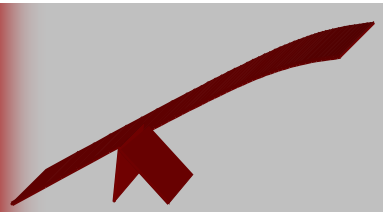


Overview of Service Support & Service Delivery Functions

Service Delivery Functions

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

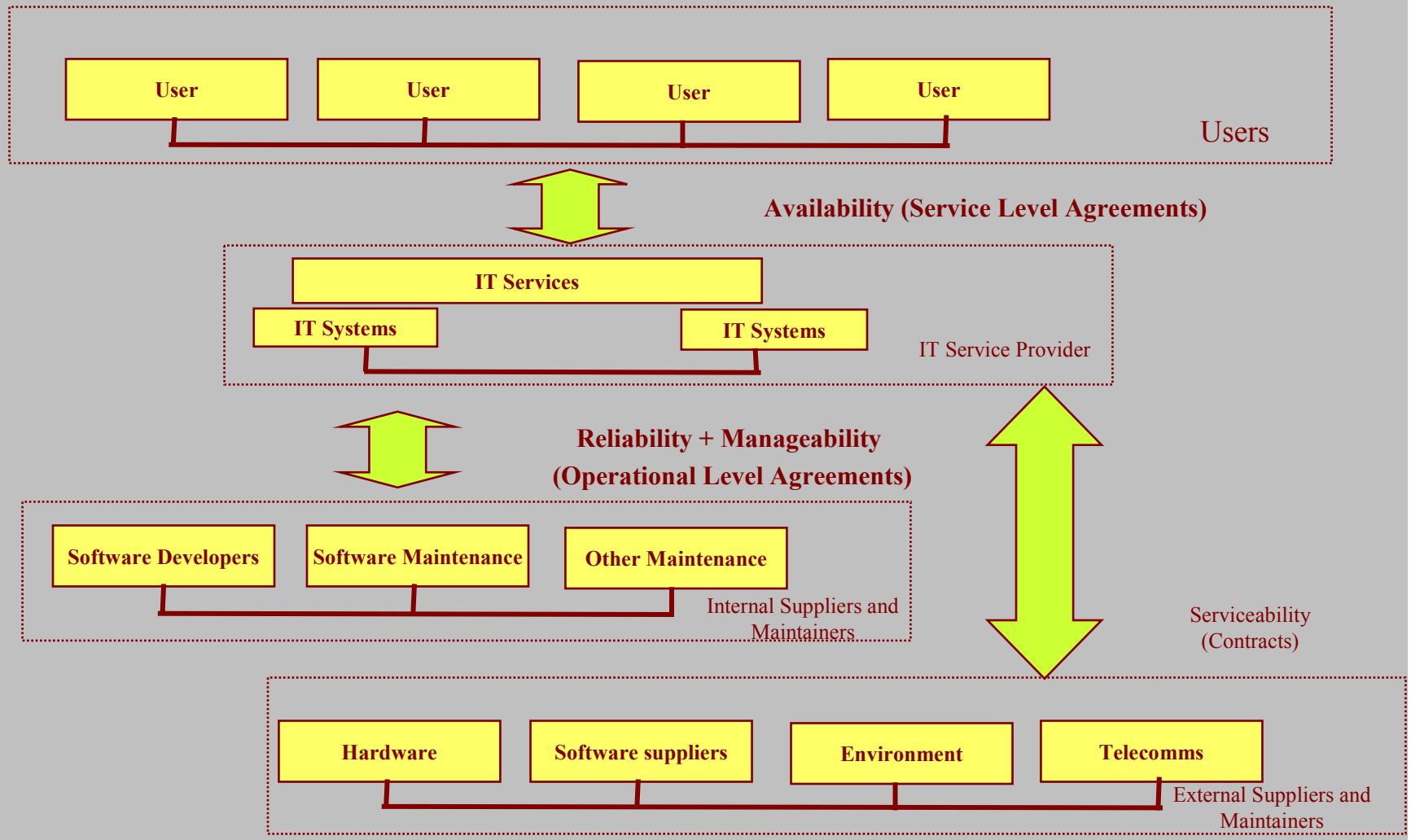
Availability Management

- Availability Management enables an organization to predict, plan for and manage the availability of services by ensuring that:
  - All services are supported by sufficient, reliable, and properly maintained configuration items (CM)
  - CI's not supported internally are supported through appropriate contractual agreements with third party suppliers (SAM – ISM)
