

ITIL overview

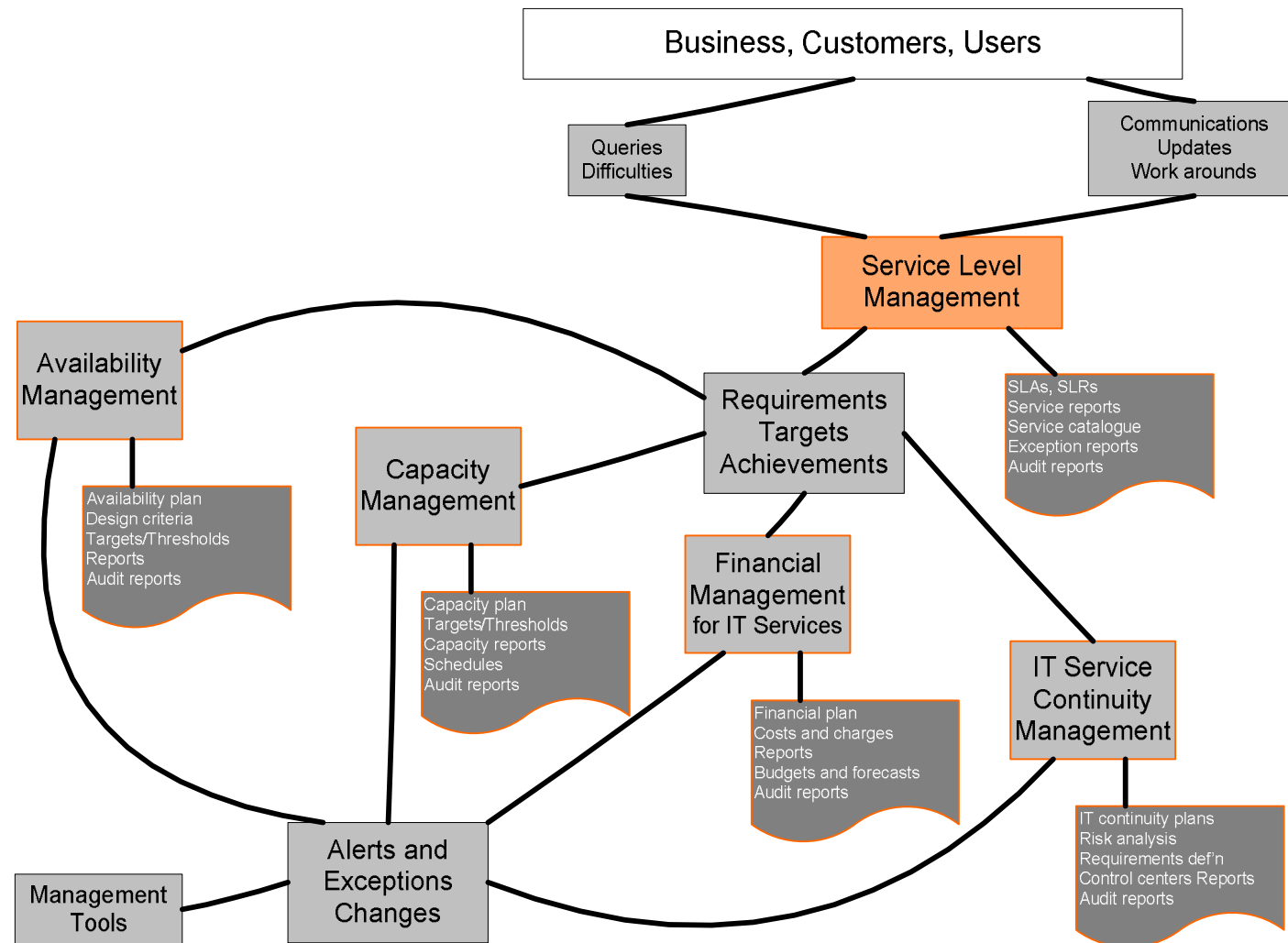
Service Delivery

Jaroslav Procházka

Content

- Service Delivery processes
 - Service Level Management
 - IT Financial Management
 - Capacity Management
 - Availability Management
 - IT Service Continuity Management

