accounting and charging.

H: hardware required for the automation of IT accounting and charging.

E: Education of customers and IT staff about process and their responsibilities.

T: Transfer costs – cost of involvement of the general Finance department.

Planning the process activities

- Define scope and goal of IT accounting and charging
- Feasibility study
- Design cost model
- Define metrics
- Purchase software and hardware tools required
- Training

Implementing the process activities

- Document procedures required
- Set up cost centers and cost units
- Set up data recording
- Develop awareness
- Pilot and monitor the system

Ongoing process activities

- Reporting
- Review meetings
- Checking expenditure against predicted spend (budget)
- Invoicing customers
- Review systems
- Develop next year's budget

KPIs

- Actual spend matches predicted spends (budgets)
- All costs are accounted for
- Accurate reports are produced for management
- CI information is up to date
- Bills are accurate and issued on time
- Customer perception is improving
- Discrepancies in charges are identified and improved

Inter-Process Relationships

FMIT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> o Cost/service o Financial Reports 	<ul style="list-style-type: none"> o SLA o SLR
Capacity Mgt	<ul style="list-style-type: none"> o Financial Plans/Service o Budgets 	<ul style="list-style-type: none"> o Costing/Charging Recommendations
Availability Mgt	<ul style="list-style-type: none"> o Budgets o Cost per Service 	<ul style="list-style-type: none"> o Costs o Availability Models
ITSCM Mgt	<ul style="list-style-type: none"> o Actual Costs o Budgets 	<ul style="list-style-type: none"> o Recovery Options Costs o Recovery Costs
Security Mgt	<ul style="list-style-type: none"> o Actual costs of security measures 	<ul style="list-style-type: none"> o Estimated costs of Security Measures
Incident Mgt	<ul style="list-style-type: none"> o Cost/Outage o Cost/Service 	<ul style="list-style-type: none"> o Incident Reports
Problem Mgt	<ul style="list-style-type: none"> o Cost Benefit Analysis o Cost Models 	<ul style="list-style-type: none"> o Known Error \$\$ Solution Recommendations
Configuration Mgt	<ul style="list-style-type: none"> o Asset Costs o Depreciated Values 	<ul style="list-style-type: none"> o Audit Reports o Asset Information
Change Mgt	<ul style="list-style-type: none"> o CAB Member o Cost Benefit Analysis 	<ul style="list-style-type: none"> o Project Costs/Overruns
Release Mgt	<ul style="list-style-type: none"> o Financial Approval o \$\$ Analysis 	<ul style="list-style-type: none"> o \$\$ Asset Costs o Budget Reports for Release
Service Desk	<ul style="list-style-type: none"> o Costs 	<ul style="list-style-type: none"> o Cost Estimates

Capacity Management

Balances:

- Cost against capacity
- Supply against demand

Goal

To ensure that cost-justifiable IT capacity and performance always exists and that it is matched to the current and future identified needs of the business.

Scope

All IT infrastructure and human resources (where a lack of people could result in degraded service or performance).

Terminology

Sub-Process	Description	Case Study Example
Business Capacity Management	Responsible for ensuring that future business requirements for IT services are considered, planned and implemented. These come from business plans for new services, growth and development plans etc.	Responsible for ensuring that the 20 new retail outlets are provided with the required capacity and performance in a cost-effective manner.
Service Capacity Management	Focus on the live operational IT services for Customers. Responsible for ensuring that the performance of all services as detailed in SLAs and SLRs is monitored and measured, and actions taken to meet business requirements.	Responsible for ensuring SLA targets of services.
Resource Capacity Management	Responsible for ensuring all components within IT infrastructure are monitored and measured and necessary actions taken to ensure that IT services meet business requirements.	Responsible for ensuring components of IT infrastructure enable IT service to meet business requirements.

Activities of Capacity Management

Activity	Description
Monitoring	Monitors the utilization of each resource and service to ensure the optimum use of hardware and software, so that all SLA targets can be achieved and that business processes operate as expected.
Analysis	Data collected from monitoring should be analyzed to identify trends for capacity and performance baselines. This can also be used to predict future resource usage etc/
Tuning	Balancing workloads, balancing disk and network traffic, memory usage.
Implementation	The introduction of any Changes that were identified during monitoring, analysis and tuning.
Storage of Capacity Management Data	Where all capacity data is stored and utilized. Including: <ul style="list-style-type: none"> • Business data (number of users, locations, PCs, anticipated workloads) • Service Data (transaction response times, SLA targets and SLRs) • Technical Data (Component thresholds, eg max 80%) • Financial Data (cost of components, IT budgets, cost of suppliers) • Utilization data (recording of actual utilization of services and components)
Demand Management	Understanding patterns of business activity, influencing demand for computing resource and restricting use of that resource. <ul style="list-style-type: none"> • Technical (physical) constraints • Financial constraints
Modeling	Predicting the behavior of IT services under a given volume and variety of work. Requires baselines to model against.

Application Sizing	Estimating the resource capacity requirements for new and adapted applications and their predicted workload. Primary factors include SLRs and existing Capacity plans.
Capacity Plan	<ul style="list-style-type: none"> • Introduction • Methods used • Management Summary • Business Scenarios • Service Summary • Resource Summary • Options for Service Improvement • Recommendations

Benefits

- Increased efficiency and cost savings
 - Deferred expenditure
 - Economic provision of services
 - Planned buying
- Reduced Risk
 - Better management of resources and service performance
 - CAB meeting involvement
 - Number of changes to urgently increase Capacity is reduced and hopefully eliminated
- More confident forecasts
- Improved design of applications

Challenges

- Unrealistic customer expectation for capacity and performance
- Vendor and supplier influence
- Implementation of automated monitoring and reporting

Planning the process activities

- Review what exists already
- Scope and structure of process
- Design and setup of CDB
- Integration of other processes
- Production of Capacity Plan
- Awareness campaign

Implementing the process activities

- Train staff
- Establish monitoring and CDB
- Establish work procedures for Business, Service and Resource Capacity Management

KPIs

- Is the utilization of services and components recorded in CDB
- Exceptions and breaches are reducing
- Are reports produced on time
- Capacity Plan is produced on time
- Recommendations are accurate, both in terms of cost and timescale required

Critical Success Factors

- Accurate business forecasts
- Knowledge of IT strategy and plans
- Understanding of current and future technologies
- Ability to demonstrate cost-effectiveness
- Interaction with other effective Service Management processes
- Ability to plan and implement appropriate IT capacity to meet business need.

Inter-Process Relationships

Capacity MGT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> o Capacity Reports o Drafting OLAs - resourcing 	<ul style="list-style-type: none"> o SLA o SLR
FMIT	<ul style="list-style-type: none"> o Costing/Charging Recommendations 	<ul style="list-style-type: none"> o Financial Plans/Service o Budgets
Availability Mgt	<ul style="list-style-type: none"> o Capacity Reports o Capacity Plans 	<ul style="list-style-type: none"> o Resilience Requirements o Availability Plan
ITSCM Mgt	<ul style="list-style-type: none"> o Modeling Recovery Options 	<ul style="list-style-type: none"> o ITSCM Plan o Capacity Requirements for ITSCM
Security Mgt	<ul style="list-style-type: none"> o Capacity Plan o Capacity Reports 	<ul style="list-style-type: none"> o Security Policy
Incident Mgt	<ul style="list-style-type: none"> o Alarms, Thresholds 	<ul style="list-style-type: none"> o Capacity Related Incidents
Problem Mgt	<ul style="list-style-type: none"> o CI Threshold Levels o Recommendations 	<ul style="list-style-type: none"> o Capacity related Problems
Configuration Mgt	<ul style="list-style-type: none"> o CDB o Capacity Attribute values 	<ul style="list-style-type: none"> o CI Data o CMDB
Change Mgt	<ul style="list-style-type: none"> o Tuning o RFC 	<ul style="list-style-type: none"> o FSC o PSO
Release Mgt	<ul style="list-style-type: none"> o New Technology Info o Modeling App Sizing data 	<ul style="list-style-type: none"> o Rollout/Deployment Plans o Release Test Results
Service Desk	<ul style="list-style-type: none"> o Capacity Related feedback o Surveys 	<ul style="list-style-type: none"> o Capacity Plans o User capacity limits

Availability Management

Goal

To optimize the capability of the IT Infrastructure, services and supporting organization to deliver a cost effective and sustained level of Availability that enables the business to satisfy its objectives.

- To understand the Availability requirements of the business
- To plan, monitor and measure and continuously improve the Availability of the Infrastructure and IT organization
- To ensure Availability requirements are met consistently.

Objectives

- Ensure IT services are designed to deliver required Availability
- Provide reporting against agreed levels of Availability
- Optimize availability of IT infrastructure and deliver cost-effective improvements
- Achieve a reduction in frequency and duration of Incidents that impact IT Availability.
- Create and maintain a forward looking Availability Plan.

Terminology

Availability	The ability of an IT Service or IT component to perform its required function over a stated period.
Reliability	Describes an IT service's freedom from operational failure. This is determined by the reliability of each component and resilience built into the infrastructure.
Maintainability	The ability of the IT organization to maintain Availability and recover to operational states using internal resources. The various internal group's responsibilities within the IT organization in this regard would be documented in Operational Level Agreements.
Serviceability	Describes the contractual agreements with third-party suppliers to ensure the Availability and reliability of Services and components under their care.

Security	The Confidentiality, Integrity and Availability (CIA) of the data associated with a service or an aspect of overall Availability.	
Vital Business Function	The business-critical elements of a business process supported by an IT Service.	
Single Point of Failure	Is any component within the IT infrastructure that has no backup capability and can cause impact to the business and user community when it fails .	
Component Failure Impact Analysis	<p>A technique designed to predict and evaluate the impact on IT Service Availability arising from component failures within the proposed IT infrastructure and service design. It identifies:</p> <ul style="list-style-type: none"> • SPOF • Impact of component failures • Component and people dependencies • The need to identify and implement risk reduction measures. • The need to identify and document recovery options. 	
Service Outage Analysis	<p>A structured approach to identify end-to-end Availability improvement opportunities that deliver benefits to the User. Usually a combined role with Problem Management. (including business and User input)</p> <ul style="list-style-type: none"> • Identifies underlying causes of Service interruption to the user • Produce reports of findings and recommendations • Provides a mechanism to ensure the IT Infrastructure delivers optimal Availability. • Enables “outside the box” thinking 	
Expanded Incident ‘Lifecycle’	<ul style="list-style-type: none"> • Incident start • Incident Detection • Incident Response 	<ul style="list-style-type: none"> • Incident Diagnosis • Incident Repair • Incident Recovery • Incident Restoration

Technical Observation Post	A TOP is a prearranged gathering of technical specialists from the IT support organization brought together to focus on specific aspects of Availability . Its purpose being to monitor real-time events as they occur with the specific aim of identifying improvement opportunities or bottlenecks which exist within the IT infrastructure .
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Benefits

IT Services are designed, implemented and managed to consistently meet Availability targets.

- A single point of accountability for Availability is established
- Levels of IT Availability provided are cost-justified
- Shortfalls of Availability are recognized and appropriate corrective actions identified and implemented
- Business and user perception of IT organization improves

Challenges

- IT organization and different groups have difficulty understanding how Availability MGT can help given that other ITIL processes are already deployed
- If current Availability levels are perceived as good there is no compelling reason seen for the creation of a new role
- Lack of authority of Availability Manager in influencing all areas of the IT support organization.
- Lack of available resources and skills, tools etc
- Lack of mature ITIL processes that provide necessary input to Availability Management

Key Inputs

- Availability requirements of the business for a new or enhanced IT service
- Configuration and monitoring data regarding IT Services and components.
- SLA targets for Availability
- Business Impact assessment for each critical business function
- Information on IT Service and component failures (Incidents and Problems)
- Service Level Achievements for Availability

Key Outputs

- Availability and recovery design criteria
- Details of Availability techniques
- Availability Plans
- Agreed targets of Availability, reliability and maintainability for IT components
- Availability reporting
- Monitoring requirements for IT Services and components

Activities

- Determining Availability Requirements
- Determining vital business functions and impact of IT component failure
- Defining targets for Availability, reliability and maintainability
- Monitoring and reporting of IT Services and IT components
- Investigating and implementing actions to improve Availability
- Producing and maintaining a forward looking Availability Plan.