  - Changes are proposed to prevent future loss of service availability (SAM – ISM)

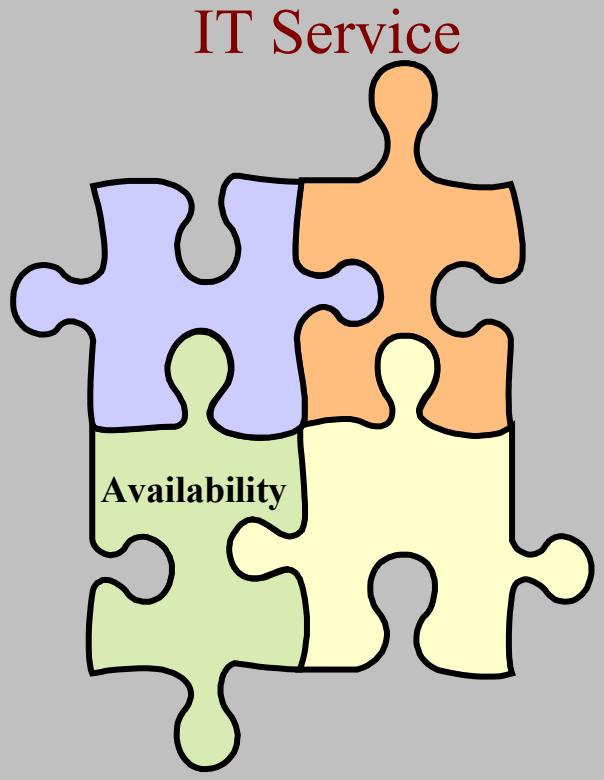
Availability Management - 2

- Availability Management is defined by: (MA, TS)
  - Reliability
  - Maintainability : Maintenance you do yourself as an organization
  - Resilience – Level of Redundancy you establish
  - Serviceability – Maintenance done by someone else

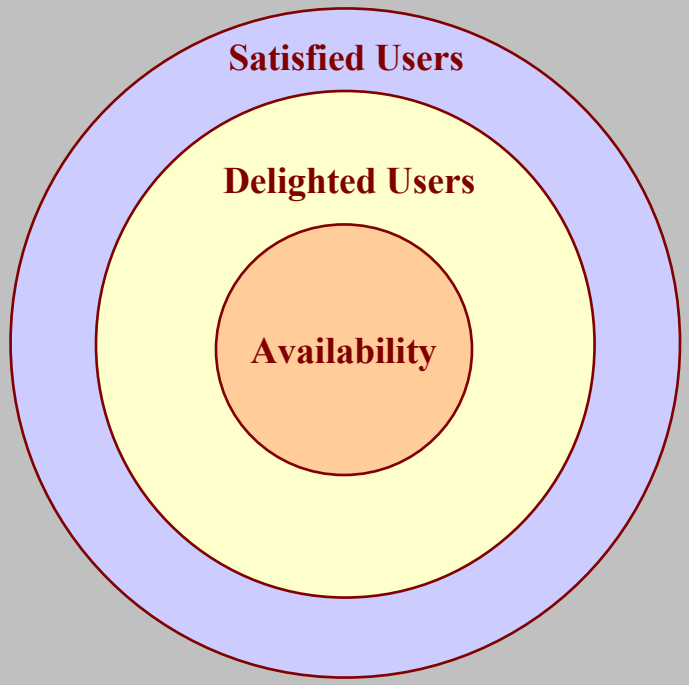
The IT Infrastructure and IT support organization



