

Software Process & Quality Management

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ITIL - Information Technology Infrastructure Library

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Introduction

- I.T.I.L. - Information Technology Infrastructure Library
- Originated from the UK
- UK government was not satisfied with quality of service from internal and external IT companies
- CCTA (Central Computer and Telecomm Agency) was instructed to develop a standard approach for efficient and effective delivery of IT Services
- Collection of “best practices”

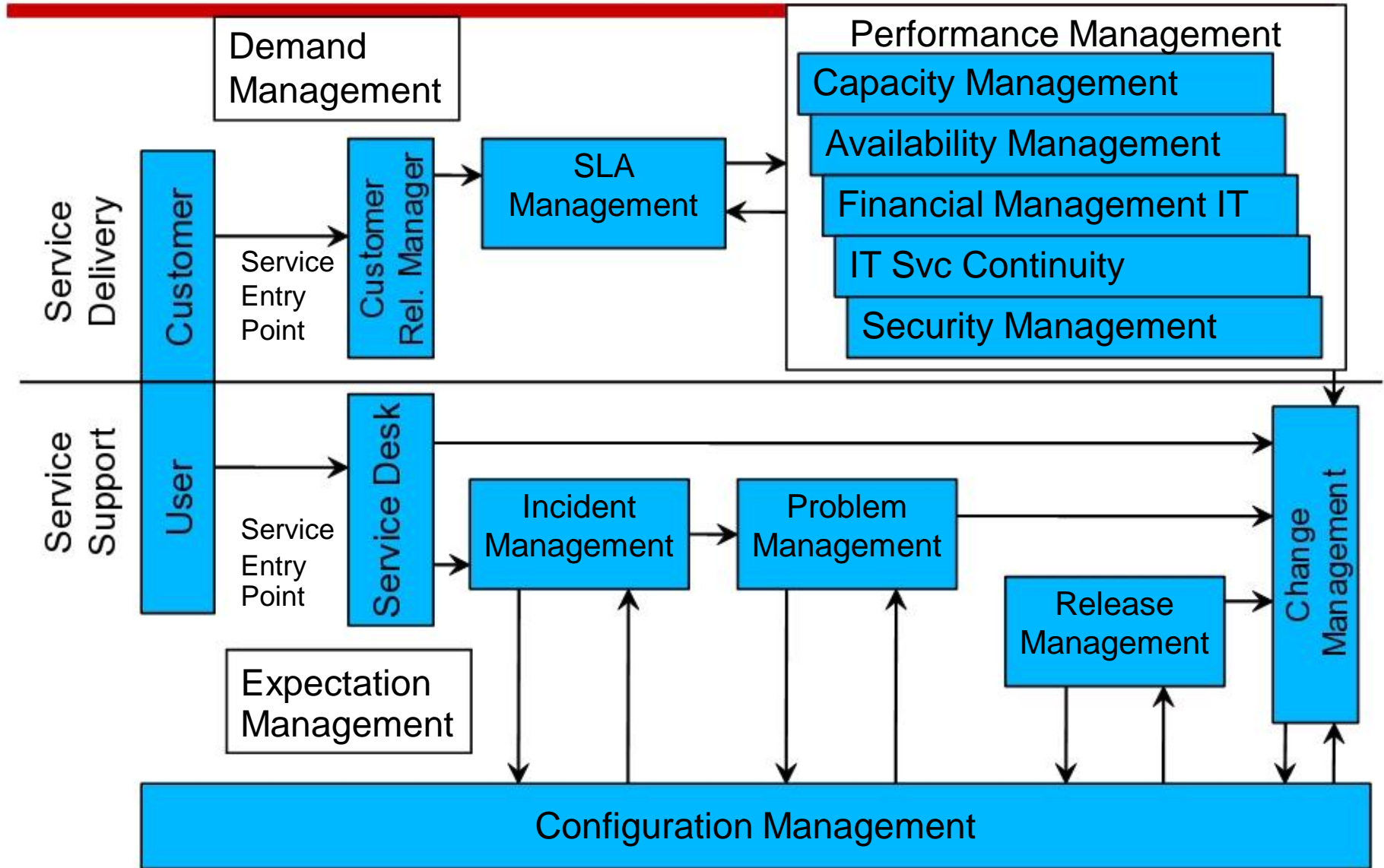
Benefits and Risks

- Benefits include:
 - Provision of IT services becomes more customer-focused
 - Services are described better
 - Better management of quality
 - Improved communication within IT organization
- Risks include:
 - Can take a long time and require significant effort to use
 - Over-engineered procedures can be seen as bureaucratic obstacles
 - No real benefit if there is a fundamental lack of understanding about what the relevant processes should provide

Definitions

- **Service:** means of delivering value to customers by facilitating outcomes the customers want to achieve without the ownership of specific costs or risks
- **Function:** subdivision of an organization that is specialized in fulfilling a specified type of work, and is responsible for specific end results.