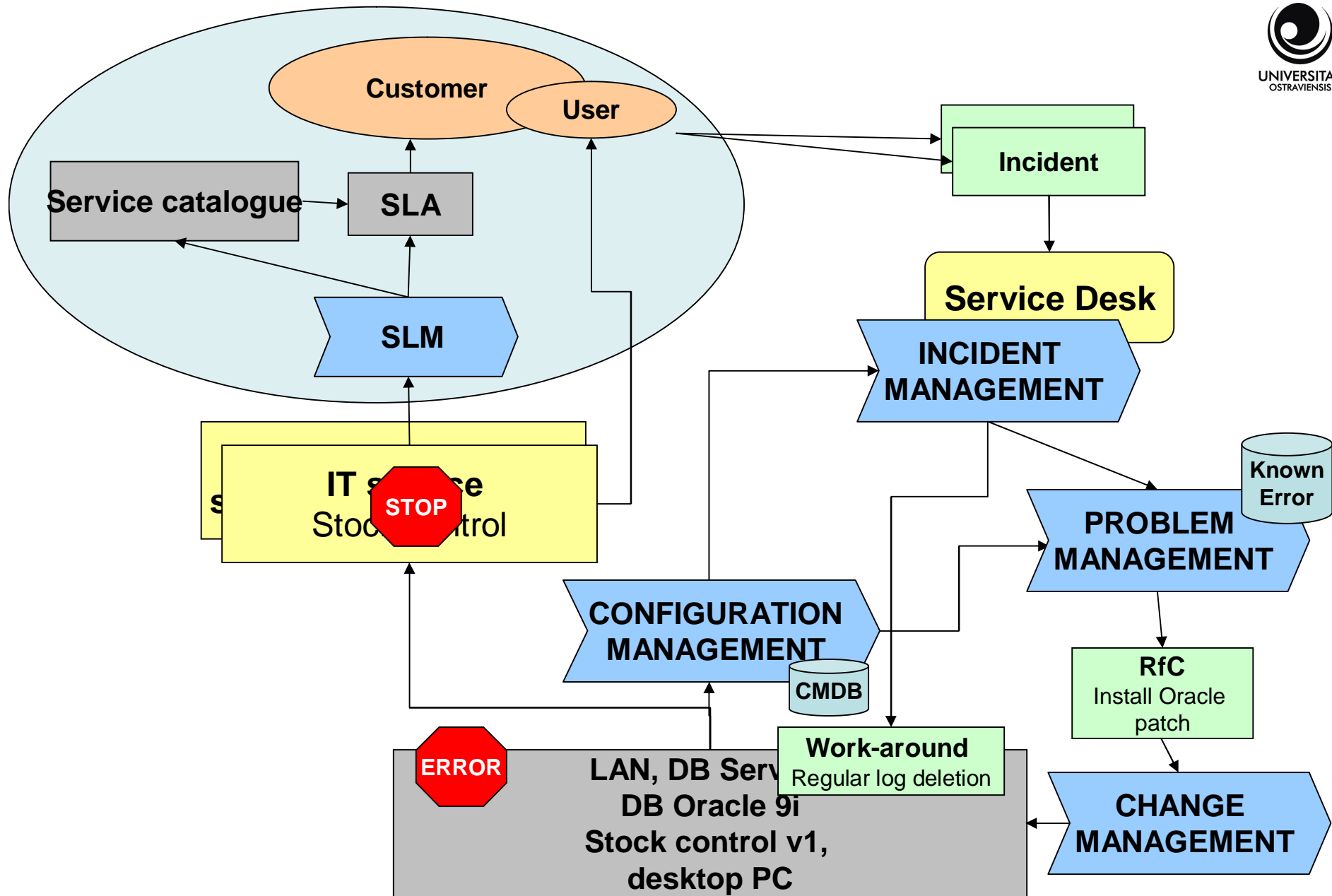
ITIL Service Delivery



ITIL overview

Service Delivery

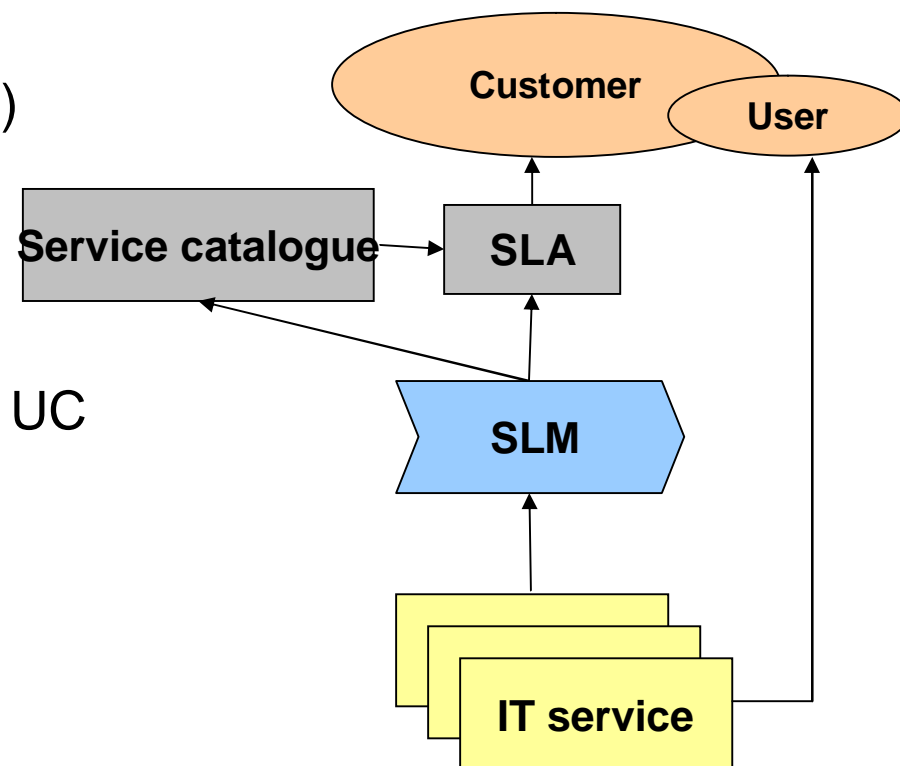
Service Level Management