Availability is at the Core of Business and User Satisfaction

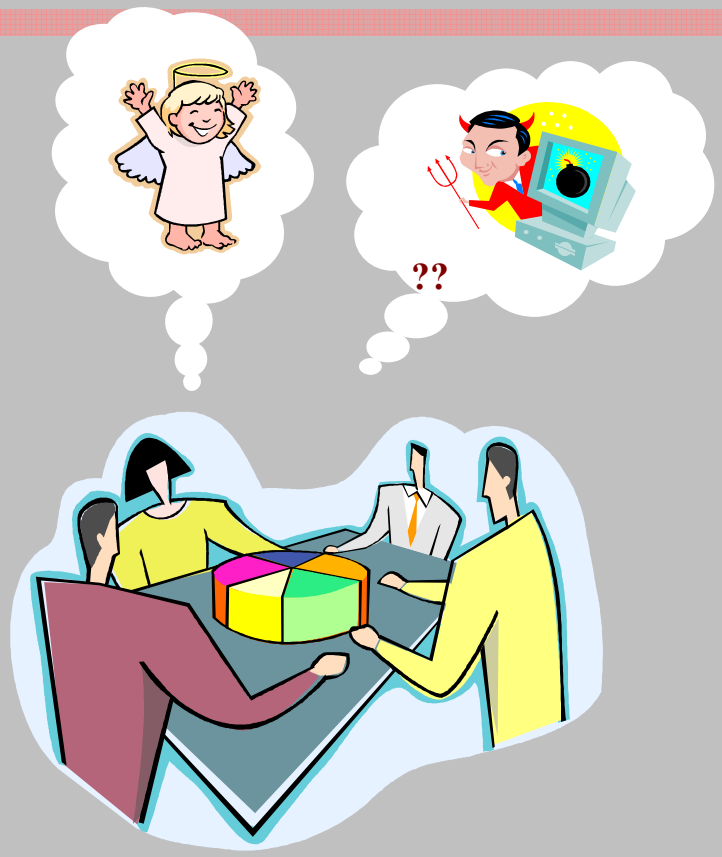


"A key component of Users' perception on the quality of IT Services"

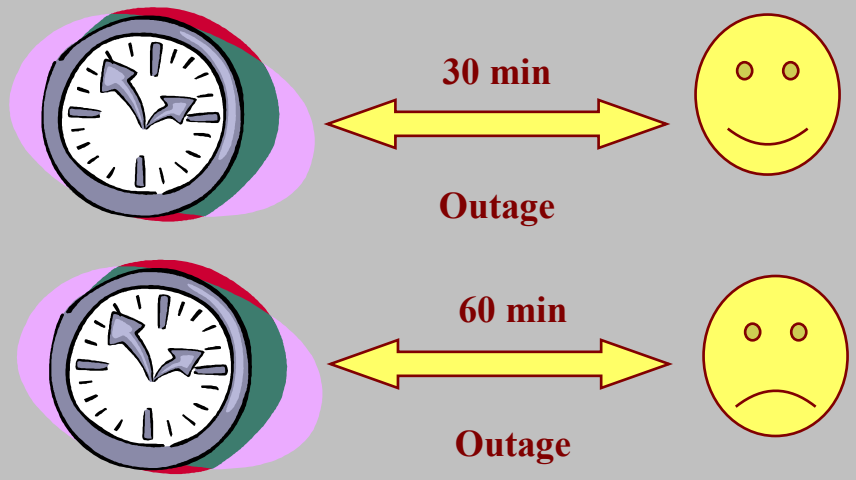


"Recognize that Availability is at the core of User satisfaction"