Costs

PASHET

In particular Availability Monitoring Tools
Maintenance Costs

Inter-Process Relationships

Availability MGT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> ○ Availability Parameters ○ Availability Reports 	<ul style="list-style-type: none"> ○ Availability Requirements from business ○ VBF
FMIT	<ul style="list-style-type: none"> ○ Costs ○ Availability Models 	<ul style="list-style-type: none"> ○ Budgets ○ Cost per Service
Capacity Mgt	<ul style="list-style-type: none"> ○ Resilience Requirements ○ Availability Plan 	<ul style="list-style-type: none"> ○ Capacity Reports ○ Capacity Plans
ITSCM Mgt	<ul style="list-style-type: none"> ○ CRAMM ○ Delivering Risk Reduction Measures 	<ul style="list-style-type: none"> ○ ITSCM Plan ○ Availability Requirements
Security Mgt	<ul style="list-style-type: none"> ○ CIA activities ○ Reports 	<ul style="list-style-type: none"> ○ Security Policy
Incident Mgt	<ul style="list-style-type: none"> ○ SPOF, CFIA 	<ul style="list-style-type: none"> ○ Availability Related Incidents
Problem Mgt	<ul style="list-style-type: none"> ○ TOP 	<ul style="list-style-type: none"> ○ Availability Related Problems ○ FTA etc analysis
Configuration Mgt	<ul style="list-style-type: none"> ○ Availability Reports 	<ul style="list-style-type: none"> ○ New CI ○ CMDB
Change Mgt	<ul style="list-style-type: none"> ○ RFC ○ Impact Assessments 	<ul style="list-style-type: none"> ○ FSC ○ PSO
Release Mgt	<ul style="list-style-type: none"> ○ Maintenance Windows/ Schedules ○ Release timing Considerations 	<ul style="list-style-type: none"> ○ Rollout/Deployment Plans ○ Planned Outages
Service Desk	<ul style="list-style-type: none"> ○ Service Status ○ Maintenance Schedule 	<ul style="list-style-type: none"> ○ User Data ○ Availability Related data

IT Service Continuity Management

Goal

To support the overall Business Continuity Management process by ensuring that all required IT services can be recovered within required and agreed business timescales.

Benefits

ITSCM supports the BCM process and delivers the required IT supporting Infrastructure to enable the business to continue to operate following a service disruption.

- Potential lower insurance premiums
- Meet regulatory requirements
- Improved relationship with business
- Positive marketing of contingency capabilities
- Improved organizational credibility
- Improved Competitive advantage

Scope Considerations for ITSCM

- The organization's dependence on technology and IT services
- The number and location of offices
- Number of critical business processes and level of interaction between them
- The level of services that need to be provided to support those critical business process
- The organization's attitude towards risk.
- The risks that need to be addressed

Business Continuity Lifecycle

- STAGE ONE - Initiation
 - Policy setting
 - Specify scope
 - Allocate resources
 - Define project organization and control structure

- STAGE TWO – Requirements and Strategy Definition
 - Business Impact Analysis
 - Risk Assessment
 - Business Continuity Strategy
- STAGE THREE – Implementation
 - Organization and implementation planning
 - Develop recovery plans
 - Implement risk reduction measures
 - Develop procedures
 - Initial testing
- STAGE 4 – Operation Management
 - Education & Awareness
 - Ongoing testing
 - Review and audit
 - Training
 - Assurance
 - Change Management involvement

Business Impact Analysis (BIA)

The BIA identified the ***minimum critical requirements to support the business***. It identifies:

- Critical business processes
- The potential damage or loss that may be caused by disruption of critical business processes
- How the degree of damage or loss is likely to escalate
- The staffing, skills, facilities and services needed to enable critical and essential business processes
- The time with which minimum levels of services, staffing and facilities should be recovered
- The time with which services, staffing and facilities should be fully recovered.

Impact Categories:

- Financial loss
- Additional costs
- Loss of market share
- Breach of law or regulation
- Risk to personal safety
- Loss of organizational credibility

Risk Assessment:

Assesses the likelihood that a disaster or serious service disruption will occur. This includes:

- Identification of risks
- Assess threat – “how likely is it that a service disruption will occur?”
- Assess vulnerability: “To what extent will the organization be affected by the threat occurring?”
- Assess the overall level of risk based on the two factors

Risk Reduction Measures:

Utilized for where the impact of a threat occurring is immediately high.

- Elimination of single points of failures
- Outsourcing service to more than one provider
- Resilient IT systems
- High security controls
- Effective processes including Change Management.

Recovery Options for:

- *People and accommodation*
- *IT systems, networks and Data*
- *Utilities (gas, water, electricity etc)*
- *Critical Assets such as paper record and reference material.*
 - **Do nothing** – strategic decision not to implement recovery
 - **Manual workarounds** – non-IT solutions to enable effective business processes at a decreased efficiency.
 - **Reciprocal Agreements** – agreements with other organizations using similar technology for accommodation or infrastructure sharing. Security and maintenance concerns.
 - **Gradual Recovery** – aka Cold Standby, utilized where restoration of business processes can take up to 72 hours or longer. Typically could include empty facilities that equipped with telecommunication and power lines that can be used.
 - **Intermediate Recovery** – aka Warm Standby – utilized where restoration of business processes and supporting critical systems is required within 24-72 hours. This commonly involves third party recovery organizations that spread the cost across multiple customers.

- **Immediate Recovery** – aka Hot Standby – provides for immediate restoration of services and critical business processes during the first 24 hours following a disruption. This would be utilized where the associated impact of the disruption would be immediately high. Cost is expensive as this may need exclusive immediate recovery facilities to be provided internally.

Invocation:

The decision to invoke ITSCM processes takes into account a number of factors.

- The extent of the damage and scope of the potential invocation
- The likely length of the disruption and unavailability of services or business processes
- The timing of the disruption and potential business impact.

Challenges

- Lack of management sponsorship and commitment
- Lack of resources and time
- Lack of cooperation from all levels of staff including management and team members

Costs

P: people, ITSCM training and awareness of staff
 A: accommodation – recovery facilities
 S: software required for risk reduction or recovery
 H: hardware required for recovery or risk reduction
 E: Education and awareness of staff and management
 T: Transfer costs – cost of involving Business Continuity Management staff or external risk assessment parties.

Inter-Process Relationships

IT Service Continuity MGT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> o ITSCM Plan o Reports 	<ul style="list-style-type: none"> o SLR o BCM
FMIT	<ul style="list-style-type: none"> o Recovery Options Costs o Recovery Costs 	<ul style="list-style-type: none"> o Actual Costs o Budgets
Capacity Mgt	<ul style="list-style-type: none"> o ITSCM Plan o Capacity Requirements for ITSCM 	<ul style="list-style-type: none"> o Modeling Recovery Options
Availability Mgt	<ul style="list-style-type: none"> o ITSCM Plan o Availability Requirements 	<ul style="list-style-type: none"> o CRAMM o Delivering Risk Reduction Measures
Security Mgt	<ul style="list-style-type: none"> o ITSCM Plan - security requirements 	<ul style="list-style-type: none"> o Security Policy o Guidance
Incident Mgt	<ul style="list-style-type: none"> o Planned Resolution parameters 	<ul style="list-style-type: none"> o Major Incidents o Historical Data for Planning
Problem Mgt	<ul style="list-style-type: none"> o ITSCM Plan (TOP advice) 	<ul style="list-style-type: none"> o KEDB o Major Problem Reviews
Configuration Mgt	<ul style="list-style-type: none"> o Recovery Baselines o ITSCM Plan 	<ul style="list-style-type: none"> o Audit Reports o CI Data
Change Mgt	<ul style="list-style-type: none"> o RFC o ITSCM Plan 	<ul style="list-style-type: none"> o Infrastructure Updates
Release Mgt	<ul style="list-style-type: none"> o ITSCM Plan o Recovery Options 	<ul style="list-style-type: none"> o Rollout Plans o Confirmation that ITSCM in place for new release
Service Desk	<ul style="list-style-type: none"> o ITSCM Plan o ITSCM Training 	<ul style="list-style-type: none"> o Historical Data for planning

Service Support

Function

Service Desk

Key Word!

SPOC!

Processes

Incident Management

Problem Management

Configuration Management

Change Management

Release Management

Key Word!

Time!

Quality!

Information!

Control!

Implementation!

Service Desk

Goal

Facilitate restoration of normal services with minimal business impact on customers within agreed service levels and business priorities

Single Point of Contact (SPOC)

Terminology

Local Service Desk	Desk is located in same, or close physical location to user community
Centralized Service Desk	Service Desk in central physical location to all offices
Virtual Service Desk	Give users impression that they are using a central service desk – whereas staff may be spread or located in any number or type of geographical location

Benefits

- Improved customer service perception, and satisfaction
- Increased accessibility through SPOC
- Better quality and speedier turnaround of requests
- Improved teamwork and communication
- Better managed infrastructure and control
- Improved usage of IT resources

Challenges

- Ensuring customers use Service Desk (bypassing)
- Mgt Commitment
- Adequate Resources (staff, tools) to provide effective and efficient resources
- Collected information meets support and mgt information needs
- Clear boundaries between Service Desk and other support groups

Implementing Service Desk

- Establish business needs are clearly defined
- Mgt Commitment
- Identify and achieve quick wins
- Define clear objectives and deliverables
- Start simple – phased approach
- Sell Benefits
- Training
- Advertise Service Desk

Critical Success Factors

- Management Commitment
- Ability to relinquish Control
- Business metrics are collected and used
- Support processes maintained
- Ease of use and quality content
- Communication

KPIs

- Number of calls to Service Desk
- Number of calls to other Support Staff (aim for 0)
- Call Resolution Time
- Customer Satisfaction (surveys)
- Use of self help (where exists)

Setting up Service Desk

- SD environment considerations
- Define services
- SD pre-release requirements
- Advertise and sell SD
- Quick wins

Costs

P – Staffing costs

A – SD environment costs

S – Tools

H – Hardware -Console/Telephone system

E – Training costs

T – Transfer costs – setting up...

Inter-Process Relationships

Service Desk	Contributes to (OUT)	Utilizes from (IN)
FMIT	<ul style="list-style-type: none"> o Cost Estimates 	<ul style="list-style-type: none"> o Costs
Capacity Mgt	<ul style="list-style-type: none"> o Capacity Plans o User capacity limits 	<ul style="list-style-type: none"> o Capacity Related feedback o Surveys
Availability Mgt	<ul style="list-style-type: none"> o User Data o Availability Related data 	<ul style="list-style-type: none"> o Service Status o Maintenance Schedule
ITSCM Mgt	<ul style="list-style-type: none"> o Historical Data for planning 	<ul style="list-style-type: none"> o ITSCM Plan o ITSCM Training
Security Mgt	<ul style="list-style-type: none"> o Security Breach Notification 	<ul style="list-style-type: none"> o Security Policy o Guidance
Incident Mgt	<ul style="list-style-type: none"> o Staffing o Logged Incidents 	<ul style="list-style-type: none"> o Incident Mgt Tools
Problem Mgt	<ul style="list-style-type: none"> o Detected Problems o Escalated Incidents 	<ul style="list-style-type: none"> o Workaround knowledge transfer o Known Errors of new releases
Configuration Mgt	<ul style="list-style-type: none"> o Status Reports o Lost CI Incidents 	<ul style="list-style-type: none"> o CMDB o CI Data
Change Mgt	<ul style="list-style-type: none"> o Status Reports 	<ul style="list-style-type: none"> o FSC o PSO
Release Mgt	<ul style="list-style-type: none"> o User Feedback o 	<ul style="list-style-type: none"> o Training o Release Notification
Service Level Mgt	<ul style="list-style-type: none"> o User Satisfaction Reports/Surveys o Status Reports 	<ul style="list-style-type: none"> o SLA, OLA, UC o SC

Incident Management

Goal

Restore services ASAP and minimize adverse impact on business

Scope

Incident – any event which is not part of standard operation of a service and which causes, or may cause, an interruption to, or reduction in, the quality of that service

