

# Chapter 7

## IM/IT Service Management

# Learning Objectives

- Articulate the impact that unplanned work has on an IM/IT department.
- Identify a number of different process improvement frameworks that could be applied to the management of the IM/IT department and the advantages and disadvantages of each approach.
- Describe the ITIL service support components and how they are interrelated.
- Articulate why the configuration management database is critical to the service support processes.
- Describe the ITIL service delivery components and how they are interrelated.
- Describe what service level agreements are and why they are important to an IM/IT department.
- Describe some of the reasons given for IM/IT service continuity plan failures.

# IM/IT Department

- Since few CEOs or COOs have a background in IM/IT, the internal workings of the IM/IT department have often been a “black box” to mainstream healthcare administrators.
- A key indicator of the effectiveness of an IM/IT department is the percentage of unplanned work (e.g., “all hands on deck” events to mitigate major system “crash”) that it accomplishes as opposed to planned work (e.g., work on an EMR project).

# Examples of Unplanned Work at Low-Performing IM/IT Departments (Kim 2006)

- Failed changes
  - The production environment is used as a test environment, and the customer is the quality assurance team
- Unauthorized changes
  - Engineers do not follow change management process, making mistakes harder to track and fix.
- No preventive work
  - Failing to conduct preventative work makes repeated failures inevitable. Mean time to repair may be improving, but without root-cause analysis, the organization is doomed to fix the same problems over and over.

# Examples of Unplanned Work at Low-Performing IM/IT Departments (Kim 2006)

- **Configuration inconsistency**
  - Inconsistencies in user applications, platforms, and configurations make appropriate training and configuration mastery difficult.
- **Security-related patching and updating**
  - Inadequate understanding and consistency of configurations makes applying security patches extremely dangerous.
- **Too much access**
  - Too many people have too much access to too many IM/IT assets, causing too many preventable issues and incidents.

# Examples of Unplanned Work at High-Performing IM/IT Departments (Kim 2006)

- Product failures
- Release failures
- Human/user errors

# IM/IT Process Improvement Frameworks

- Capability Maturity Model (CMM)
- Control Objects for Information Technology (CobiT)
- ISO 9000
- Information Technology Infrastructure Library (ITIL)

# Capability Maturity Model (CMM)

- An IM/IT process improvement framework best suited to process improvements surrounding the application development and maintenance domain
- Based on five levels of maturity (Gartner 2001):
  - Level 1: Initial
  - Level 2: Repeatable
  - Level 3: Defined
  - Level 4: Quantitatively Managed
  - Level 5: Optimizing
- Describes what characterizes an organization at each level but does not describe “how to” get there

# Control Objects for Information Technology (CobiT)

- IM/IT governance, oversight, and process audit framework
- Made up of four main areas of control objects (IT Governance Institute 2005):
  - Planning and organization
  - Acquisition and implementation
  - Delivery and support
  - Monitoring
- Two supporting areas of focus
  - Information
  - IM/IT resources
- Like the CMM, it tends to describe what characterizes an organization that has solid internal control mechanisms in place but falls short of “how to” descriptions