Business and User Satisfaction Levels Following an IT Failure



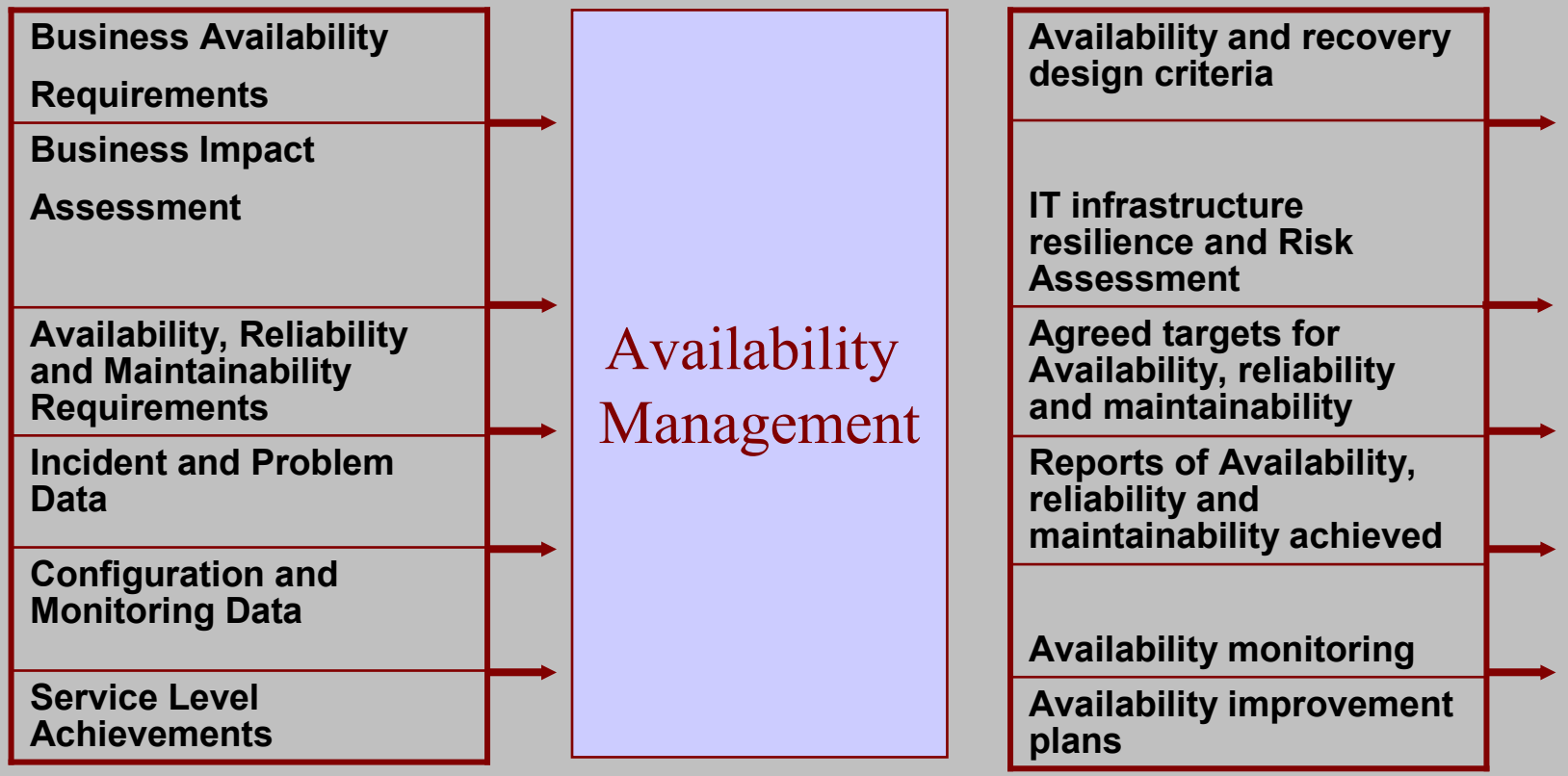
Business Satisfaction Report