Major Incident – degree of impact on user community extreme, and timescale of disruption becomes excessive – requires separate procedure with shorter timescale

Benefits

- Reduced Business impact of incidents due to timely resolution
- Improved customer satisfaction
- Improved monitoring – SLA to be measured
- Better staff utilization
- Eradication of lost or inaccurate incident
- More accurate CMDB

Challenges

- Staff and Mgt Commitment
- Logging of all incidents – bypassing
- Lack of clarity of business needs
- Poorly defined service objectives
- No provision of agreed customer service levels
- Inadequate training
- Resistance to change

Activities

- Incident detection and logging
- Classification and initial support
- Resolution and diagnosis
- Incident closure
- Ownership, monitoring, tracking and communication

Key Inputs

- Incident Matching
- CI's CMDB
- Resolution Details
- Response to RFC

Key Outputs

- RFC
- Resolved Incident
- Communication to customer

Planning to Implement

- Not in isolation – with SD
- Phased approach – 3-6 months
- Determine H/W and S/W ASAP
- Start small
- Keep closely linked systems – CMDB

KPI's

- Total number of incidents
- % incidents handled within agreed response times
- Average \$ per incident
- % incidents closed by SD without reference to other levels of support
- Number and % incidents closed remotely without need to visit

Critical Success Factors

- Up to date CMDB
- Knowledge base – eg problem/error database developed to provide resolutions and workarounds
- Effective automated system for incident Mgt and SD
- Close link with SLM

COSTS

PASHET

In particular, Incident Mgt Tool, Training costs

Inter-Process Relationships

Incident MGT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> ○ Incident Reports 	<ul style="list-style-type: none"> ○ SLA Targets ○ Service Catalog
FMIT	<ul style="list-style-type: none"> ○ Incident Reports 	<ul style="list-style-type: none"> ○ Cost/Outage ○ Cost/Service
Capacity Mgt	<ul style="list-style-type: none"> ○ Capacity Related Incidents 	<ul style="list-style-type: none"> ○ Alarms, Thresholds ○ Events through capacity monitoring
Availability Mgt	<ul style="list-style-type: none"> ○ Availability Related Incidents 	<ul style="list-style-type: none"> ○ SPOF, CFIA
ITSCM	<ul style="list-style-type: none"> ○ Major Incidents ○ Historical Data for Planning 	<ul style="list-style-type: none"> ○ Planned Resolution parameters
Security Mgt	<ul style="list-style-type: none"> ○ Security Incident Reports 	<ul style="list-style-type: none"> ○ Security Policy ○ Guidance
Problem Mgt	<ul style="list-style-type: none"> ○ Incident Records 	<ul style="list-style-type: none"> ○ KEDB ○ Workarounds
Configuration Mgt	<ul style="list-style-type: none"> ○ Incident Records ○ Status Reporting 	<ul style="list-style-type: none"> ○ CI Attributes ○ CMDB
Change Mgt	<ul style="list-style-type: none"> ○ RFC ○ Incident Reports on changes for PIR 	<ul style="list-style-type: none"> ○ FSC ○ PSO
Release Mgt	<ul style="list-style-type: none"> ○ Incident Reports 	<ul style="list-style-type: none"> ○ Training ○ Release Notification
Service Desk	<ul style="list-style-type: none"> ○ Tools 	<ul style="list-style-type: none"> ○ Staffing ○ Logged Incidents

Problem Management

Goal

Minimize adverse impact on incidents and problems caused by error in IT Infrastructure and to prevent recurrence by finding underlying root cause.

Scope

Problem Control

- Identifying and logging
- Classifying
- Investigation and Diagnosis

Error Control

- Known Errors
- RFC
- Workarounds

Proactive Problem Mgt

- Preventative means
- Trend analysis
- Target and support

Benefits

- Improved quality of services
- Incident volume reduction
- Permanent solutions
- Improved organizational learning
- Better 1st time fix rate for SD

Challenges

- Absence of good incident registration and control process
- Failure to link incident process to problem records
- Lack of Mgt Commitment
- Undermining of SD role
- Failure to set time for proactive Problem management

Activities

- Problem Control
- Error Control
- Proactive Problem Mgt
- Identifying trends
- Obtaining Mgt information from Problem data
- Reporting
- Major Problem Reviews

Supporting Techniques

- TOP
- Kepner and Tregoe Analysis
 - Define problem
 - Describe problem – location, identity, time, size
 - Establish possible cause
 - Test most probable cause
 - Verify true cause
- Ishakawa Diagram
 - cause –effect diagram

KPIs

- Number of correctly registered and classified incidents
- Number of correctly registered and classified problems and known errors
- Number of incidents or lost revenue prevented by proactive measures
- Time of problem and known errors
- Effective use of problem mgt staff
- Amount of productive collaboration between Incident and Problem Mgt

Critical Success Factors

- Effective automated registration of incidents, and effective classification
- Setting achievable objectives
- Making use of skills of team
- Cooperation between Incident and Problem Mgt due to potential conflicting interests

Costs

PASHET

In particular KEDB setup costs, integration with existing knowledge Mgt capabilities

Inter-Process Relationships

Problem MGT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> o Major Problem Review o Known Error Reports 	<ul style="list-style-type: none"> o Poor Service Issues o SLA Response Times, Targets
FMIT	<ul style="list-style-type: none"> o Known Error \$\$ Solution Recommendations 	<ul style="list-style-type: none"> o Cost Benefit Analysis o Cost Models
Capacity Mgt	<ul style="list-style-type: none"> o Capacity related Problems o 	<ul style="list-style-type: none"> o CI Threshold Levels o Recommendations
Availability Mgt	<ul style="list-style-type: none"> o Availability Related Problems o FTA etc analysis 	<ul style="list-style-type: none"> o TOP o
ITSCM	<ul style="list-style-type: none"> o KEDB o Major Problem Reviews 	<ul style="list-style-type: none"> o ITSCM Plan (TOP advice)
Security Mgt	<ul style="list-style-type: none"> o Security Related Problems/Known Errors 	<ul style="list-style-type: none"> o Security Policy o
Incident Mgt	<ul style="list-style-type: none"> o KEDB o Workarounds 	<ul style="list-style-type: none"> o Incident Records
Configuration Mgt	<ul style="list-style-type: none"> o KEDB o Error Control Information 	<ul style="list-style-type: none"> o CMDB o Trends
Change Mgt	<ul style="list-style-type: none"> o RFC o Problem Reports arising from change 	<ul style="list-style-type: none"> o Problem/Change Review Information o RFC Status
Release Mgt	<ul style="list-style-type: none"> o Problem Analysis Data o Reports of Problems introduced by release 	<ul style="list-style-type: none"> o System Documentation o Release Notification
Service Desk	<ul style="list-style-type: none"> o Workaround knowledge transfer o Known Errors of new releases 	<ul style="list-style-type: none"> o Detected Problems o Escalated Incidents

Configuration Management

Goal

- Account for all IT assets and configurations within organization and its services
- Provide accurate on configurations and their documentation
- Provide sound basis for Incident, Change, Problem and Release Mgt
- Verify configuration records against infrastructure and correct any exceptions

Scope

- Identification, recording and reporting of IT components
- All Hardware, software and associated documentation

Terminology

Configuration Item	Any component that supports an IT service. Including H/W, S/W, associated documentation, RFC, Incident Records, SLAs
CMDB	Configuration Management Database
Attribute	Specific information about that CI - eg RAM, location, Owner, serial number
CI Level –	recording and reporting of CIs at level that the business requires
Status Accounting	Reporting all current and historical data about each Vi throughout its lifecycle
Configuration Baseline	Configuration established at a specific point in time – captures both structure and details of configuration. Used for later comparison
Variant	A slightly different version of the same CI

Activities

- Planning
 - define scope, policies, procedures
 - Roles and Responsibilities
 - Storage areas
 - CI naming conventions
- Identification
 - selecting and identifying config structure for all CIs
 - version control,
 - CMDB
- Control
 - Ensure only authorized CI recorded from receipt to disposal
 - Registering new CI and versions
 - Update records
 - Protecting integrity of infrastructure
 - Update CMDB
- Status Accounting
 - Reporting current and historical data of CI
- Verification and Audit
 - Reviews and audits existence of CI, checking correctly recorded in CMDB

Planning to implement Configuration Mgt

- Person responsible
- Committee
- Define scope/level
- Awareness raising
- Training
- Tools – selection
- Analyze existing config mgt

Benefits

- Management of IT resources
- Economical quality services – less mistakes
- Optimal support on security issues
- Helps ensure compliance to legal obligations
- Optimal support on issues of budgeting and spending
- Reduced use of unauthorized software

Challenges

- Management support/commitment
- Adherence to system
- Setting level of detail
- Monitoring unauthorized software – bypassing
- Initial setup costs
- Not to implement in isolation

KPIs

- Occasions when config is not authorized
- Incidents and problems that can be tracked to wrongly made changes
- RFCs that were not completed successfully due to poor impact assessment, incorrect data in CMDB
- Cycle time to approve and implement change
- Licenses that have been wasted or not put into use at a particular location
- Exceptions reported during audits
- Unauthorized Components detected in use

Costs

PASHET

In particular CMDB Tool costs, Setup costs

Inter-Process Relationships

Configuration MGT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> ○ Config status Reports 	<ul style="list-style-type: none"> ○ Service Catalog ○ SLA coverage relevant to Config inc OLA, UC
FMIT	<ul style="list-style-type: none"> ○ Audit Reports ○ Asset Information 	<ul style="list-style-type: none"> ○ Asset Costs ○ Depreciated Values
Capacity Mgt	<ul style="list-style-type: none"> ○ CI Data ○ CMDB 	<ul style="list-style-type: none"> ○ CDB ○ Capacity Attribute values
Availability Mgt	<ul style="list-style-type: none"> ○ New CI ○ CMDB 	<ul style="list-style-type: none"> ○ Availability Reports
ITSCM	<ul style="list-style-type: none"> ○ Audit Reports ○ CI Data 	<ul style="list-style-type: none"> ○ Recovery Baselines ○ ITSCM Plan
Security Mgt	<ul style="list-style-type: none"> ○ CI data ○ Baselines 	<ul style="list-style-type: none"> ○ Security Policy
Incident Mgt	<ul style="list-style-type: none"> ○ CI Attributes ○ CMDB 	<ul style="list-style-type: none"> ○ Incident Records ○ Status Reporting
Problem Mgt	<ul style="list-style-type: none"> ○ CMDB ○ Trends 	<ul style="list-style-type: none"> ○ KEDB ○ Error Control Information
Change Mgt	<ul style="list-style-type: none"> ○ Update CMDB ○ CI Information 	<ul style="list-style-type: none"> ○ Update CI ○ RFC Records
Release Mgt	<ul style="list-style-type: none"> ○ CMDB Reference for DHS, DSL ○ Baseline Information 	<ul style="list-style-type: none"> ○ Version Info ○ New CI/updates
Service Desk	<ul style="list-style-type: none"> ○ CMDB ○ CI Data 	<ul style="list-style-type: none"> ○ Status Reports ○ Lost CI Incidents

Change Management

Goal

To ensure standardized methods and procedures are used for efficient and prompt handling of all changes, in order to minimize impact of any related incidents upon service

Scope

H/W, S/W (system, live apps), communication equipment, all documentation and procedures associated with running, support and maintenance of live systems

Terminology

RFC	Request for change
FSC	Forward schedule of changes
CAB	Change advisory Board
CAB/EC	CAB Executive Committee
Change Lifecycle	Full cycle from RFC until evaluation of executed change
ITEC	IT executive Committee

Activities

- Logging and Filtering
 - Allocation of priorities
 - categorization
- Impact and resource assessment
- Chairing CAB and CAB/EC
- Change Scheduling (FSC)
- Reviewing and closing
- Mgt Reporting

Planning and implementing

- Designate Change Mgr Role
- Decide on Change Mgt system
- Plan system reviews
- Implementation planning
- Guidance
- Procedures
- People
- Timing