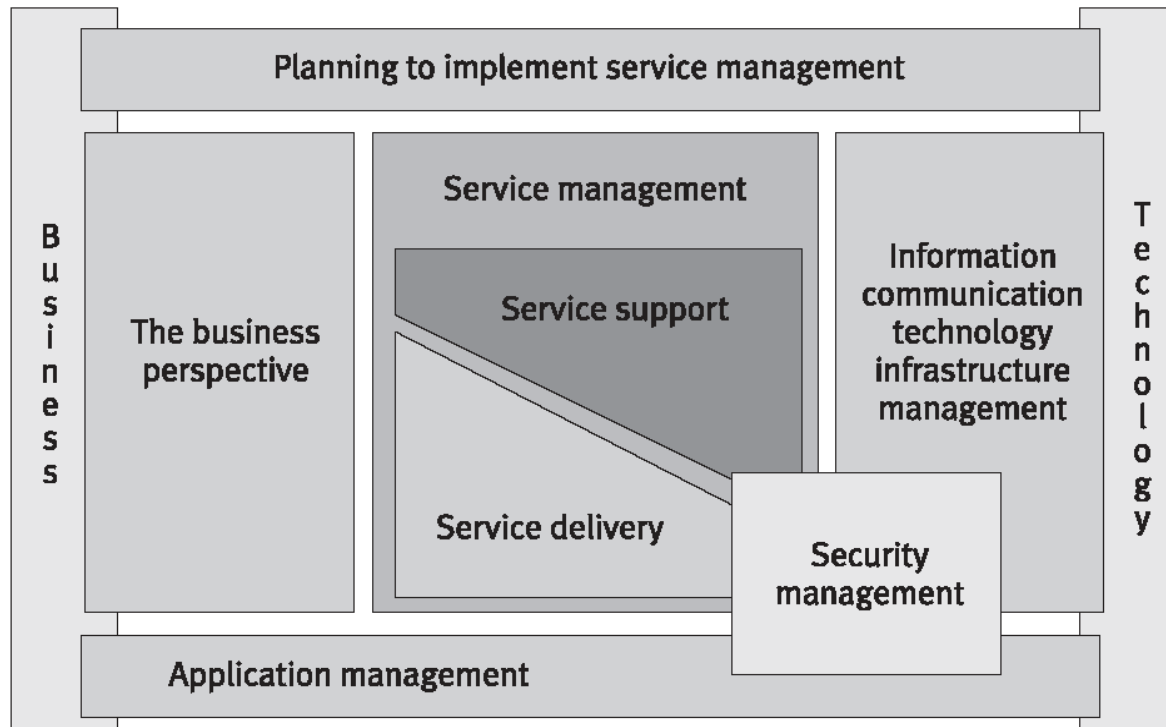
# ISO 9000

- Also from manufacturing, requires that organizations become accredited or registered, thereby assuring customers that the organization adheres to the ISO quality assurance standards.
- Criticisms of ISO 9000 include:
  - Requires a great deal of administrative overhead to employ ISO 9000 standards and become registered
  - May not be well suited to hospital IM/IT departments that tend to implement vendor applications, rather than develop their own applications

# Information Technology Infrastructure Library (ITIL)

- An IM/IT process improvement framework centered around seven main IM/IT management domains
  - Business perspective
  - Service delivery
  - Service support
  - Information communication technology infrastructure management
  - Planning to implement service management
  - Application management
  - Security management
- Well suited to organizations whose CIO or IM/IT leader are championing IM/IT process improvements. As opposed to some of the other process improvement models, ITIL® provides high level “how to” guidance via its many generic ITIL® process flow diagrams and descriptions.