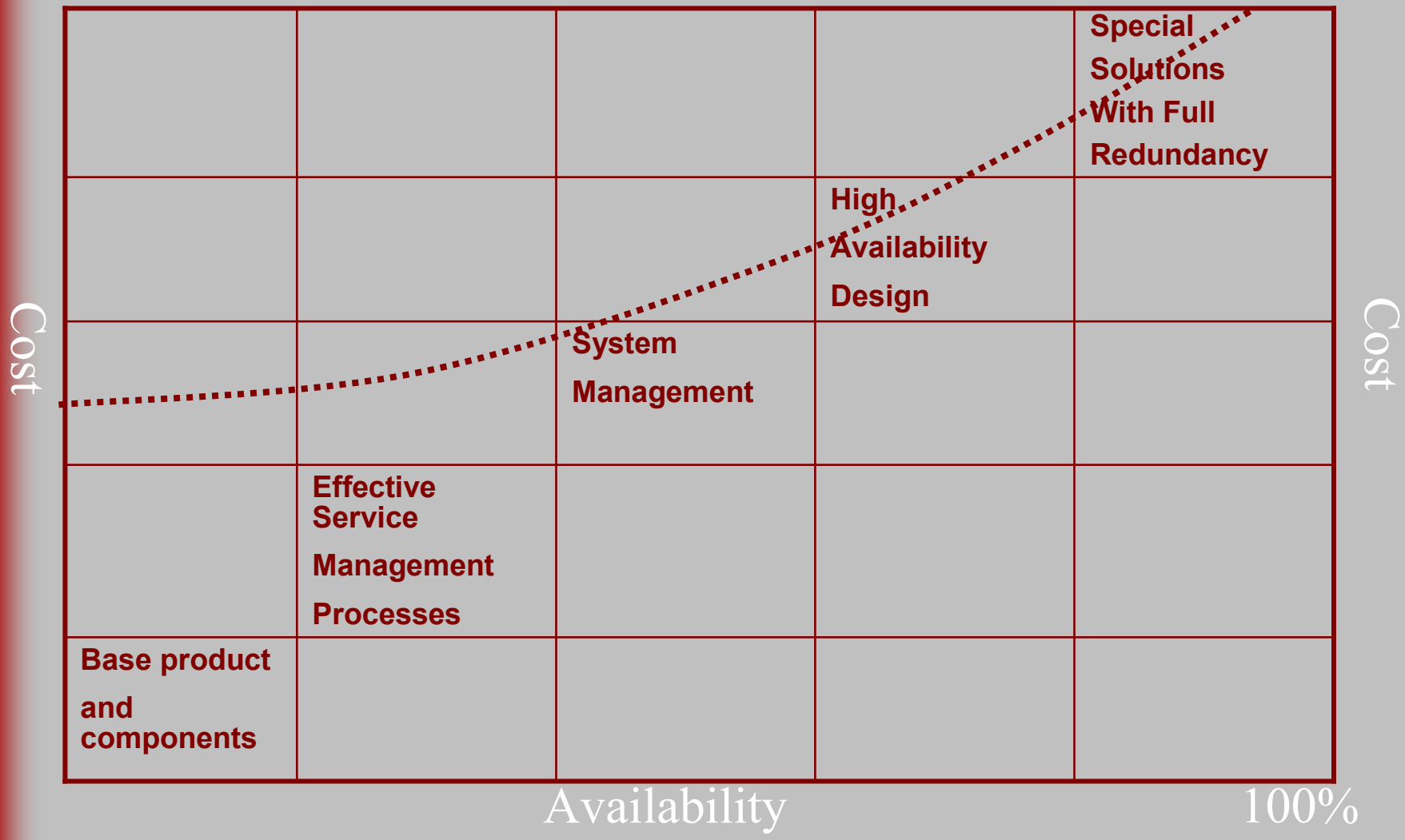
"The business and User view of the IT support Organization"

"The business and User view of the IT support Organization"