Inputs

- RFCs
- CMDB
- FSC

Outputs

- FSC
- RFCs
- CAB minutes and actions
- Change Mgt Reports

Benefits

- Fewer risks
- Fewer (or no) backouts
- Optimal estimation of implications/ costs of changes
- Insight in/ oversight of “problem” areas becomes possible
- Increase productivity of users and IT personnel through stable IT services
- Large number of changes can be handled without making IT environment unstable

Challenges

- Regular checks and audits – adhering to process
- Mgt controls
- Implementing Configuration Mgt – control of CIs
- Training staff on ITSM – change in culture
- Bypassing
- Commitment of suppliers to process

KPIs

- Number of RFCs (accepted/rejected)
- Number and % successful changes
- Emergency changes
- Number changes awaiting implementation
- Number implemented changes
- Change backlogs and bottlenecks
- Business impact of changes
- Frequency of change to CIs

Costs

PASHET – in particular staff costs and Support costs

Inter-Process Relationships

CHANGE MGT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> ○ Change Reports ○ PIR Reports 	<ul style="list-style-type: none"> ○ RFC – new Service ○ Business Critical times – Freeze Periods
FMIT	<ul style="list-style-type: none"> ○ Project Costs/Overruns 	<ul style="list-style-type: none"> ○ CAB Member ○ Cost Benefit Analysis
Capacity Mgt	<ul style="list-style-type: none"> ○ FSC ○ PSO 	<ul style="list-style-type: none"> ○ Tuning ○ RFC
Availability Mgt	<ul style="list-style-type: none"> ○ FSC ○ PSO 	<ul style="list-style-type: none"> ○ RFC ○ Impact Assessments
ITSCM	<ul style="list-style-type: none"> ○ Infrastructure Updates 	<ul style="list-style-type: none"> ○ RFC ○ ITSCM Plan
Security Mgt	<ul style="list-style-type: none"> ○ CI Changes 	<ul style="list-style-type: none"> ○ RFC ○ Security Policy
Incident Mgt	<ul style="list-style-type: none"> ○ FSC ○ PSO 	<ul style="list-style-type: none"> ○ RFC ○ Incident Reports on changes for PIR
Problem Mgt	<ul style="list-style-type: none"> ○ PIR ○ RFC Status 	<ul style="list-style-type: none"> ○ RFC ○ Problem Reports arising from change
Configuration Mgt	<ul style="list-style-type: none"> ○ Update CI ○ RFC Records 	<ul style="list-style-type: none"> ○ Update CMDB ○ CI Information
Release Mgt	<ul style="list-style-type: none"> ○ FSC ○ Control of releases 	<ul style="list-style-type: none"> ○ Rollout Plan/Schedule ○ Test Reports/Issues
Service Desk	<ul style="list-style-type: none"> ○ FSC ○ PSO 	<ul style="list-style-type: none"> ○ Status Reports

Release Management

Goal

Release Mgt conducts management and distribution of software and hardware versions in use, which are supported by IT service provision in order to comply to agreed levels of service

Scope

Release Mgt undertakes planning, design, build, configuration and testing of hardware and software to create a set of Release components for a live environment

Terminology

Release	A collection of authorized changes to an IT service
Release Unit	Portion of IT infrastructure normally released together
DHS	Definitive Hardware Store
DSL	Definitive Software Library
Full Release	All components of a release unit built tested and implemented together
Delta Release	Only those CIs in release unit that have changed since last full or delta release
Package Release	Multiple release units released at same time

Activities

- Release Policy and planning
- Release design, build and Configuration
- Release acceptance
- Release resting – acceptance criteria
- Rollout planning
- Sign off for implementation
- Communication training
- Audits
- Installation of new/upgraded S/W, H/W
- Storage – DSL. DHS

Benefits

- Greater success rate in release of H/W and S/W
- Consistency of process
- Minimization of disruption of service
- Better use of resources
- Error reduction through controlled release

Challenges

- Resistance from staff
- Mgt support
- Time to adopt new process
- Circumvention of procedures
- Insufficient resources

KPIs

- Release built and implemented on time
- Number of backed out releases
- Security and accuracy of DSL, DHS
- Compliance with all legal restrictions relating to bought in software
- Level of use of unauthorized software
- Accurate and timely recording of all build, distribution and implementation activities within CMDB

Costs

PASHET

In particular – accommodation costs – DSL, DHS, Training Costs

Inter-Process Relationships

RELEASE MGT	Contributes to (OUT)	Utilizes from (IN)
SLM	<ul style="list-style-type: none"> o Service Catalog o Signed Acceptance 	<ul style="list-style-type: none"> o Release Schedule o Live Service Readiness
FMIT	<ul style="list-style-type: none"> o \$\$ Asset Costs o Budget Reports for Release 	<ul style="list-style-type: none"> o Financial Approval o \$\$ Analysis
Capacity Mgt	<ul style="list-style-type: none"> o Rollout/Deployment Plans o Release Test Results 	<ul style="list-style-type: none"> o New Technology Info o Modeling App Sizing data
Availability Mgt	<ul style="list-style-type: none"> o Rollout/Deployment Plans o Planned Outages 	<ul style="list-style-type: none"> o Maintenance Windows/Schedules o Release timing Considerations
ITSCM	<ul style="list-style-type: none"> o Rollout Plans o Confirmation that ITSCM in place for new release 	<ul style="list-style-type: none"> o ITSCM Plan o Recovery Options
Security Mgt	<ul style="list-style-type: none"> o Security issues/requirements from Release o Release Notifications 	<ul style="list-style-type: none"> o Security Policy o Guidance
Incident Mgt	<ul style="list-style-type: none"> o Training o Release Notification 	<ul style="list-style-type: none"> o Incident Reports
Problem Mgt	<ul style="list-style-type: none"> o System Documentation o Release Notification 	<ul style="list-style-type: none"> o Problem Analysis Data o Reports of Problems introduced by release
Configuration Mgt	<ul style="list-style-type: none"> o Version Info o New CI/updates 	<ul style="list-style-type: none"> o CMDB Reference for DHS, DSL o Baseline Information
Change Mgt	<ul style="list-style-type: none"> o Rollout Plan/Schedule o Test Reports/Issues 	<ul style="list-style-type: none"> o FSC o Control of releases
Service Desk	<ul style="list-style-type: none"> o Training o Release Notification 	<ul style="list-style-type: none"> o User Feedback

Case Study Preparation

- READ Case Study 3 times minimum
 - Once from Business perspective
 - Once from IT perspective
 - Once from Service Mgt perspective
- Create Chaos Diagram – or some form of visual representation to gain understanding of interdependencies between departments and IT services/systems
- Identify obvious process links to case study – will help with tie ins
- Practise objective tree for case study objectives with each process
- Look for areas of concern/interests to justify answers (tie ins)
- Expect to get extra information with exam, and remember to reference this as much as possible – or where asked.

Exam Answering Style

It is wise to assume that the Marker has already marked 10 exams before you. You want to make it as easy for the marker as possible.

Tips:

- Bold/underline key points in your answer
- Be succinct - Use point format where possible – without sacrificing demonstration of knowledge of question
- Use tables where possible to make reading easier eg

Definition	Case study Tie in
------------	-------------------

- Memo Structure – you get 2 marks for using appropriate memo style and tone –
 - Use headings: MEMO; TO; FROM; RE: DATE:
 - Introductory paragraph to set tone
 - Closing statement and name/Title
- New page for each question
- Your answer has to be to the point... Get in, answer question... Get out!

Sample ITIL v2 Managers Exams

The following is a mock exam prepared by The Art of Service. More EXIN Sample exams can be purchased from EXIN at www.exinbookshop.com

This exam is based on 30 marks per question. This is to allow for more practice questions, as well as greater process coverage.

Business Case Study

**RECE Shoe Company
Global Conglomerate**

**ITIL Service Managers Case Study
V1.1**



Introduction

Rece Couture Shoe Company of London, England, is a privately owned shoe company, founded in 1994.

Rece has grown rapidly to become one of the leading shoe retailers of the world.

During recent years Rece has expanded substantially to reach in 2004 the third most favored designer shoe label. The company has also expanded the product line with the introduction of an accessory line. Such spectacular growth has been achieved internally and not through acquisition or merger.

Rece is a company that has major operations centers in New York, Paris, Milan, Hong Kong and Melbourne, as well as 150 retail outlets worldwide (Rece stores and concessions in major department store locations). In addition, Rece operates an online store with the capacity to accept in excess of 5000 online orders per day.

Rece provides an unparalleled service network via dedicated own offices throughout the world and remains a truly independent and private Company able to respond quickly to market changes and implement long term plans, without unnecessary interference or delay.

With a streamlined management structure in London, England, Rece has become a leading customer focused and cost effective global retailer, their first class craftsmanship is favored by international stars and elegant women worldwide.

Officers & Employees

CEO: Claire Enever (co-founder and president)

Creative Director: Angela Miller

Group Managing Director, Finance and Administration: [Paul J. Rizzo](#),

Group Managing Director, Commercial and Consumer: [Bernard Scholl](#)

Group Managing Director, Retailing Business Solutions: [Cecile Yelland](#)

Group Managing Director, International Shipping: [Anton Chirac](#)

Group Managing Director, Employee Relations: [Rebecca Cartwright](#)

Group Managing Director, Network and Technology: Anwar Sadat

Group Managing Director, Sales and Marketing: Steve Birch

Group Managing Director, Press and Public relations: Carla Scott

Group Managing Director, Convergent Business: Rachael Alfonsin

Group Managing Director, Legal and Regulatory: Pien Ch'iao

2007 Employees: 13,840

1-Year Employee Growth: (7.7%)

Headquarters: Level 42, 76 Oxford Street, London, England

Vision

Rece vision is to enhance its position as the leading designer shoe design and retailer in the world.

To realize this vision and prepare for competition, Rece has adopted a four-part growth strategy, entailing:

Optimizing returns from the 'classic' products and services throughout the world

Developing and delivering value-added services via an online interface and extended accessories line that is available 24 x 7.

Transforming our corporate culture and improving productivity.

Extending our global scope with more retail outlets and manufacturing sites.

The Rece Organization

The organization is virtually identical at each of the head offices. For example, each head office will have the following departments:

Marketing and Sales

Design and Manufacturing

Retailing and Logistics

Shipping and distribution

Customer Services

Maintenance

Legal

Accounts Department

Human Resources

ICT Department

Each manager for the listed departments will report directly to the director of that that local office.

The CEO of the company and her managing directors are located in Head Office in London, England.

Logistics

The logistics department's main responsibility is to ensure that all goods being shipped by sea or land are loaded to the appropriate carrier. This is to ensure that Rece can fulfill their obligations regarding paid orders from their customers.

The logistics department works very closely with both the Sales and the Manufacturing departments. The logistics departments will organize the loading and consignment of the goods, but it needs to also ensure that appropriate crews have already been notified and that there is an availability of transport.

The Sales, Manufacturing and Logistics departments work closely together. As a result of the complexity of the relationship a number of business process issues can arise. In the event that it becomes difficult to ascertain the nature or the solution for the issues, the Logistics department will be given priority to manage the issue to resolution. The Logistics department will therefore have the final authority in these decisions.

Maintenance

The Maintenance department is responsible for maintaining and stocking the necessary parts for both road and air transport. The primary objective is being responsible for the state of repair of the delivery road vehicles.

Rece operates a number of large container workshops around the world, so that maintenance can be carried out more efficiently.

Sales

The sales department is responsible for obtaining orders for international company chains and stores requiring Rece concession stock. They are also responsible for the online orders made via the Rece website.

Rece operates a total of 350 dedicated sales offices across the entire globe, and employs approximately 8,000 sales staff.

Because of such a large volume of people each regional head office will have a Sales Director which will look after the sales offices within that region.

Accounts Department

The Accounts Department takes care of the head office's financial accounts, including the management of the accounts payable and accounts receivable ledgers. The Accounts Department also takes care of the payment of salary to staff members and any contractors.

There will also be small Accounts Departments at each key location across the globe. The managers of these departments will report directory to the manager at the head office for that region. As a general rule, there is not more than four Accounts Departments per region.

The Accounts Departments work very closely with the Sales Departments. The Sales departments will interface into the computer systems controlled by the Accounts Department.

Human Resources

The Human Resources department is the department, involved in the recruitment, selection and discharge of personnel and in human resource management. For example, each head office employs a company doctor and a psychologist, who provide medical and mental assistance to employees.