# ITIL



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# Service Support

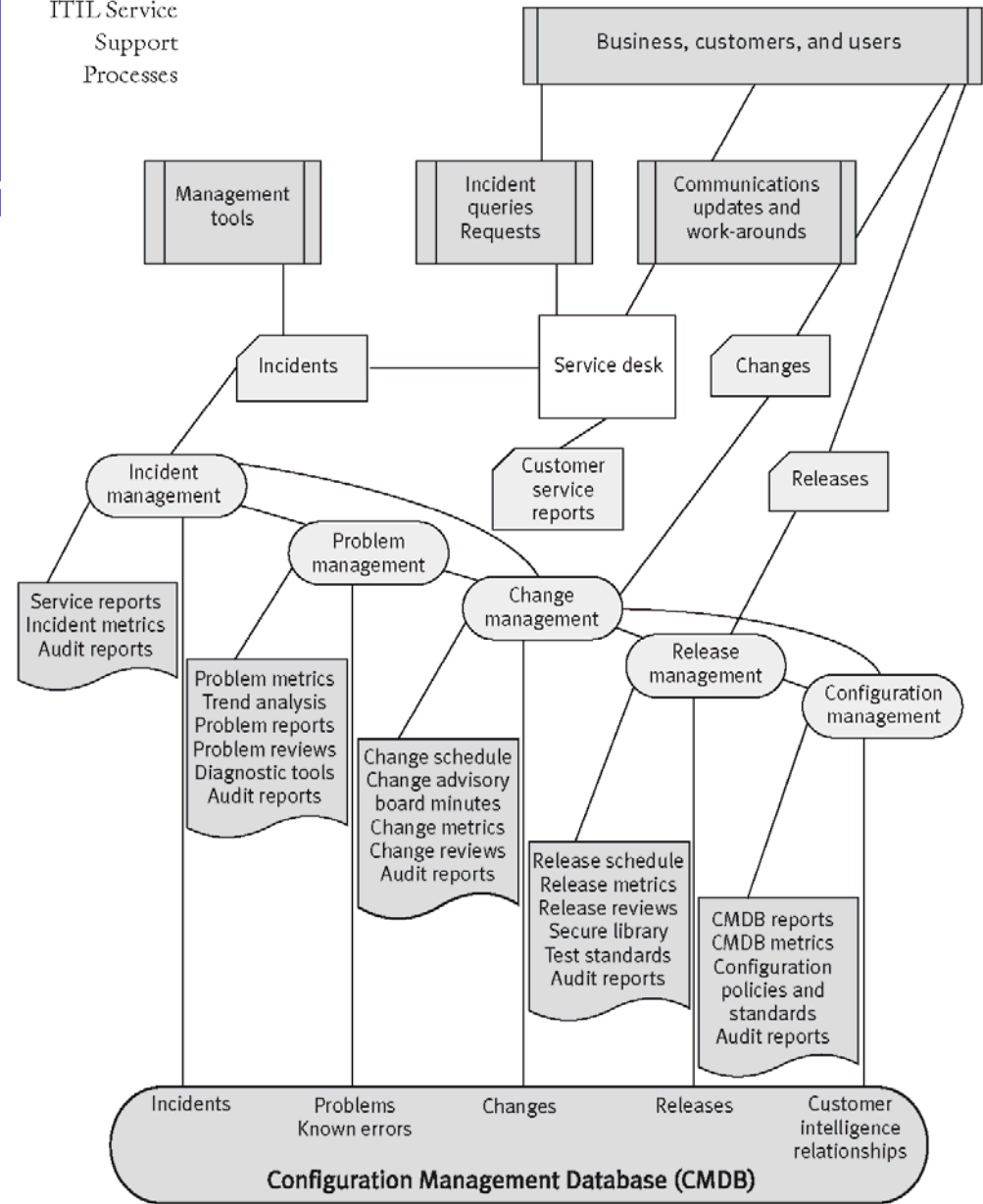
- **Service desk**
  - The single point of contact for users to report incidents and seek troubleshooting resolution
- **Incident management**
  - The process by which “trouble calls” or incidents are managed to resolution
- **Problem management**
  - The process by which recurring incidents are analyzed to determine and provide permanent solutions for root causes
- **Change management**
  - The process by which changes are introduced into the computing environment of an organization
- **Release management**
  - The process by which major new releases of application or operating system software are implemented
- **Configuration management**
  - Closely tied to all of the above IM/IT service support processes, configuration management is the process by which the computing environment is documented, typically in a configuration management database

# Service Delivery

- Service level management
  - The process by which service levels are negotiated with end users, tracked for performance adherence
- Availability management
  - The process focused on ensuring that the IM/IT infrastructure and support services are available to the business functions
- Capacity management
  - The process focused on ensuring that the IM/IT infrastructure has the processing capacity needed by the business functions
- Financial management for IM/IT services
  - The process of accounting for the complex nature of IM/IT services, understanding cost by unit of service, and assisting in management decisions relating to IM/IT services
- Service continuity management
  - Formerly known as the “disaster recover” or “business continuity planning” function, this is the process by which organizations identify their most critical applications and design, test, and maintain alternatives for providing IM/IT services in the event of a major service interruption