8.3 The Availability Management process



The Cost of (Un)Availability



IT Services Continuity Management

- IT Services Continuity Management is established to mitigate the risk of the business suffering a major IT disaster (RSKM)
- IT Services Continuity must be planned to:
  - Increase business dependency on IT
  - Reduce cost and time of recovery
  - Reduce cost to customer relationship
  - Survive

IT Services Continuity Management - 2

- Conduct Risk Analysis to determine:
  - Value of assets
  - Threats
  - Vulnerabilities
- Conduct Risk Management to:
  - Develop countermeasures
  - Plan for potential disasters
  - Manage a disaster

IT Services Continuity Management - 3

- Establish Risk Mitigation Strategies (RSKM)
  - Do Nothing
  - Manual workarounds
  - Reciprocal arrangements
  - Gradual Recovery (cold standby)
  - Intermediate Recovery (warm standby)
  - Immediate Recovery (hot standby)

IT Services Continuity Management - 4

- Conduct Tests and Reviews
  - Initially followed by every 6-12 months after each disaster
  - Test under realistic conditions (TS, VER, VAL)
  - Move / protect any live services first
  - Review and change the plan (VER)
  - All changes made via the CAB – Change Advisory Board (CM)

Business Continuity Lifecycle

Stage 1 Initiation

Initiate BCM

Stage 2 Requirements and Strategy

Business Impact Analysis

Rick Assessment

Business Continuity Strategy

Stage 3 Implementation

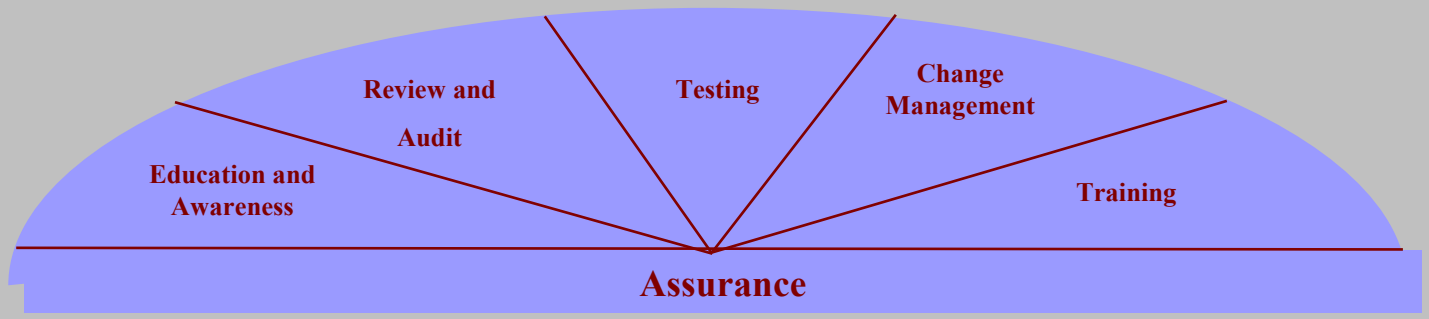
Organization and Implementation Planning

Implement Stand-by Arrangements | **Develop Recovery Plans** | **Implement Risk Reduction Measures**