Rece sees this function as being critical to their organization. Sales, Design and some Manufacturing staff are required to travel on a regular basis, sometimes at short notice for extended periods of time. This can place a serious strain on staff and their families, and as a result Rece wishes to ensure the well being of its staff members as it is recognizes that they are integral to the organization. Rece does this through medical and mental assistance programs, and by offering generous product discount and annual leave packages.

ICT Department

Each head office around the world employees a small team of IT personnel to help deliver and support IT Services for their specific regions. For all intents, these groups run fairly autonomously, having their own support teams, including their own Service Desks.

However, in London, there is a central ICT Department that provides IT Support for all the store and online requirements.

The Rece information systems

General

The computerization of Rece's information systems has not been fully completed at this stage. However, there are certain aspects that can be considered fairly mature. A large part of the financial accounts of the entire Rece organization have been computerized. Due to the geography that exists between the various head offices, there had been identified a need for a virtually identical computerization standard at these offices.

However, unfortunately a large part of the handling of orders and planning processes has not been as well computerized as possible. This is generally due to local constraints being enforced by the relevant government organizations within the various regions that Rece operates.

Resolution of this is being seen as a key aspect of the success of the Rece organization.

Systems

FINANCE is the information system used by the Accounts Department to prepare financial reports.

FINANCE contains modules for accounts receivable, accounts payable, salary records and book keeping. After an order is completed, the relevant invoices are created automatically. The payments to suppliers of shipping and payments to providers of specialist maintenance are also made by means of this system.

Due to the need for various head offices to comply with the local laws regarding finances, the FINANCE system has evolved to be the most diverse system in the organization, being virtually different at each head office.

PAYPOINT is the companies' point of sale system. This is ready for an update. The technology being used is out of date and not to the standard represented by the company, who want to be state of the art but at the right cost!

STOCK is the Rece Inventory Management system. It holds list of goods and materials themselves, held available in stock by a business. The inventory is held in order to manage and hide from the customer the fact that manufacture/supply delay is longer than delivery delay, and also to ease the effect of imperfections in the manufacturing process that lower production efficiencies if production capacity stands idle for lack of materials.

FOCUS is the companies CRM system that manages their relationships with customers, including the capture, storage and analysis of customer, vendor, partner, and internal process information.

There are three aspects to the FOCUS system:

Operational - automation or support of customer processes that includes the company sales or service reps

Collaborative - direct communication with customers that does not include the company sales or service reps

Analytical - analysis of customer data for a broad range of purposes

Currently the third aspect of Analysis is not used effectively and is subject to a forthcoming review for determining the reasons for this.

General Systems

There is also a general suite of applications, mainly Microsoft, with some Lotus Notes, which includes an e-mail, word processor, spreadsheet application, appointment calendars & scheduling software and the Human Resources applications..

These suites of applications are offered via local networks. The links between local networks and the links between desktop computers are completely transparent to the users.

This software is stored centrally on the main servers within the ICT Department in London, which allows remote users to download them as needed. However, each head office around the world, local versions are kept as this allows for easier management of the local standard operating environments.

Hardware

Each of the head offices uses a series of UNIX based servers for capturing and recording their information. These servers have direct data links back to the head office in London, where the information is then stored on a central mainframe. The mainframe is equipped with disk and tape storage facilities.

However, across the organization the network structure is fairly similar at each of the head offices. This allows for easier deployment of applications across the entire organization.

Additional Infrastructure Information

The wide area network has been outsourced. The outsourcer in this situation is managing and coordinating the leasing of the necessary network infrastructure. The outsourcer is responsible for providing monitoring information regarding the availability of the wide area network.

The cost of the organization maintaining the WAN infrastructure was considered too great. However, recently it is being seen by the organization that the infrastructure may not be as stable as proposed and are looking at the IT Departments to manage this in a more structure manner. This has resulted in incomplete transactions being fed back into the central mainframe, potentially costing the organization millions of dollars.

IT Organization

Due to the diverse nature of Rece, there are a number of IT Departments.

However, policy and objectives for IT are created and managed from the London office. London is seen as the central IT Department. However, autonomy is provided to the other head offices to manage, deliver and support IT Services as they need.

As such, each head office has a Chief Information Officer (CIO), who reports into the Group Managing Director, Network and Technology.

All CIO's have a monthly video conference call, with a bi-annual face to face meeting. At the bi-annual meeting, strategy and policies for Information Services and Information Technology are discussed and agreed upon. This meeting is chaired by the Group Managing Director, Network and Technology.

In addition to this, there are regular consultations between the head offices regarding technical matters. Telephone and e-mail are the means most commonly used for this with the occasional video conference.

There is however a general consensus amongst the senior IT Managers that the IT functions within Rece could probably contribute more to the business objectives of the company. However, they still all agree that in general terms the deployment and organization of its IT resources is reasonably good:

Communication internationally is regular with good information and results
Head Offices are communicating well
The technical infrastructure has been extensively documented by each head office

London

London uses a Fujitsu 8500 series mainframe as its central computer. The mainframe serves as a way of centralizing all the data from the other various head offices. The mainframe has approximately 3000 GB of disk storage.

Due to the large nature of the organization, it was determined that there also needed to be a development mainframe, although scaled down in size. At this stage the organization does not have a testing mainframe and as such, most of the testing is carried in the development environment.

The remote head offices can access the mainframe via deployed client applications and for some specific uses, via the World Wide Web.

Sales Offices

The following IT components have been installed at each local sales office:

Personal Computers

Operating System: Windows XP

Intel Core Duo – 2.4Ghz

At least 1 Server –

Operating System: Windows Server 2003

This allows individual sales offices to enter shipping orders into the system, as well as create and distribute information via email for their local regions. This is seen as a key aspect, as each sales office is responsible for generating their revenue.

General – Other Head Offices

At certain times and for certain parts of the infrastructure, development and maintenance of this is contracted out to various suppliers with whom a maintenance agreement has been signed.

At this stage Rece does not have any reciprocal arrangements with any other company in the event of a disaster.

The IT Organizational structure of each of the head offices is as follows:

Regional IT Manager – Overall Manager for the specific region

Network Manager - Local Area Network infrastructure

Project Manager - who is responsible for testing and coordinating any modifications to the systems and solving small problems

Service Desk - manager specializing in the management of the service desk representatives and dealing with IT Incidents

Desktop Manager – responsible for managing coordinating the roving engineers.

Change Control Coordinator

In addition to this, there is a group of roving engineers who travel their local region and are trained to solve the most commonly occurring problems independently. If he/she is unable to do this, the head office is contacted. The call will then be routed through to the local head office, if resolution is not possible then the assistance of suppliers who are able to solve the problems are called in.

Current Issues:

A. There has been a break down of communication between the IT organization and the Business. The Business lacks understanding about the systems and processes within the IT organization and how they affect the day to day running of the Business. In the past, there has been a failure to bridge the gap between both sides and this has resulted in a lack of support and a failure to meet targets. The Business feels that there is a lack of internal communication within the IT organization, causing the channels of communication to be confused and disorganized.

There is also unrest within the IT organization; the Service Desk staff feel continuously neglected and uninformed. They only receive sporadic information from the other processes with regards to changes, releases and up to date workarounds from Problem Management. This has resulted in a back log of Incident reports that have not yet been solved and a lot of unsatisfied customers!

The current CMDB is not kept up to date. The audits are finding too much information that does not reflect the true live environment. This is seen as a significant challenge affecting the continued growth and maturity of the IT organization.

The IT organization continues to have some departments and teams working in isolation who resist adopting the process-oriented approach that has been communicated by the CIO.

Service Delivery Practice Exam

READ ALL INSTRUCTIONS AND QUESTIONS CAREFULLY

The following questions will test your knowledge and readiness to attempt the ITIL Service Management Managers Exam, but equally important it will test your ability to analyze a given situation and make decisions as a Service Manager.

Instructions:

Make sure you read the associated case study carefully. Your responses where appropriate must reference this case study

1 of 5 (30 marks) Service Level Management

(10 marks)

You are an IT Service Management consultant tasked by the organization to begin the process of implementing Service Level Management. Based on your recommendation a project is started to begin implementing Service Level Management.

List 5 planning activities that must be considered and incorporated into the formal project in order to ensure the success of the Service Level Management process.

(15 Marks)

Describe each of the following Service Level Management terms and give a specific example of how each term could be used within the Case Study organization:

1. Service Level Agreement
2. Operational Level Agreement
3. Service Improvement Program

(5 Marks)

List 5 key skills a Service Level Manager should have.

2 of 5 (30 marks) Financial Management

A. (18 Marks)

List 3 key benefits for the following Financial Management activities:

IT Accounting
Charging

For each benefit give an example of how the benefit relates to the case study organization objectives. (You may use the same objective more than once)

B. (8 Marks)

List and describe the four factors that govern the requirements for a charging system.

C. (4 Marks)

Describe two outputs for each of the following sub-processes of the Financial Management Process

Budgeting
IT Accounting

3 of 5 (30 Marks) Capacity Management

A (13 Marks)

You are an IT Service Management consultant tasked with implementing the Capacity Management process. There is still some confusion among senior management as to the differences between Business, Service and Resource Capacity Management.

In a memo to Senior Management, list the objectives of each of the processes and give a brief example relating back to the Case Study Organization demonstrating the sub-process concepts.

B (8 Marks)

The Capacity Management process is instrumental in helping other service management disciplines achieve their goals. For each of the following service management disciplines, briefly explain how Capacity Management helps to achieve greater effectiveness.

1. Availability Management
2. IT Service Continuity Management

C. (9 Marks)

List and describe 3 types of Capacity Modeling Techniques. For each technique list one way the technique could be used to assist the case study in achieving its objectives (You may not use any objective more than once)

4 of 5 (30 Marks) IT Service Continuity Management

A (10 Marks)

Name 5 activities that should be undertaken that ensure that management and employees are continually focused on IT Service Continuity Management as part as business as usual.

B (10 Marks)

Due to the increasing fear of the effects of climate change and natural disasters, the Case Study organization has decided to introduce Business Continuity Management. Part of this is the implementation of IT Service Continuity Management.

Name 5 general advantages of introducing IT Service Continuity Management from the perspective of the organization.

C (10 Marks)

Name and describe 5 areas of supporting information which should be included in an IT Service Continuity plan.

5 of 5 (30 Marks) Availability Management

A. (8 Marks)

You are a Service Management consultant tasked with implementing the Availability Management process. The case study organization is having difficulties understanding the difference between a Service Outage Analysis (SOA) and a Technical Observation Post (TOP)

In a memo to the department head chose a current issue the case study has and then use that same issue to help explain the differences between the two methods.

B. (6 Marks)

For many years IT organizations around the world have reported Availability from an IT perspective. List 3 disadvantages of reporting Availability from this perspective.

C. (8 Marks)

Name the contribution the following ITIL disciplines would make to the Availability Plan.

Service Level Management
Capacity Management
Financial Management
IT Service Continuity Management

D (8 Marks)

The CIO of the case study organization is sold on the benefits of Availability Management and has ask you to communicate it's ideals to the department heads of the case study organization.

In a memo to the department heads, list and explain the 3 guiding principles of the Availability Management process.

Service Support Practice Exam

READ ALL INSTRUCTIONS AND QUESTIONS CAREFULLY

The following questions will test your knowledge and readiness to attempt the ITIL Service Management Managers Exam, but equally important it will test your ability to analyze a given situation and make decisions as a Service Manager.

Instructions:

Make sure you read the associated case study carefully. Your responses where appropriate must reference this case study.

1 of 5 (30 marks) Configuration Management

A (6 marks)

Describe the following Configuration management terms and, for every term, provide an example relating to the case study.

Variant

Attribute

Baseline

B (10 Marks)

Describe the five activities of Configuration Management

C (10 Marks)

The CIO of the case study organization wants to implement the Change, Configuration and Release Management processes first. Based on current understanding of the processes, the CIO feels this is the best way to help solidify a “service culture” throughout the organization by making the technical specialist think before they act.

The CIO has asked you to help spread the understanding of the Configuration Management Process to the technical specialists of the organization.