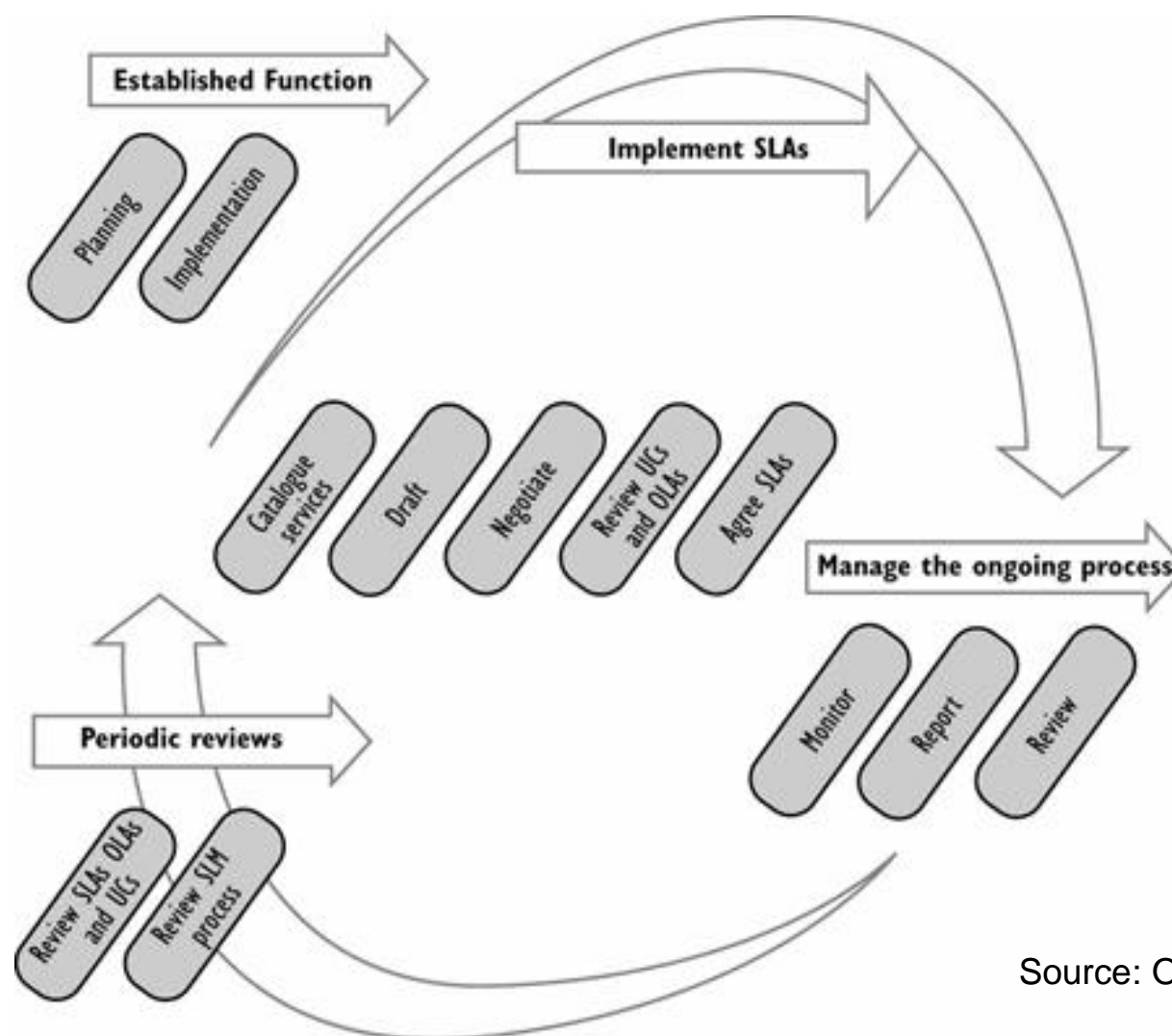
SLM Objectives

- § To catalog IT services
- § Agree levels of performance
- § Agree targets (external, internal)
- § Ongoing improvement