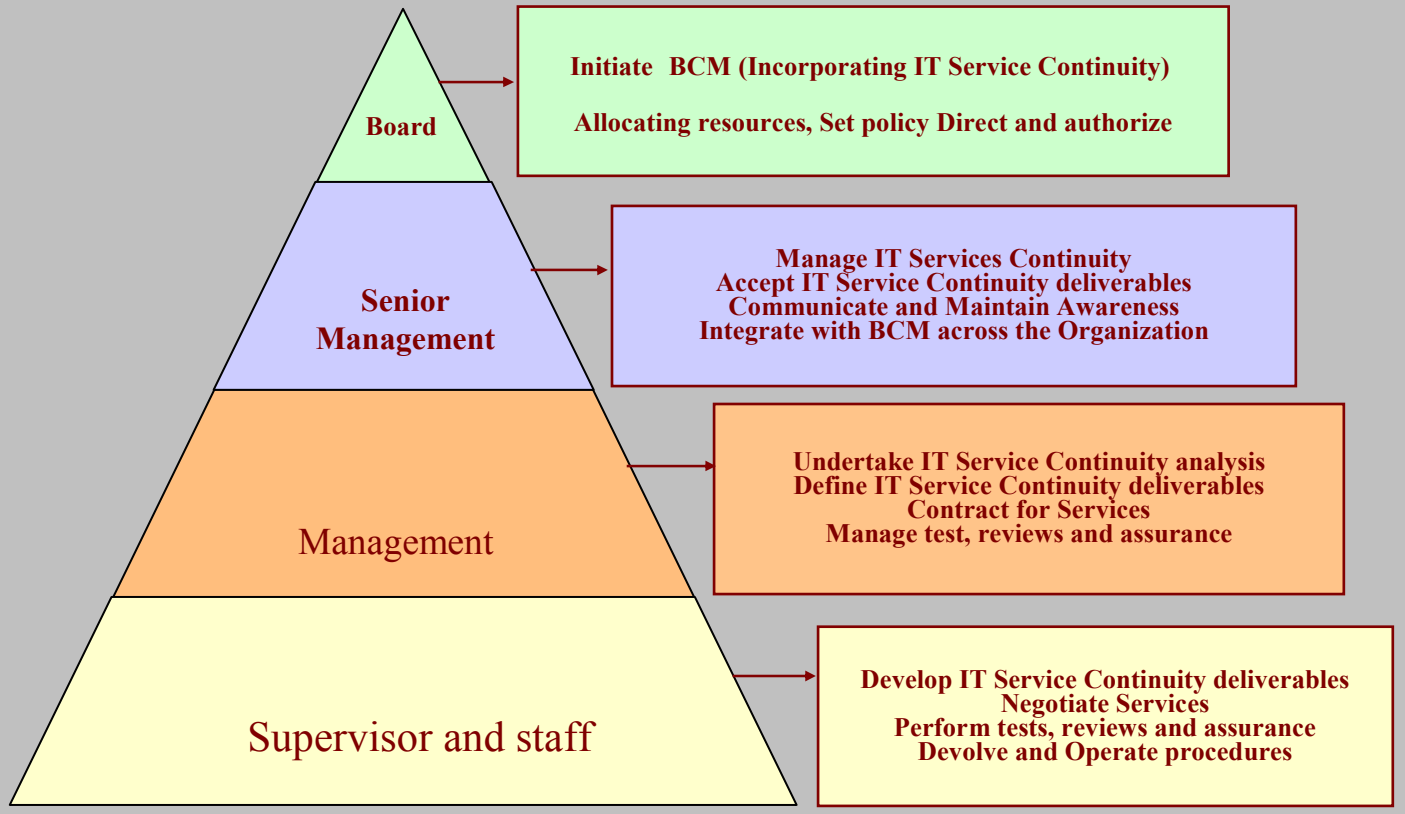
Develop Procedures

Initiate Testing

Stage 4 Operational Management



Responsibilities



Capacity Management

- Capacity Management assists the organization in determining the right, cost justifiable, capacity of IT resources such that the Service Levels linked to the business are achieved “at the right time” (Project Planning – SP 2.4 Plan for Project Resources)