In a memo to the technical specialists, describe the scope of configuration management; then explain two relationships between Configuration Management and each of the following processes: Incident Management, Change Management and Release Management.

D (4 marks)

Implementing Configuration Management within the case study organization will be very challenging due to the complex nature of the business.

Name and explain two difficulties that will need to be overcome during the implementation of Configuration Management within the organization.

2 of 5 (30 Marks) Incident Management

A. (4 marks)

According to best practice what are the two main characteristics of major incidents?

B. (14 marks)

The CIO of the case study organization is considering buying a service management tool. One of the requirements they have for the tool is that it must assist in the efficient management of all the service support processes. As an IT Service Management consultant you have been tasked to help the organization in finding a tool that will best suit their needs.

In a memo to senior management, outline three specific requirements the tool should have that will contribute to the effectiveness and efficiency of the Incident Management process.

For each requirement give one example of how it can help the case study organization achieve its corporate objectives.

Note: You may use the same objective for more than one example.

C. (6 marks)

There are two major perspectives to which the benefits of incident management can be seen. List the two areas and then give two examples of the major benefits of each perspective.

D. (6 marks)

One of the Critical Success Factors for the Incident Management process is forming a close link with Service Level management to obtain Incident response targets.

List three other Critical Success Factors and explain how they can aide the case study organization in achieving their business objectives.

3 of 5 (30 marks) Problem Management

A. (10 marks)

The Problem Management process can aid the Management of an organization by producing information that helps the organization make more informed decisions. List 5 Management focused Problem Management reports that help demonstrate the quality and performance of the process.

B. (4 marks)

List 4 factors that should be taken into account when performing a trend analysis for Targeting Preventative Action sub-process of Problem Management.

C. (4 marks)

There are many benefits to Problem Management. Some of these benefits include the overall reduction in the volume of Incidents and higher Availability because of this.

Other than the benefits just described, list four other benefits to the Problem Management process.

D. (12 marks)

The CIO of the case study organization is not sold on Problem Management. As far as the CIO is concerned, as long as the IT Organization is handling incidents efficiently, there is no need for Problem Management.

In a Memo to the CIO list the goals of both Problem Management and Incident Management and then using an example from the case study describe 3 differences between the processes.

4 of 5 (30 Marks) Change Management

A. (6 Marks)

Amongst other things, Change Management depends on the quality of the information in the Configuration Management Database (CMDB).

Name three activities of Change Management that rely on the information in the CMDB.

For each of these activities describe the consequences when the information in the CMDB turns out to be incorrect.

B. (9 Marks)

Best practice recommends that Change Management install Changes to meet business schedules rather than IT schedules. In order to facilitate this process, Change Management should coordinate the production and distribution of a Forward Schedule of Changes(FSC) and a Projected Service Availability (PSA).

Briefly describe the FSC and PSA and for each item describe the relationship it would have with the Service Desk function.

C. (15 Marks)

In order for Change Management to be successful it requires the aid of other Service Support disciplines. Briefly explain how each of the following Service Support disciplines aids in goal of effective Change Management.

Incident Management
Configuration Management
Release Management
Problem Management
Service Desk

5 of 5 (30 Marks) Release Management

A. (10 Marks)

List 5 items that should be considered when planning to implement the Release Management process.

B. (10 Marks)

For effective of Release Management is necessary to draw up and maintain a release policy. A Release Policy contains information on the standard naming and numbering convention.

List five other topics that should be recorded in a Release Policy.

C. (10 Marks)

In order to ensure that news IT systems are installed into the infrastructure efficiently and in a structured way, a rollout plan will need to be drawn up for every release.

Describe five subjects that can be included in these plans.

Practice Exam Answers

This answer Guide demonstrates possible ways to answer the question.. In the official EXIN exams – there are some questions which is an “ABSOLUTE” yes/no answer (text book answers), and some which are possible answers. The answer guide gives you key points which need to covered to demonstrate understanding.

Service Delivery Answer Guide

1 of 5 (30 marks) Service Level Management

A. (10 marks)

You are an IT Service Management consultant tasked by the organization to begin the process of implementing Service Level Management. Based on your recommendation a project is started to begin implementing Service Level Management.

List 5 planning activities that must be considered and incorporated into the formal project in order to ensure the success of the Service Level Management process.

M.G. (4.3.1)

- Appointment or nomination of Service Level Management and any necessary supporting staff
- Production of a mission statement
- Definition of the objectives and scope of the function
- An awareness campaign to win support for the function and to advise people how and when they might be affected
- Definition of roles, tasks and responsibilities
- Quantification of activities, resources, funding, quality criteria
- Identification of risks
- Planning of a Service Catalogue and an SLA structure
- Drafting of a pilot SLA format
- Identification of support tools, particularly for SLA monitoring
- Setting and agreeing Incident priority levels and escalation paths, with Customers, and Internal and External providers (in conjunction with Service Desk and Problem Management).

Mark distribution

2m For each correctly named activity (10 marks maximum)

0m For any activity not on the above list

B. (15 Marks)

Describe each of the following Service Level Management terms and give a specific example of how each term could be used within the Case Study organization:

1. Service Level Agreement
2. Operational Level Agreement
3. Service Improvement Program

MG

1. Service Level Agreement (4.1.4)

- A written agreement between an IT Service Provider and the IT Customer(s)
- Defines the key service targets and responsibilities of both parties

(Example MUST clearly state the provider and customer and describe relative target examples)

2. Operational Level Agreement (4.4.8)

1. It is an agreement between internal support groups
2. It needs to define targets for each of the elements in the support chain (as opposed to the overall SLA target time)

(Example MUST show the relationship between an internal department in relation to a higher level service within the case study with an clear target example)

3. Service Improvement Program (4.5.3)

- A formal project undertaken by an organization
- Identifies and introduces measurable improvements within the work area or process

(Example MUST show something that would be a measurable improvement. Preferably “trickling down” from the examples given in terms 1 and 2)

Mark distribution

2m for each correctly described term referencing the highlighted key words in some way, shape or form (6 marks maximum)

3m for an example relating to the case study that clearly expand on the key words underlined in the definitions. (9 marks maximum)

C. (5 Marks)

List 5 key skills a Service Level Manager should have.

MG (Annex 4A)

- Relationship Management skills
- Good understanding of the IT Provider's services and qualifying factors in order to understand how Customer requirements will affect delivery
- An understanding of the Customer's business and how IT contributes to the delivery of that product or service
- Excellent communication and negotiation skills
- Patience, tolerance and resilience
- Knowledge and experience of contract and/or supplier management roles
- Good people management and administrative skills
- Good understanding of statistical and analytical principles and processes
- Good presentational skills
- Reasonable numeric skills
- The ability to interact successfully with all levels of the Customer and IT Provider organization
- Reasonable technical understanding and an ability to translate technical requirements and specifications into easily understood business concepts and vice versa
- Innovative in respect of service quality and ways in which it can be improved within the bounds of the organization's limits (resource, budgetary, legal etc.)
- A good listener with the ability to apply the knowledge gained effectively
- Even-handed and fair in dealings with other parties.

Mark Distribution

1m For a correctly listed skill

2 of 5 (30 marks) Financial Management

A. (18 Marks)

List 3 key benefits for the following Financial Management activities:

1. IT Accounting
2. Charging

For each benefit give an example of how the benefit relates to the case study organization objectives. (You use the same objective more than once)

MG

IT Accounting (5.1.7)

1. It provides management information on the costs of providing IT Services that support the organization's business needs
2. Enables IT and business managers to make decisions that ensure the IT Services organization runs in a cost-effective manner
3. Helps to ensure that any investment that increases the costs of providing IT Services should always result in enhancement to service quality or quantity
4. Allows IT to make more business-like decisions about IT Services and investments in them
5. Provides information to justify IT expenditure
6. Helps to understand the costs of not taking advantage of opportunities for Change.

Charging (5.1.7)

1. It provides a sound business method of balancing the shape and quantity of IT Services with the needs and resources of the Customers
2. Ensures that Customers are aware of the costs they incur
3. Allows IT to recover costs in a fair manner
4. IT can make formal evaluations of IT Services and plan for investment based on cost recovery and business benefits

Mark Distribution

1m for a correctly named benefit (6 marks maximum)

2m for each explanation that relates to the case study (12 marks maximum)

B. (8 Marks)

List and describe the four factors that govern the requirements for a charging system.

MG (5.4.2)**1. Level of recovery of expenditure required**

If the IT organization opts for full recovery of all costs, then it is opting to function as an autonomous unit, financially self-sufficient. This then requires that costs can be forecast and a Charging system selected that is rational, easily understood and very accurate

2. Desire to influence Customer and User behavior

Customers and Users are encouraged to make more efficient use of IT resources through levying charges that vary with usage.

3. Ability to recover according to usage

Recovering costs according to usage requires that the selected Chargeable Items have a reasonable correlation with the amount of resources required to produce them, thereby promoting the perception of a fair pricing and Charging structure.

3. Control of the internal market

Introducing market-priced services requires an efficient and effective IT Infrastructure Management with Capacity properly managed, costs well controlled, and services delivered according to expectations.

D. (4 Marks)

Describe two outputs for each of the following sub-processes of the Financial Management Process

Budgeting

IT Accounting

MG (Appendix G)

Budgeting

Financial Plans

Forecasts

Budget exception reports

Budgeting Guidelines (5.3.1)

IT Accounting

Cost Models

Reports on Actual Costs vs Budgeted costs (5.3.1)

Mark distribution

1m for each correctly identified output. Other outputs acceptable at the marker's discretion. (4 marks maximum)

3 of 5 (31Marks) Capacity Management

A (14 Marks)

You are an IT Service Management consultant tasked with implementing the Capacity Management process. There is still some confusion among senior management as to the differences between Business, Service and Resource Capacity Management.

In a memo to Senior Management, list the objectives of each of the processes and give a brief example relating back to the Case Study Organization demonstrating the sub-process concepts.

MG

Business Capacity Management (6.2.1)

- Ensures that the future business requirements for IT Services are considered and understood,
- And that sufficient Capacity to support the services is planned and implemented in an appropriate timescale.

Service Capacity Management (6.2.2)

- Identifies and understand the IT Services, their use of resource, working patterns, peaks and troughs, and to ensure that the services can and do meet their SLA targets
- the focus is on managing service performance, as determined by the targets contained in the SLAs or SLRs

Resource Capacity Management (6.2.3)

- Identifies and understands the Capacity and utilization of each of the component parts in the IT Infrastructure.
- This ensures the optimum use of the current hardware and software resources in order to achieve and maintain the agreed service levels.

Mark distribution

2m for a correctly written memo with the proper tone

2m for each correctly described sub-process (6 marks maximum)

2m for an example relating to the case study that clearly describes the underlined points of each of the sub-processes (6 marks maximum)

B (4 Marks)

The Capacity Management process is instrumental in helping other service management disciplines achieve their goals. For each of the following service management disciplines, briefly explain how Capacity Management helps to achieve greater effectiveness.

1. Availability Management
2. IT Service Continuity Management

MG

Availability Management (8.3.4 & 6.7.9)

An output from Capacity Management to Availability Management is the Capacity Plan detailing how the Capacity requirements associated with the provision of additional Infrastructure resilience will be met.

IT Service Continuity Management (6.7.8)

Capacity Management determines the Capacity required for all recovery options identified in ITSCM. The minimum hardware and software configurations required are defined to provide the required performance and throughput levels following an invocation.

Mark distribution

2m for a correctly described relationship between the processes. (4 Marks total)

Other answers acceptable at the markers' discretion if they deal with specific outputs/inputs.

C. (4 Marks)

There are 9 Key areas contained within a Capacity Plan. One of these key areas to help the business understand the focus and direction of the capacity plan is the Introduction section.

One of the elements described is the organization's current level of Capacity. Briefly list the four other elements that should be contained in the Introduction of the Capacity Plan.