- § To negotiate & review OLA and UC



SLM Process



Source: OGC

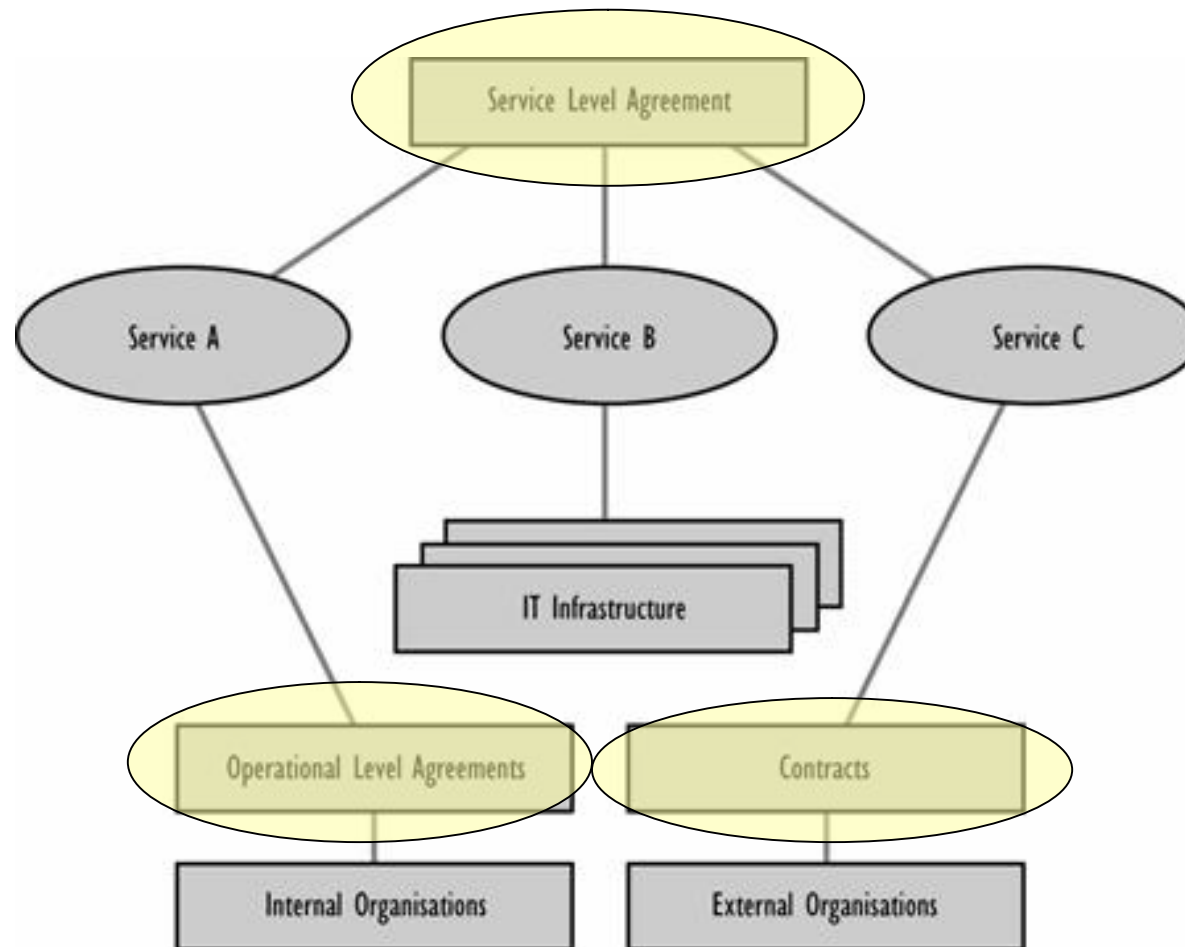
Service Catalogue

Service Name	Description	Service Users	Configuration Items
StockControl	Service provides functions for order processing,	Trade dept. Warehousing dept. Marketing dept.	StockControl Program v1.1 Tomcat v5.5 Oracle 9i Red Hat Enterprise Linux 5 Server Prague Switch1 Switch3 Intranet
Internet	Service provides connection to Internet	All users	Internet Service Provider Firewall Zone F v3.2
Document Search	Service allows searching for documents	All users	Google Desktop Search

SLA, OLA, UC

- **SLA** (Service Level Agreement) – written agreement **between a service provider and the Customer**, that documents agreed Service Levels for a Service, not legal contract!
- **OLA** (Operational Level Agreement) – **internal agreement** covering the delivery of services which support the IT organisation in their delivery of services, not legal contract!
- **UC** (Underpinning Contract) – contract with an **external supplier** covering delivery of services that support the IT organisation in their delivery of services, legal contract!





SLA Content

- Document title
- Description & scope
- Parties to the agreement
- Signatories: names, job titles
- Dates: start, finish, review

- Responsibilities of customer and provider
- Version number

- Service hours
- Availability metrics
- Reliability, Maintainability, Support



SLA Example

This agreement is made between.....
and.....

The agreement covers the provision and support of the ABC services
which..... (brief service description).

This agreement remains valid until superseded by a revised agreement
mutually endorsed by the signatories below. The agreement will be
reviewed annually. Minor changes may be recorded on the form at the end
of the agreement, providing they are mutually endorsed by the two parties.

Signatories:

Name.....

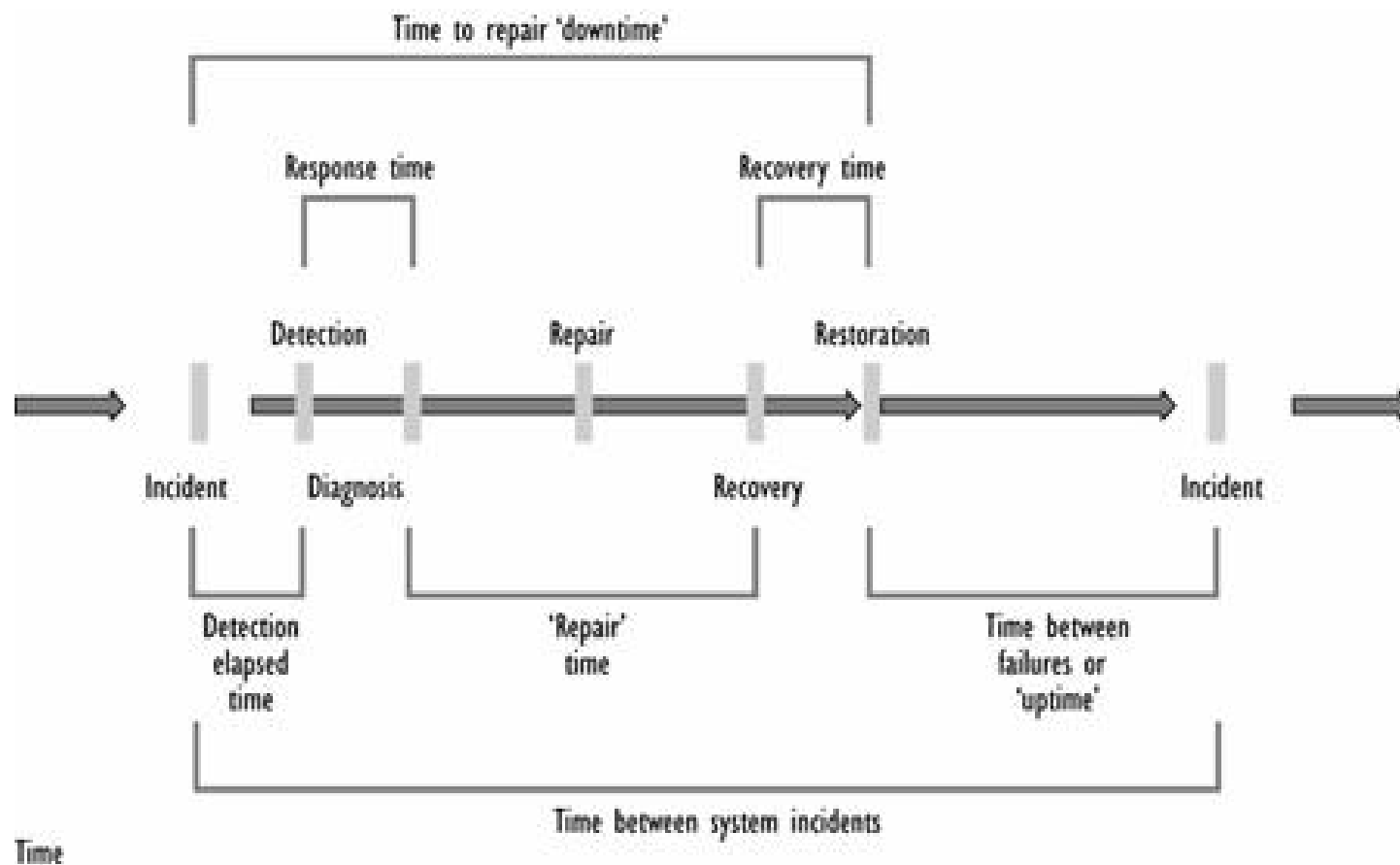
Position..... Date.....