ITIL Process Overview



Service Support

Widely Used Process of IT

- Configuration Management
 - Provide a logical model of the IT Infrastructure by identifying, controlling, maintaining and verifying the versions of all Configuration items
- Service Desk
 - Central point of contact between users and the IT service Organization
- Incident Management
 - Restore normal operations as quickly as possible
- Problem Management
 - Prevent and minimize adverse effect on the business of errors in the IT Infrastructure

Service Support

Widely Used Process of IT - 2

- Change Management
 - Ensure standardized methods and procedures are used for efficient prompt and authorized handling of all changes in the IT Infrastructure.
- Release Management
 - Ensure that all technical and non-technical aspects of a release are dealt with in a coordinated approach

Service Delivery

- Service Level Agreement (SLA) Management
 - Maintain and improve IT service quality through a constant cycle of agreeing, monitoring, reporting and reviewing IT service achievements.
- Capacity Management
 - Ensure that capacity and performance aspects of the business requirement are provided timely and cost effective.
- Availability Management
 - Optimize the capability of the IT Infrastructure and supporting organization to deliver a cost effective and sustained level of availability to satisfy business objectives.

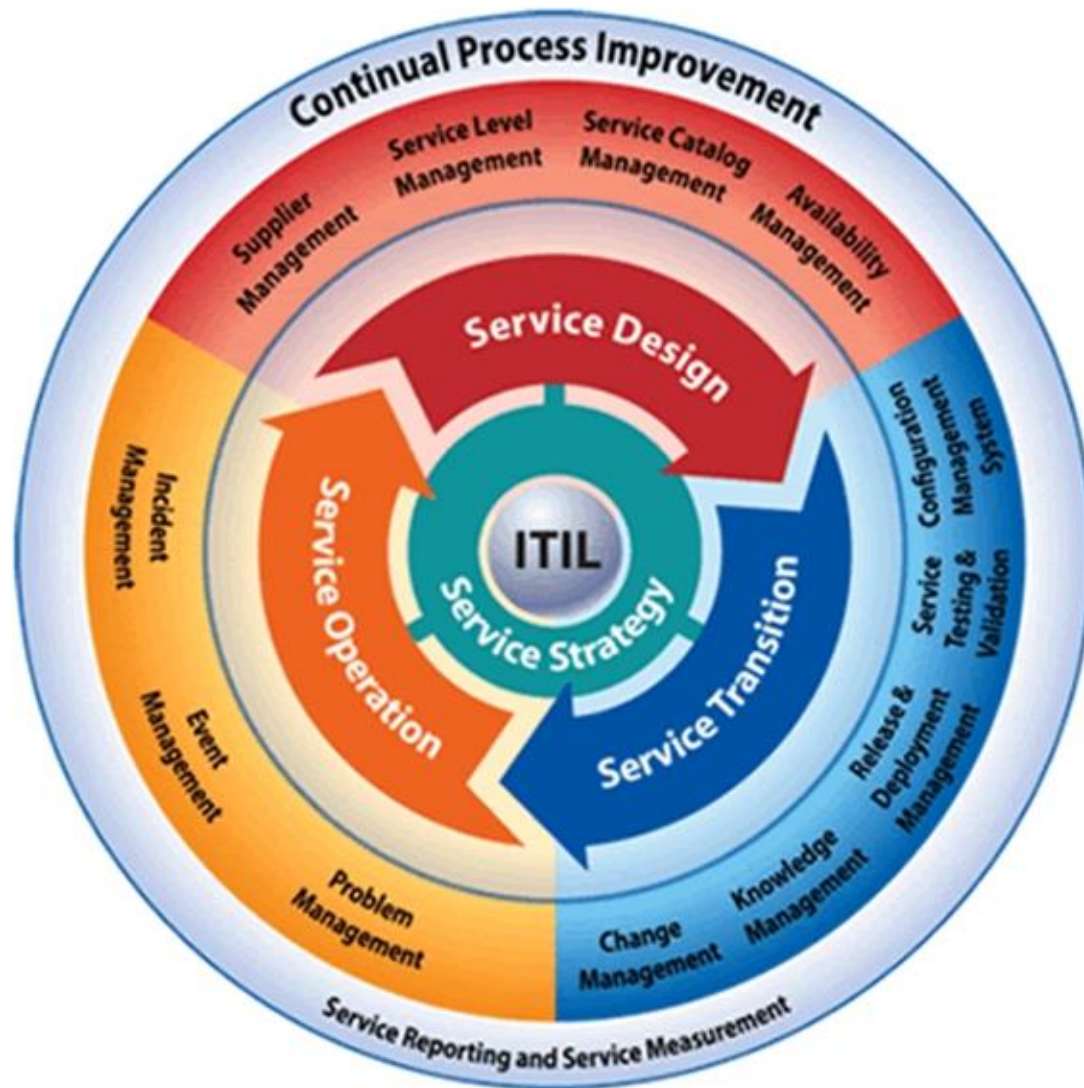
Service Delivery - 2

- Financial Management for IT Services
 - Provide Cost effective stewardship of IT assets and resources used in providing IT services.
- IT Service Continuity Management
 - Ensuring that the required IT technical and service facilities can be recovered within the time scales required by Business Continuity Management.
- Security Management
 - Managing a defined level of security for information and IT Services.

Service Lifecycle (5 Phases)

- **Service Strategy** - designing, developing and implementing service management as a strategic resource
- **Service Design** - developing appropriate IT services, including architecture, processes, policy and documents; the design goal is to meet the current and future business requirements
- **Service Transition** - developing and improving capabilities for the transition of new and modified services to production
- **Service Operation** - achieving effectiveness and efficiency in providing and supporting services in order to ensure value for the customer and service provider
- **Continual Service Improvement** - creating and maintaining the value for the customer by design improvement, and service introduction and operation

Service Lifecycle



1. Service Strategy

- “Hub” of ITIL v3 core itself
- A view which aligns information technology and the business
- Helps in identifying, selecting and prioritizing opportunities

3 Processes at the Strategic Level

- Financial Management - anticipates the essential management information that is required for the guarantee of efficient and cost-effective service delivery