MG

- Problems being experienced due to over or under capacity
- The degree to which service levels are being achieved
- What has changed since the last issue of the plan.
- Scope of the plan
- Methods used

Mark distribution

1m for each correctly named element (4 marks total)

D. (9Marks)

List and describe 3 types of Capacity Modeling Techniques. For each technique list one way the technique could be used to assist the case study in achieving its objectives (You may not use an objective more than once)

MG**1. Trend Analysis**

- a. Provides estimates of future resource utilization information

2. Analytical Modeling

- a. Representations of the behaviors of computer systems using mathematical techniques

3. Simulation Modeling

- a. Models discrete events (e.g. transaction arrival rates against a given hardware configuration)

4. Baseline Models

- a. Reflects accurately the performance that is being achieved.

Mark distribution

1m for each correctly described technique (3 marks maximum)

2m for each technique correctly applied to the case study using specific IT infrastructure items and outcomes from the case study (6 marks maximum)

4 of 5 (30 Marks) IT Service Continuity Management

A. Name 5 activities that should be undertaken that ensure that management and employees are continually focused on IT Service Continuity Management as part as business as usual.

MG (7.3.4)

Education and awareness

Ensures that all staff are aware of the implications of Business Continuity and of Service Continuity and consider these as part of their normal working routine and budget.

Training – IT may be involved in training the non-IT literate business recovery team members to ensure that they have the necessary level of competence to facilitate recovery.

Review – regular review of all of the deliverables from the ITSCM process needs to be undertaken to ensure that they remain current.

Testing – following the initial testing it is necessary to establish a program of regular testing to ensure that the critical components of the strategy are tested at least annually or as directed by senior management or audit. It is important that any changes to the IT Infrastructure are included in the strategy.

Change control – following tests and reviews and in response to day to day Changes, there is a need for the ITSCM plans to be updated. ITSCM must be included as part of the Change Management process to ensure that any Changes in the Infrastructure are reflected in the contingency arrangements provided by IT or third parties.

Mark distribution

1m for each correctly named activity. (0m for describing “assurance” as each of the above named activities are what makes assurance) (5 marks total)

1m for a correct description of the activity (5 marks total)

B. (10 Marks)

Due to the increasing fear of the effects of climate change and natural disasters, the Case Study organization has decided to introduce Business Continuity Management. Part of this is the implementation of IT Service Continuity Management.

Name 5 general advantages of introducing IT Service Continuity Management from the perspective of the organization.

MG (7.1.5)

- Potential lower insurance premiums:

The IT organization can help the organization demonstrate to underwriters or insurers that they are proactively managing down their business risks. Therefore the risk to the insurance organization is lower and the premiums due should reflect this.

- Regulatory requirements:

Failure to demonstrate tested business and ITSCM facilities could result in heavy fines or the loss of trading licenses.

- Business relationship:

The requirement to work closely with the business to develop and maintain a Continuity capability fosters a much closer working relationship between IT and the business areas.

- Positive marketing of contingency capabilities:

Being able to demonstrate effective ITSCM capabilities enables an organization to provide high service levels to clients and Customers and thus win business.

- Organizational credibility:

Contingency facilities increase an organization's credibility and reputation with Customers, business partners, stakeholders and industry peers.

- Competitive advantage:

In many cases this is a good incentive for Customers to continue a business relationship and becomes a part of the competitive advantage used to win or retain Customers.

MG

1m for each correctly named activity. (5 marks total)

1m for a correct description of the activity (5 marks total)

C. (10 Marks)

Name and describe 5 areas of supporting information which should be included in an IT Service Continuity plan.

MG (Annex 7C, 2)

1. Recovery Strategy

Identifies the systems, infrastructure, services or facilities to be recovered. Also identifies approximate hours to recover systems, required time for system recovery and the information on the recovery time as per the last test with the date.

2. Invocation

Identifies who is authorized to invoke the plan

3. General Guidance

Highlights the contact/escalation points. Actions to be taken, and general advice

4. Dependencies

System, Infrastructure, service, facility or interface dependencies should be documented (in priority order) so that related recovery plans or procedures that will need to be invoked in conjunction with this recovery plan can be identified and actioned.

5. Recovery Team

Identifies the staff/functions responsible for actioning the procedures

6. Recovery Team Checklist

Helps to facilitate the execution of the activities in a timely manner

Mark distribution

1m for each correctly named area. (5 marks total)

1m for a correct description of the area (5 marks total)

5 of 5 (30 Marks) Availability Management

A. (8 Marks)

You are a Service Management consultant tasked with implementing the Availability Management process. The case study organization is having difficulties understanding the difference between a Service Outage Analysis (SOA) and a Technical Observation Post (TOP)

In a memo to the department head chose a current issue the case study has and then use that same issue to help explain the differences between the two methods.

MG

Service Outage Analysis (8.9.8)

- Reactive in nature
- SOA is a technique designed to provide a structured approach to identify end-to-end availability improvement opportunities that deliver benefits to the user.
- Typically performed with Problem Management. Helps to identify underlying causes of service interruption to the user.

Technical Observation Post (8.9.1)

- A TOP is best suited for delivering proactive business and user benefits within the real-time IT environment.
- Identifies issues and bottlenecks by monitoring events in real time with the specific aim of identifying improvement opportunities or bottlenecks which exist
- TOP is a gathering of technical specialist support staff from within IT with the purpose of.

Mark distribution

2m for a memo with the proper tone

3m for each correctly described method highlighting the key underlined points

(6 Marks maximum)

B. (6 Marks)

For many years IT organizations around the world have reported Availability from an IT perspective. List 3 disadvantages of reporting Availability from this perspective.

MG

1. The IT perspective of Availability fails to reflect the business and user experience
2. The IT perspective of Availability can conceal “hot spots” whereby regular reporting shows the SLA “met” but the business and users are becoming increasingly dissatisfied with the IT service
3. The IT perspective of Availability does not support continuous improvement opportunities that benefit the business and the user
4. The IT perspective of Availability hides “value add” areas where tangible benefits to the business and user have been delivered but the method of measurement does not make this visible.

Mark distribution

2m for each correctly described disadvantage (6 Marks total)

0m for not describing the concepts highlighted above

C. (8 Marks)

Name the contribution the following ITIL disciplines would make to the Availability Plan.

1. Service Level Management
2. Capacity Management
3. Financial Management
4. IT Service Continuity Management

MG (8.6.3)

Service Level Management

Changes to business and user availability requirements for existing IT services

Capacity Management

Scenarios for upgrading or downgrading the software hardware and network layers of the infrastructure to meet the plans for Availability improvement.

Financial Management

Cost and budget implication of the options identified for Availability improvement

IT Service Continuity Management

Business impact and resilience improvement for critical business processes

Mark Distribution

2m for each correctly described contribution. Other answers acceptable at the markers discretion. (8 Marks maximum)

D. (8 Marks)

The CIO of the case study organization is sold on the benefits of Availability Management and has ask you to communicate it's ideals to the department heads of the case study organization.

In a memo to the department heads, list and explain the 3 guiding principles of the Availability Management process.

MG (8.2.2)

Guiding Principle # 1

Availability is at the core of business and User satisfaction

As a consumer of an IT Service, its Availability and reliability can directly influence both the perception and satisfaction of the overall IT Service provision

Guiding Principle #2

Recognizing that when things go wrong it is still possible to achieve business and user satisfaction

On occasion things do go wrong. How the incident is managed and resolved plays an important role in how the business views the IT organization.

Guiding Principle #3

Improving Availability can only being after understanding how the IT services support the business

Availability Management should not simply understand the Availability of each component. By taking a business and User perspective it is important to understand how each technology component supports the vital business functions upon which the business operation relies

Mark distribution

2m for a memo with the proper tone

1m for each correctly named principle (3 marks total)

1m for an explanation that conveys the basic points described to the target audience(3 marks total)

Service Support Answer Guide

1 of 5 (30 marks) Configuration Management

A. (6 marks)

Describe the following Configuration management terms and, for every term, provide an example relating to the case study.

1. Variant
2. Attribute
3. Baseline

M.G.

Variant (7.11.2): A slightly different version of what could otherwise be regarded as the same CI

Attribute: (Annex 7C): A characteristic of a CI that typically can't be subdivided

Baseline (7.3.6): The configuration of a product or system established at a specific point in time. Serves as a reference for further activities.

Mark distribution

1m per correctly defined term (3 marks maximum)

1m per example relating to the case study outlining the consensus of the definitions.

B. (10 Marks)

Describe the five activities of Configuration Management

M.G.

Planning (7.3.1)

- Agreeing on the strategy, scope, policy and objectives of the process.
- Analysis of the current situation
- Interfaces between projects, suppliers applications and support teams

Identification (7.3.2)

- The selection, identification and labeling of CI's and their relationships

Control (7.3.3)

- Ensures only authorized and identifiable CIs are recorded from receipt to disposal

Status Accounting (7.3.4)

- Reporting of all current and historical data throughout its lifecycle

Verification and Audit (7.3.5)

- Verify the physical existence of CIs and checks they are correctly recorded in the CMDB

Mark Distribution:

1m for each correctly named activity (total 5 marks)

1m for correctly explained activity (total 5 marks)

10m total

C. (10 Marks)

The CIO of the case study organization wants to implement the Change, Configuration and Release Management processes first. Based on current understanding of the processes, the CIO feels this is the best way to help solidify a "service culture" throughout the organization by making the technical specialist think before they act.

The CIO has asked you to help spread the understanding of the Configuration Management Process to the technical specialists of the organization.

In a memo to the technical specialists, describe the scope of configuration management; then explain two relationships between Configuration Management and each of the following processes: Incident Management, Change Management and Release Management.

M.G.

Scope: Identification, recording, and reporting of IT components, including their versions, constituent components and relationships.

Incident Management

CFG periodically verifies and audits CIs in the CMDB. INC helps the verification and audit activity by doing “on the fly” audits when matching incidents to CI's during the classification stage of INC management..

CFG is responsible for the identification of all new CI's. INC through the processing of Service Requests for the addition of new users or equipment helps to ensure that the new items are properly accounted for and that CFG is informed of the additions.

Change Management

CFG holds details of baselines of configurations. CHNG uses these baselines to assist in the classification and initial assessment of the change.

CFG creates procedures to ensure the proper control of CIs when adding or changing information in the CMDB. CHNG ensures that the CI records are updated in accordance with these procedures during the change.

Release Management

REL maintains and manages the DHS and DSL. CFG through the use of Status Accounting and Verification and Audit activities ensures that the records of the CIs held within the DHS and DSL are accurate and up to date.

CFG holds details of baselines and profiles of service. REL uses these records to create a testing environment that closely matches production which makes for a higher likelihood of a successful release.

Mark distribution:

2m for a memo with the proper tone

2m for a correct description of the scope of Configuration Management

2m for a correct explanation of the relationship (6 marks total)

Note: Other relationships can be used if valid and matching each other at the marker's discretion.

C. (4 marks)

Implementing Configuration Management within the case study organization will be very challenging due to the complex nature of the business.

Name and explain two difficulties that will need to be overcome during the implementation of Configuration Management within the organization.

M.G. (7.4.2)

1. The case study organization does not have a mature Change processes.

This will make the keeping the information in the CMDB up to date very difficult as there are currently no check and balances in place to ensure changed CI information is updated in the CMDB. The CMDB may be seen as unreliable because of this.

2. Lack of commitment. Setting up CFG requires a tremendous amount of cost education and training. The business may not see CFG as a priority and therefore ignore the attention to detail required focusing instead on the business-as-usual aspects. Quick wins should be established to ensure the long term benefits can be achieved.

Mark distribution

1m for stating a difficulty

1m for an explanation that ties into the case study

Note: Other answers acceptable at the markers discretion as long as they are relevant and apply to the case study.

2 of 5 (30 Marks) Incident Management

A. (4 marks)

According to best practice what are the two main characteristics of major incidents?

MG (5.7)

1. The Degree of impact on the User community is extreme
2. The timescale of disruption has become excessive

Mark distribution

2m for each correctly described characteristic.

B. (14 marks)

The CIO of the case study organization is considering buying a service management tool. One of the requirements they have for the tool is that it must assist in the efficient management of all the service support processes. As an IT Service Management consultant you have been tasked to help the organization in finding a tool that will best suit their needs.

In a memo to senior management, outline three specific requirements the tool should have that will contribute to the effectiveness and efficiency of the Incident Management process.

For each requirement give one example of how it can help the case study organization achieve its corporate objectives.