Name.....

Position..... Date.....

Details of previous amendments:

Extended Incident Lifecycle



Service Quality Review

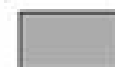
Period Target	1	2	3	4	5	6	7	8	9	10	11
A											
B											
C											
D											
E											
F											
G											
H											
I											
J											



SLA MET



SLA Breached



SLA Threatened

SLM Roles

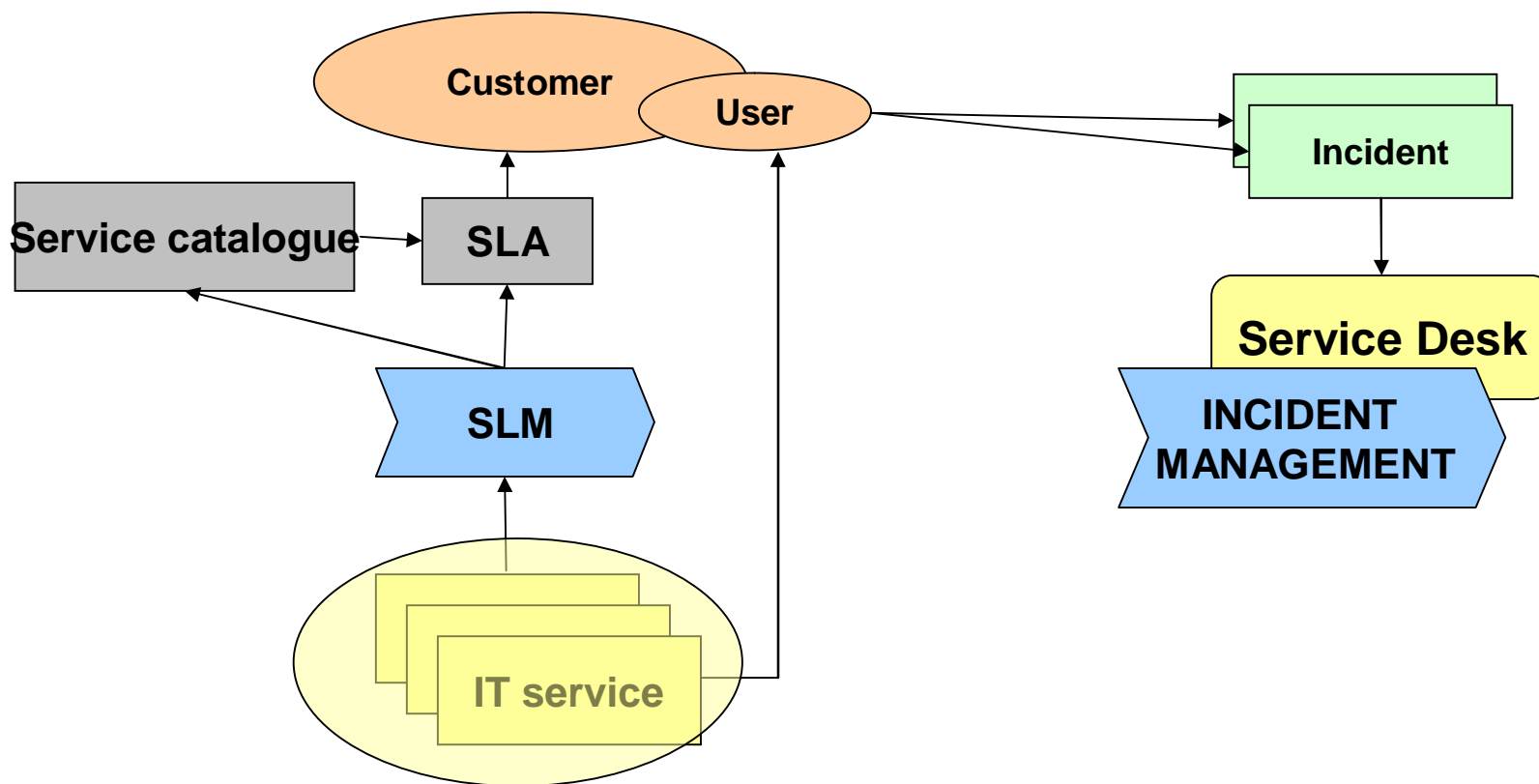
- **Service Level Manager**
 - Gather data and requirements for SLA (SLR)
 - Negotiate SLA with customer
 - Negotiate & review OLA & UC
 - Pilot SLA
 - Create and Publish Service Catalogue
 - Participate CAB to assess and authorize changes



ITIL overview

Service Delivery

Availability Management



Availability, reliability,
maintainability of IT
Services

Objectives

- To ensure IT capacity is designed to deliver required and agreed availability
- Provide availability reports
- Optimize the availability of IT infrastructure