(Cost effectiveness)
- Demand Management - predict as accurately as possible the purchase of products, and if possible, to regulate it
(Meeting Demand)
- Service Portfolio Management - achieve maximum value creation while at the same time managing the risks and costs.
(Maximizing value)

2. SERVICE DESIGN - 2

- Most important objective of Service Design:
- “The design of new or modified services for introduction into a production environment”
- Objectives include:
 - To contribute to business objectives
 - Save time and money
 - Minimize & prevent risks
 - To contribute to satisfying current and future needs
- Delivery options: in sourcing, outsourcing, co-sourcing, multi sourcing,....

3. SERVICE TRANSITION

- Service Transition: includes the management and co-ordination of the processes, systems and functions required for the building, testing and deployment of a 'release' into production, and establish the service specified in the customer and stakeholder requirements

Goals:

- supporting the change process of the business (client)
- reducing variations in the performance and known errors of the new/changed service
- ensuring the service meets the requirements of the service specifications.

3. SERVICE TRANSITION - 2

Objectives:

- Necessary means to realize, plan and manage the new service
- Ensuring the minimum impact for the services which are already in production
- Improving customer satisfaction and stimulate the proper use of the service and mutual technology

4. SERVICE OPERATION

- Service Operation: co-ordinate and fulfill activities and processes required to provide and manage services for business users and customers with a specified agreed level

Providing support for:

- The services
- The service management processes
- The technology
- The people

4. SERVICE OPERATION - 2

- Processes within Service Operation
- Event management
- Incident management
- Problem management
- Request fulfillment
- Access Management
- Monitoring and Control
- IT operations

5. CONTINUAL SERVICE IMPROVEMENT

- Goal: continual improvement of the effectiveness and efficiency of IT services, allowing them to meet the business requirements better
- Continual Service Improvement(CSI):
- Process compliance - following process or using tools
- Quality - are process activities meeting their goals
- Performance - measuring process efficiency/elapsed times
- Business Value of a process - makes a difference/effectiveness

ITIL and Day-to-Day Work

- Resolving incidents and problems
- Creating change requests
- Software development
- Software releases
- Hardware and Software research

■ From start to finish of the IT daily operations.

References

- “Foundations of IT Service Management Based on ITIL V3” (itSMF International)
- <http://en.wikipedia.org/wiki/ITIL>

I

Homework Assignment

Investigate ITIL

Reading: ISO lecture, summary and questions for next class.