Note: You may use the same objective for each example

MG (5.10)

- Automatic Incident logging and alerting in the event of fault detection

On mainframes, networks, servers and so on (possibly through an interface to system management tools) all modifications to the Incident record being registered in order to keep control

- Automatic escalation facilities

So as to facilitate the timely handling of Incidents and service requests

- Highly flexible routing of Incidents

As a basic requirement, because control staff may be located in multiple sites or they may be co-located in an operations bridge, and such a physical distribution may vary depending on the time of day

- Automatic extraction of data records from the CMDB
Of a failed item and affected items

- ACD (telephone) systems integration
For automatically registering names and phone numbers of Users

- The presence of diagnostic tools/modules (i.e. Case-Based Reasoning) can help the diagnostic process.

Mark distribution

2m for a memo with the proper tone

2m for a correctly identified tool requirement

2m for a example relating to the case study that shows the benefit of the tool requirement. Must reference specific IT systems and/or functional areas involved.

C. (6 marks)

There are two major perspectives to which the benefits of incident management can be seen. List the two areas and then give two examples of the major benefits of each perspective.

MG (5.4)

1. The business perspective

- Reduced business impact of Incidents by timely resolution, thereby increasing effectiveness
- Proactive identification of beneficial system enhancements and amendments
- Availability of business-focused management information related to the SLA

2. The IT organization perspective

- Improved monitoring, allowing performance against SLAs to be accurately measured
 - Improved management information on aspects of service quality
 - Better staff utilization, leading to greater efficiency
 - Elimination of lost or incorrect Incidents and service requests
 - More accurate CMDB information (giving an ongoing audit while registering Incidents)
 - Improved User and Customer satisfaction.

Mark distribution

1m for each correctly named perspective (2 marks maximum)

1m for each correctly identified example (4 marks maximum)

D. (6 marks)

One of the Critical Success Factors for the Incident Management process is forming a close link with Service Level management to obtain Incident response targets.

List three other Critical Success Factors and explain how they can aid the case study organization in achieving their business objectives.

MG (5.5.2)

An up-to-date CMDB

- A prerequisite for an efficiently working Incident Management process. If a CMDB is not available, information about Configuration Items (CIs) related to Incidents would need to be obtained manually, and determining impact and urgency will be much more difficult and time-consuming.

A 'knowledge base' (In the form of an up-to-date Problem/error database)

- This should be developed to provide for resolutions and Work-arounds. This will greatly speed up the process of resolving Incidents. Third-party Known Error databases should also be available to assist in this process.

Automated system for Incident Management

- Paper-based systems are not really practical or necessary, now that good and cheap support tools are available.

Mark distribution

1m for each correctly named factor (3 Marks maximum)

1m for each correct description (3 Marks Maximum)

3 of 5 (30 marks) Problem Management

A. (8 marks)

The Problem Management process can aid the Management of an organization by producing information that helps the organization make more informed decisions. List 4 Management focused Problem Management reports that help demonstrate the quality and performance of the process.

MG

- Number of RFCs raised and the impact of those RFCs on the availability and reliability of the services covered
- Amount of time worked on investigations and diagnoses per organizational unit or supplier, split by Problem types
- Number and impact of Incidents occurring before the root Problem is closed or a known Error is confirmed
- Ratio of immediate (reactive) support effort to planned support effort in Problem Management
- Plans for resolution of open Problems with regard to resources:
 - o people
 - o other used resources
 - o costs (against budget)

Mark distribution

2 marks for each correctly described report (8 marks maximum) Other answers acceptable at the marker's discretion.

B. (4 marks)

List 4 factors that should be taken into account when performing the Targeting Preventative Action sub-process of Problem Management.

MG (6.8.2)

1. The volume of incidents
2. Number of customers impacted
3. Duration and related costs of resolving incidents
4. The cost to the business

Mark distribution

1m for a correctly named factor

C. (4 marks)

There are many benefits to Problem Management. Some of these benefits include the overall reduction in the volume of Incidents and higher Availability because of this.

Other than the benefits just described, list four other benefits to the Problem Management process.

MG

- Improved IT service quality.

Problem Management helps generate a cycle of rapidly increasing IT service quality. High-quality reliable service is good for the business users of IT, and good for the productivity and morale of the IT service providers.

- Permanent solutions.

There will be a gradual reduction in the number and impact of Problems and Known Errors as those that are resolved stay resolved.

- Improved organizational learning.

The Problem Management process is based on the concept of learning from past experience. The process provides the historical data to identify trends, and the means of preventing failures and of reducing the impact of failures, resulting in improved User productivity.

- Better first-time fix rate at the Service Desk.

Problem Management enables a better first time fix rate of Incidents at the Service Desk, achieved via the capture, retention and availability of Incident resolution and Work-around data within a knowledge database available to the Service Desk at call logging.

Mark distribution

1m for a correctly named benefit

D. (12 marks)

The CIO of the case study organization is not sold on Problem Management. As far as the CIO is concerned, as long as the IT Organization is handling incidents efficiently, there is no need for Problem Management.

In a Memo to the CIO list the goals of both Problem Management and Incident Management and then using an example from the case study describe 3 differences between the processes.

MG

Problem Management Goal (6.1)

- Minimize the adverse impact of Incidents and Problems on the business that are caused by errors within the IT Infrastructure,
- Prevent recurrence of Incidents related to these errors

Incident Management Goal (5.1)

- Restore normal service operation as quickly as possible
- Minimize the adverse impact on business operations

Difference #1

Problem Management seeks detect the underlying causes of Incidents and their subsequent resolution and prevention.

Incident Management aim is to restore the service to the Customer as quickly as possible, often through a Work-around, rather than through the determination of a permanent resolution

Difference #2

Incident management's main focus is on the speed with which a resolution is found so service can be restored quickly, minimizing downtime.

Problem Management's main focus is the investigation of the underlying Problem can require some time and can thus delay the restoration of service, causing downtime but preventing recurrence.

Difference #3

Problem Management, through the sub-process of Pro-active Problem Management seeks to proactively prevent the recurrence of incidents even if the end user is satisfied with the way the incident was handled.

Incident Management is primarily reactive only concerning itself with issues as they arise.

Mark distribution

2m for a memo with the proper tone

2m for a proper description of the Problem Management goal

2m for a proper description of the Incident Management goal

2m for highlighting the differences between the processes (6 marks maximum)

4 of 5 (30 Marks) Change Management

A. (6 Marks)

Amongst other things, Change Management depends on the quality of the information in the Configuration Management Database (CMDB).

Name three activities of Change Management that rely on the information in the CMDB.

For each of these activities describe the consequences when the information in the CMDB turns out to be incorrect.

M.G.

1. Filtering Changes

Filtering RFCs requires information about relationship between IT Services, system components or documentation. RFCs cannot properly be filtered if the CMDB-information about CIs or the relationship between CIs is unavailable or incorrect.

2. Classification (priority and category)

Incorrect information in the CMDB may cause inaccurate impact estimate (priority). The possible effect of a change on IT services or other CIs may not be identified correctly.

3. Change Scheduling (for example, by means of CAB Meetings) (impact & resources)

Possible conflicts with Changes already planned may not be identified if the information in the CMDB is not accurate.

4. Change Coordination (building, testing, implementing)

Without an up-to-date Change log in the CMDB implementation of changes risk failure due to incomplete or inaccurate information from the building and testing of the change.

5. Evaluation and conclusion

Change evaluation may not be possible or become inaccurate without an up-to date Change log in the CMDB.

Or:

If the change was not successful, an incorrect CMDB may not contain the information needed about fallback for the change. E.g. the information about changes implemented earlier may be inaccurate.

Mark distribution

1m for mentioning each activity (max 3p).

1m for a correct consequence (max 3p).

B. (9 Marks)

Best practice recommends that Change Management install Changes to meet business schedules rather than IT schedules. In order to facilitate this process, Change Management should coordinate the production and distribution of a Forward Schedule of Changes(FSC) and a Projected Service Availability (PSA).

Briefly describe the FSC and PSA and for each item describe the relationship it would have with the Service Desk function.

MG (8.3.4)

FSC

Contains details of all the changes approved for implementation and their proposed implementation dates.

PSA

Contains details of changes to agreed service levels agreements and service availability because of the currently planned FSC

Service Desk relationship

FSC: The Service Desk uses the FSC to assist in incident investigation. (i.e. A service has been brought down for a fix and this is the reason the end-user cannot access the service.)

PSA: The Service Desk will be instrumental in communicating any planned additional downtime to the user community at large.

Mark distribution

2m for each properly described definition (4 Marks maximum)

1m for highlighting the relationship between the FSC and PSA

2m for each correctly described relationships. Other relationships allowable at the marker's discretion. (4 Marks maximum)

C. (15 Marks)

In order for Change Management to be successful it requires the aid of other Service Support disciplines. Briefly explain how each of the following Service Support disciplines aids in goal of effective Change Management.

1. Incident Management
2. Configuration Management
3. Release Management
4. Problem Management
5. Service Desk

MG

1. Incident Management

During the Post Implementation Review, the Incident Manager can supply a report to the Change Manager that shows how many changes created more incidents on the IT infrastructure. Change Management can use this information to help refine the requirements for testing of Changes in the future to ensure that incidents on Changes are eliminated or brought down to an agreed level.

2. Configuration Management

During the assessment of an RFC the CMDB can be queried to assess the impact that the change will have on the infrastructure. After the change has been made, the CMDB can be updated to reflect the new or modified CIs to help with the assessment of future changes.

3. Release Management

Release Management sits on the front line of change implementation. During the implementation of changes, Release Management will ensure that rollback plans are in place and thoroughly tested. If, during the implementation of a change something goes wrong. The Change can be rolled back and reports given to the Change Manager on what went wrong so that future changes can be better assessed before implementation.

4. Problem Management

Problem Management, through the use of the Proactive Problem Management sub-process can analyze Change Log data to find negative trends in the Change Management process. (i.e. bottlenecks slowing down the process) They can then assist the overall process by finding and removing the underlying cause of these issues creating a more effective and efficient Change Process.

5. Service Desk

After a Change has been implemented. The Service Desk will ask the end users if they feel the change resolved their issue to their satisfaction. This information can be reported back to Change Management and identify areas of concern from the business perspective that could help the perception of Change Management.

Mark distribution

3m for each correctly described relationship showing the input and output of information between processes. Others answers acceptable at the marker's discretion. (15 Marks maximum)

5 of 5 (30 Marks) Release Management

A. (10 Marks)

List 5 items that should be considered when planning to implement the Release Management process.

MG (9.5.1)

1. Release policies and procedures
2. Release roles and responsibilities
3. Staff to support release management
4. Tools to support Releases
5. Training
6. Template documents to assist with the planning of specific roles
7. Space considerations for the build, test, distribution and live environments
8. Location of the DHS
9. Location of the DSL
10. Interfaces with other service management disciplines

Mark distribution

2m for each correctly named consideration. Other considerations acceptable.

B. (10 Marks)

For effective of Release Management is necessary to draw up and maintain a release policy. A Release Policy contains information on the standard naming and numbering convention.

List five other topics that should be recorded in a Release Policy.

MG (9.5.1)

1. Level of infrastructure to be controlled by Releases
2. Definition of major and minor releases
3. Expected deliverables for each type of Release
4. Policy on the production and degree of back out plans
5. How and where Releases should be documented

Mark distribution

2m for each correctly described topic. Other topics acceptable at the markers discretion

C. (10 Marks)

In order to ensure that new IT systems are installed into the infrastructure efficiently and in a structured way, a rollout plan will need to be drawn up for every release.

Describe five subjects that can be included in these plans.

MG

1. Detailed timetable of events
2. List of configuration items to install and decommission
3. Action plans by site noting and implications of time zones on the plans
4. Release notes and communications needed for the end users
5. Communication plans
6. Purchase plans
7. Schedule of meetings for staff and groups involved in the release

Mark distribution

2m for each correctly named item. (10 Marks maximum)

References

ITIL Best Practice for Service Delivery (2000) OGC., London. TSO

ITIL Best Practice for Service Support (2000) OGC., London. TSO

ITIL Best Practice for Security Management (1999) OGC., London. TSO

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