Availability Management

- Gives data for SLA negotiation – we know what quality are we able to deliver
- Do not monitor everything (too expensive), but mainly Vital Business Functions (critical function of the business)
- Cooperates with Capacity Management to improve IT infrastructure when needed
- Reliability, Maintainability, Security, Recovery,

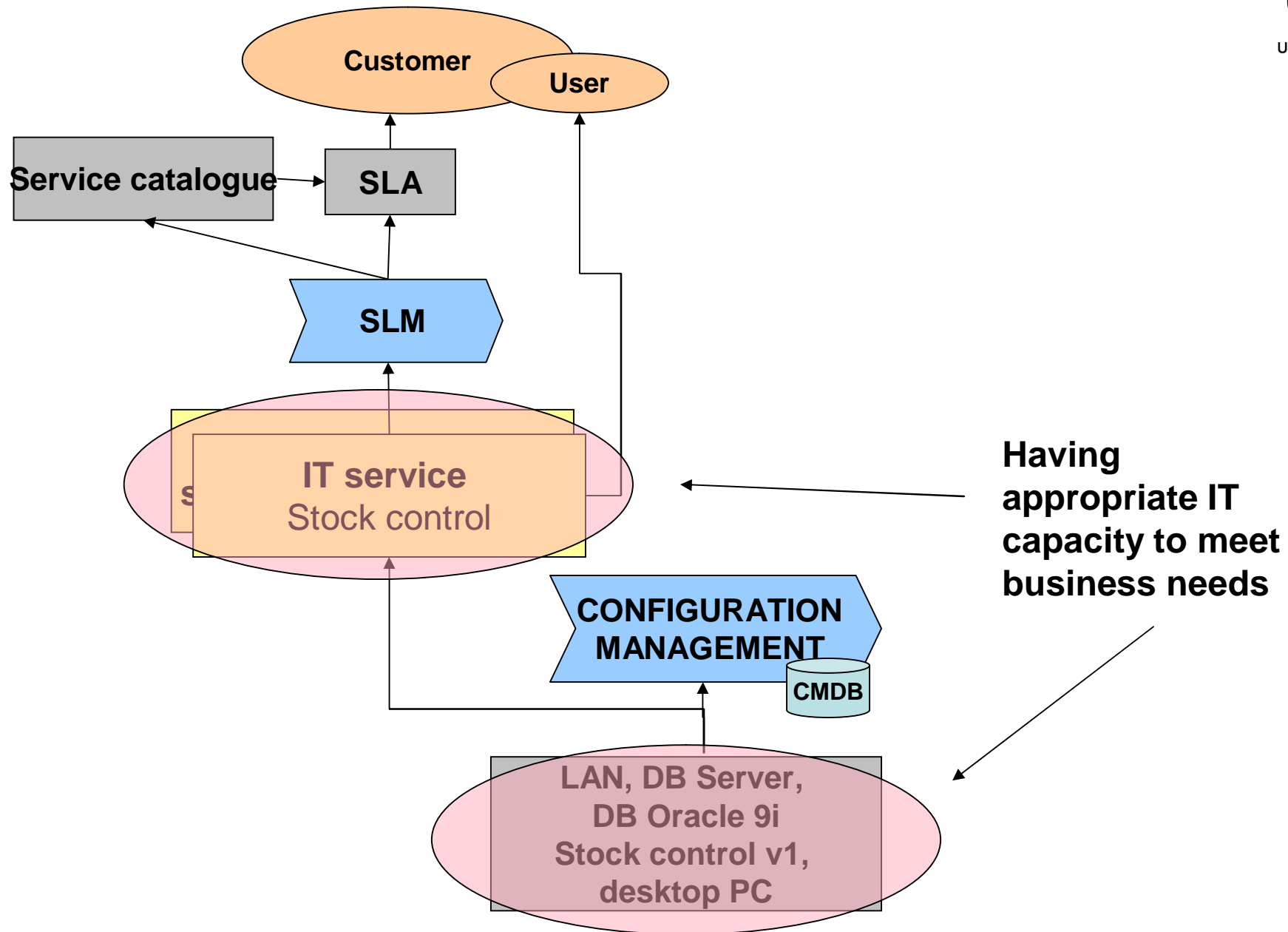
Measuring Availability

- From end user perspective:
 - Frequency of downtime
 - Duration of downtime
 - Scope of impact
- Example measures
 - Impact by user minutes lost
 - Impact by business transactions