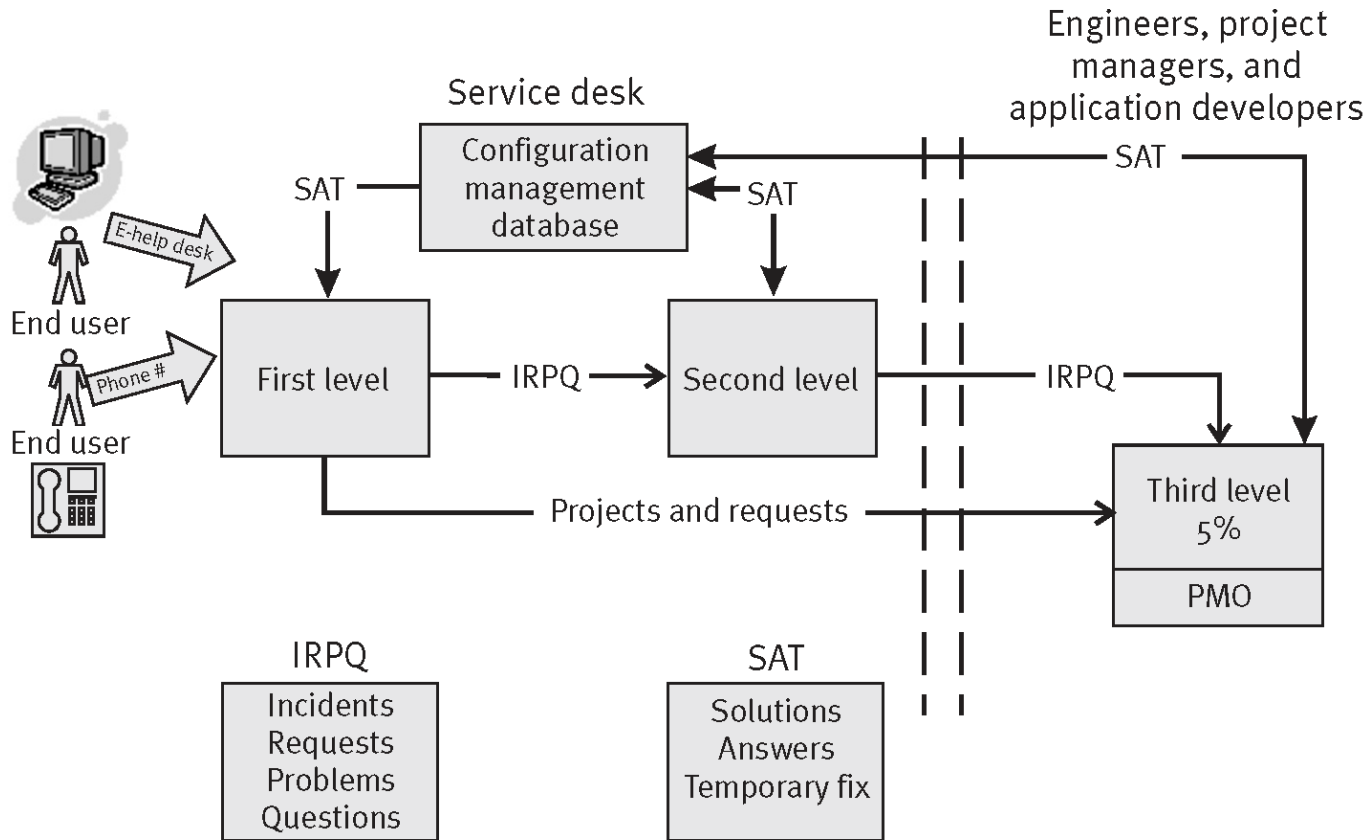
# ITIL Service Support Processes

**FIGURE 7.2**  
ITIL Service Support Processes

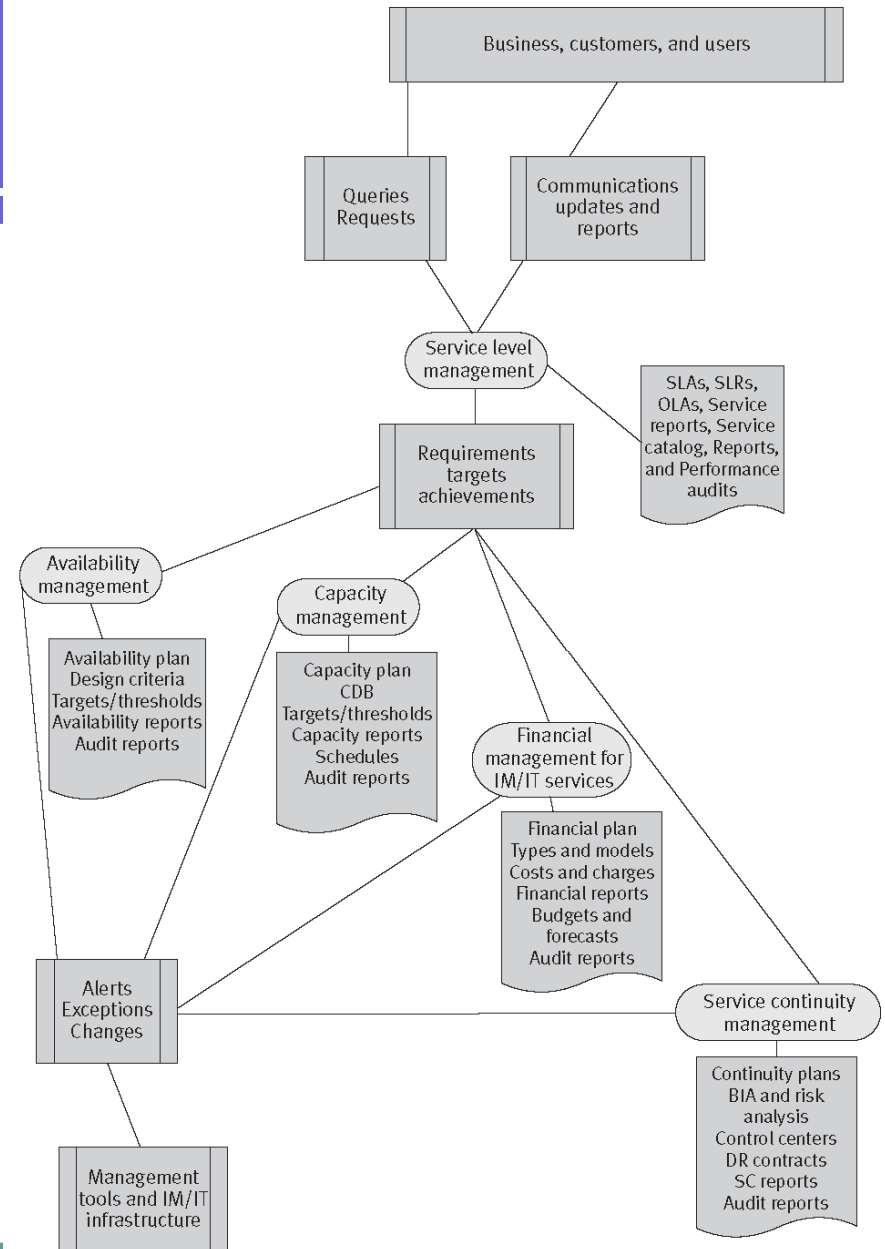


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# Sample Service Desk Workflow



# ITIL Service Delivery Processes



# Web Resources

- IT Service Management Forum

<http://www.itsmf.org/>

- UK Office of Government Commerce

[http://www.ogc.gov.uk/guidance\\_itsm\\_4438.asp](http://www.ogc.gov.uk/guidance_itsm_4438.asp)

- ITIL Open Guide

<http://www.itlibrary.org/index.php?page=ITIL>