ITIL overview

Service Delivery

Capacity Management



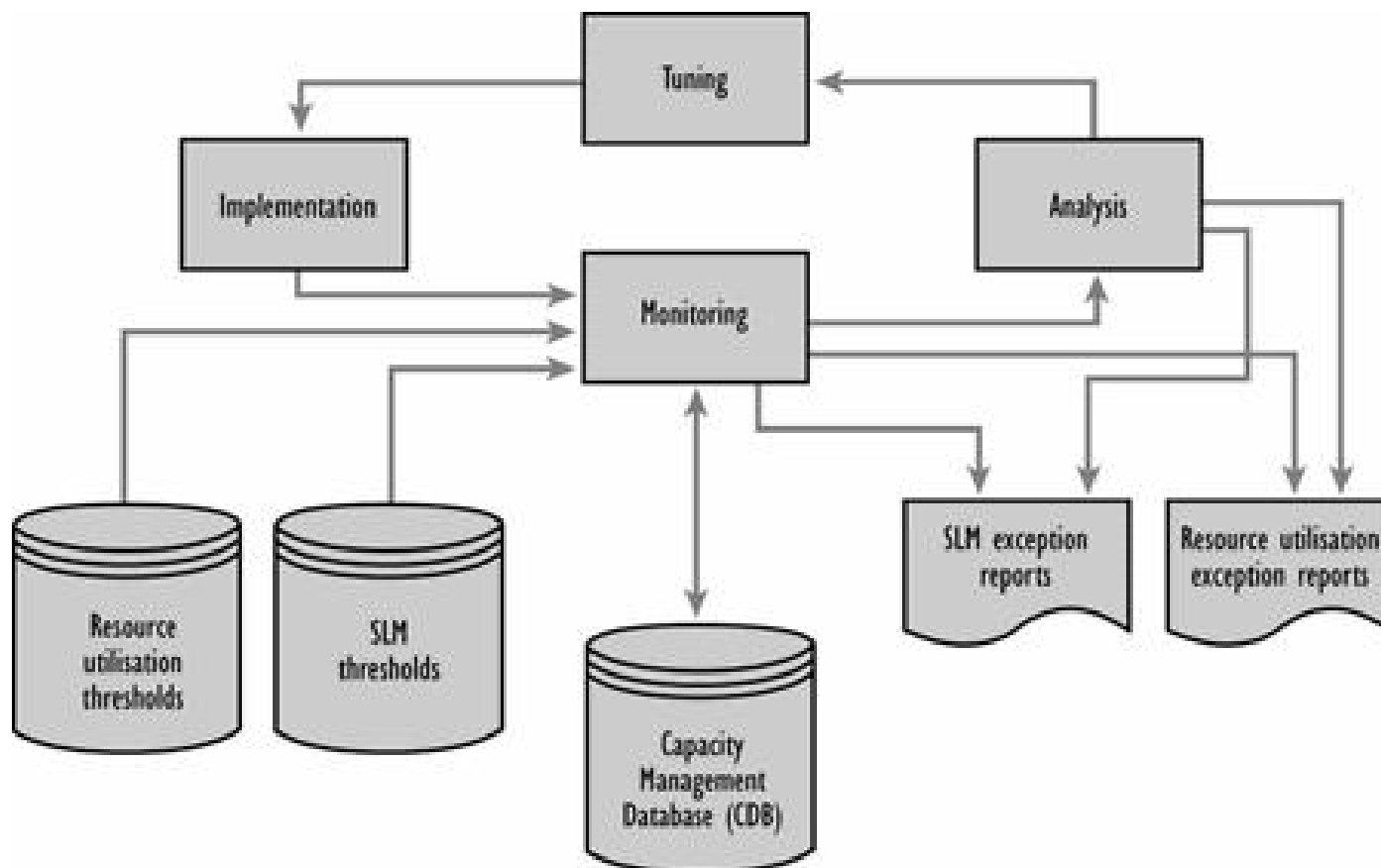
Objectives

- Having appropriate capacity of IT infrastructure
 - Not too little (can cause incidents -> costs money)
 - Not too much (need to be maintained -> costs money)
- Understand current demands and forecast
- Tuning and producing Capacity Plan
- Cooperates with Development team (Application Sizing)

Focus

- CaM is focused on
 - HW
 - SW
 - Networking equipment
 - Peripherals
 - Human resources
- Proactive management
 - Predict performance problems and take necessary actions
 - Trend analysis
 - Modelling of predicted changes
 - Upgrades are budgeted, planned implemented before SLA breach

Performance Management



Source: OGC

Capacity Plan

- Documents current levels of resource utilization & forecasts the future requirements
- Specifies the most cost-effective environment to meet business needs
- Propose solution for possible (most likely) business scenarios
- Questions:
 - What is the current capacity?
 - What trends impact on our ability to deliver service?
 - What affect have business changes on our IT infrastructure?
 - What services will be provided in the future?
 - What service usage is projected for the future?
 - What quality goals are planned for those services?

Role

- Capacity Manager
 - Appropriate levels of monitoring
 - Produce Capacity plan
 - Produce reports (current usage, trends, forecast)
 - Sizing new systems
 - Assess new technology, HW and SW products
 - Participate CAB to assess and authorize changes



ITIL overview

Service Delivery

IT Service Continuity Management

Objectives & Risks

- Reduce the vulnerability of organization
- Reduce identified risks
- Plan for recovery of business processes

- Risks:
 - Damage, denial of access
 - Loss of critical support services
 - Failure of critical suppliers
 - Human error
 - Technical error
 - Fraud, sabotage, viruses, ...

Strategies to reduce risks

- **Do nothing** – non critical services
- **Manual workarounds** – manual work, e.g. interim measures
- **Reciprocal arrangements** – between organizations to use one another's facilities in a disaster
- **Immediate Recovery** – alternative site running critical systems, recovery time less than 24 hours (internal other building, 3rd party, mobile truck)
- **Intermediate recovery** – recovery time between 24 and 72 hours
- **Gradual Recovery** – empty room ready to accommodate new computer equipment (fixed, portable)
- **Insurance** – important element for all options

ITSCM Plan

- Info to continue operations, priorities of services, specific for given persons
- Phases
 - Alert phase (incident / damage decision)
 - Invocation and recovery phases (arrangements invoked)
 - Return to normal phase (planned, facilities repaired, replaced)
- Key areas
 - Roles and responsibilities (who will do what)
 - Action lists
 - Reference data (manuals, contracts, procedures)

Role

- ITSC Manager
 - Develop and manage ITSCM Plan
 - Maintain & review IT testing schedule
 - Review Continuity Plan with the business areas
 - Negotiate and manage contracts with 3rd party providers



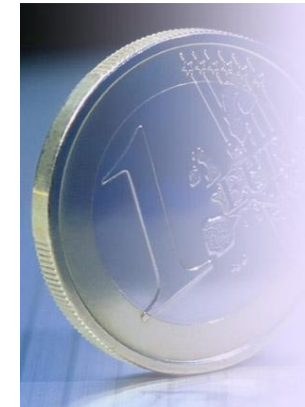
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Service Delivery

Financial Management

Core Components

- **Budgeting** (mandatory) – annual planning financial process
- **IT Accounting** (mandatory) – process for fully accounting for IT expenditures
- **Charging** (optional) – why charging:
 - influence user behavior,
 - recover costs,
 - value for money (IT = business)



Budgeting

- Predicting and controlling how money is spent
- Periodic negotiation cycle
- Day to day monitoring of current budgets

- Budgeting enables organization:
 - Predict money required to run IT services
 - Compare actual spend with predicted
 - Reduce risk of overspending



IT Accounting

- Full accounting for IT expenditures
- Overseen by someone trained in accountancy
- Enables organization:
 - Account for money spent in providing IT services
 - Calculate the cost of providing IT services and the cost of service changes
 - Perform return on investment / cost benefit analysis



Charging

- Process required to bill for the services
- Charging enables:
 - Recover the costs from the customer
 - Operate IT organization as BU
 - Influence user / customer behaviour



Role

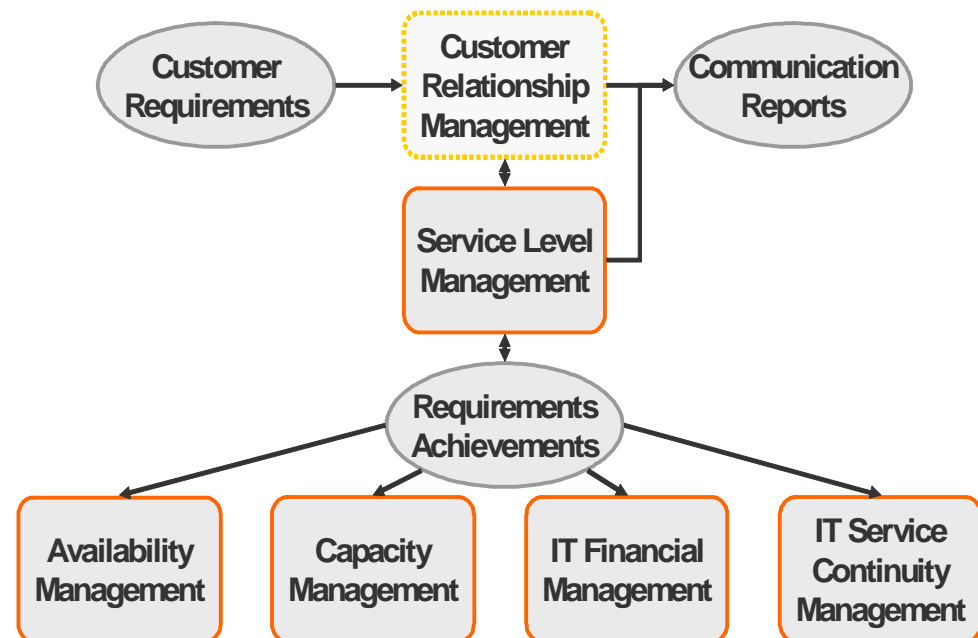
§ Financial Manager

- Work with the enterprise management and financial controller to develop policies of Budgeting, IT Accounting and Change Management
- Managing IT budget
- Preparing budget forecasts
- Reporting on conformance to budget
- Select tools and processes for gathering cost data



Cooperation with other parties

- ITIL is originally for a company with an internal IT organisation
- In PN the customer contacts go through CRM and SLM cooperates with CRM (the TE-level process)
- CRM is not described in ITIL
- The cooperation with other parties is mentioned, but not described (providers, application developers, etc.)



Example

- Overall employee cost: 20 EUR / hour
- Organization employs 500 employees
- Overall incident count is 5000 per year
- Mean time to repair (MTTR) is 10 minutes
- Man-year has 200 days



Process	Purpose	Cost and revenue examples
Service Level Management	<p>To negotiate and manage IT service quality.</p> <p>Understand business needs.</p>	<p>SD is less bothered with problems not covered by SLA thanks to clear agreement (everybody knows what can get). 4 SD staff work 5% more effective. Savings $4 * 5\% * 20 * 8 * 200 = 6.400$ EUR.</p>
Availability management	<p>To ensure high availability of IT services.</p>	<p>HDD physical failure, HDD supports 100 users. Outage lasts 3h before delivery new HDD. Costs: $100 * 3 * 20 = 6.000$ EUR.</p> <p>Avail. Mgt. should emphasize the need of mirror disk (it automatically overtakes function when 1st disk failure).</p>
Capacity management	<p>To ensure optimal usage of IT capacity.</p>	<p>Organization have 20% over-capacity. Assume, IT infrastructure costs 5 million EUR, it is possible to save 1 million thanks to Capacity Management process.</p>

Process	Purpose	Cost and revenue examples
IT Service Continuity management	To ensure quick recovery of IT service after disaster.	<p>Water-pump defect caused flood in server room. It takes 2 days to fully recover business. Common user lost 10h of work.</p> <p>Average cost (without cost of pump repair) $500 * 10 * 20 = 100.000$ EUR.</p>
IT Financial management	To bring overview, to control, account and charge for IT services.	<p>Imagine that the costs of IT services are charged to the departments that take them. A 10% reduction in the requests for new services, would directly result in a 10% reduction of IT expenditure. The insight into the real costs in IT services proves to be surprising in practice; most Users don't have a clue about the costs.</p>