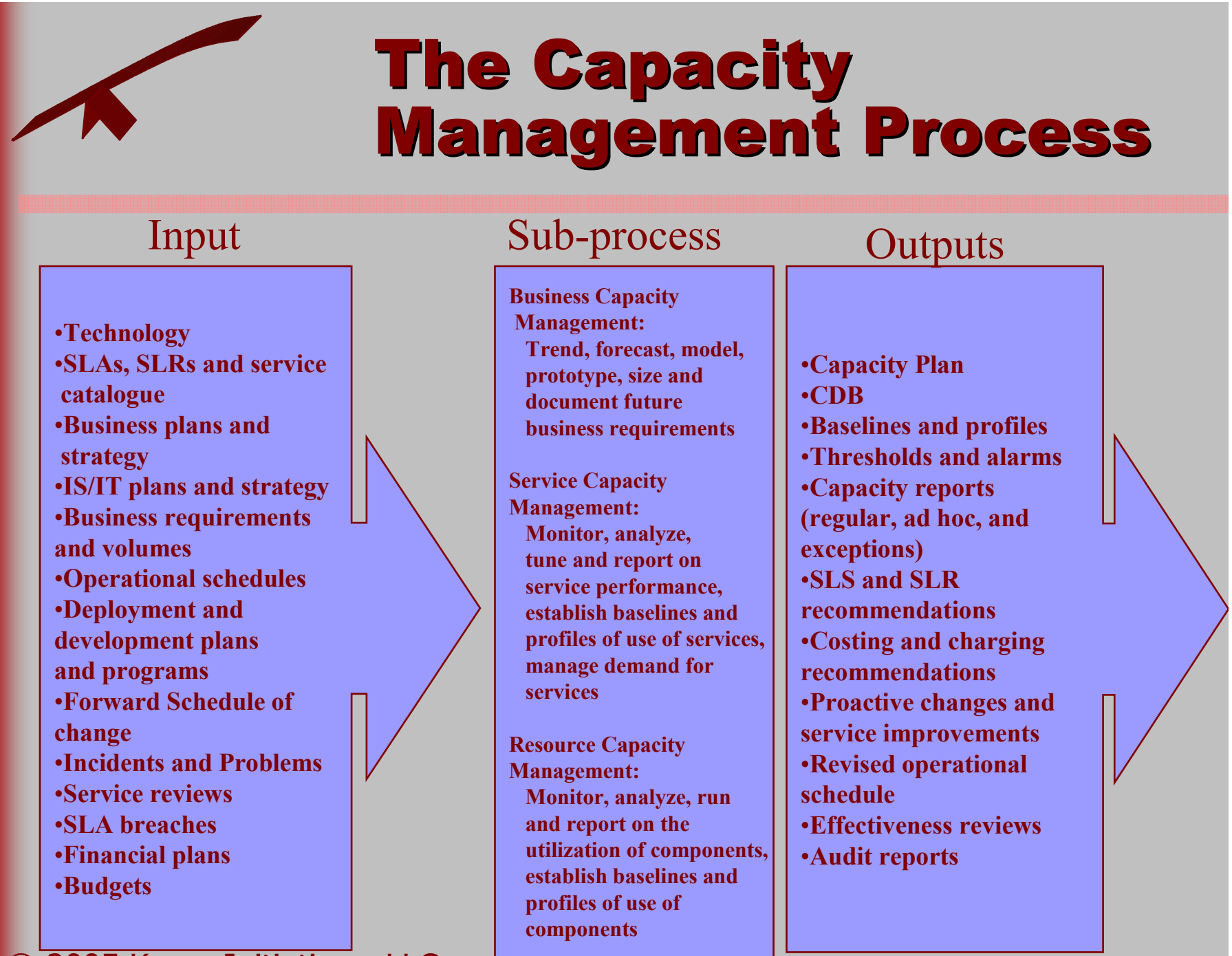
Capacity Management - 2

- Capacity Management is defined by:
  - Demand Management – Business Capacity in management
  - Workload Management – Service Capacity of Management
  - Resource Management – Resource Capacity Management
- Capacity Management must also take into consideration Performance Management
  - Internal and External Financial Data
  - Usage Data
  - SLM =Data / Response Times
  - Capacity Database (CDB) is populated by Performance Management Data

Capacity Management - 3

- Application sizing is required to estimate the resource requirements to support a proposed application change to ensure it meets its required service levels. (PP)
- Modeling is often used to support Capacity Management (PP – SP 1.4)
  - Trend Analysis
  - Simulation Modeling
  - Baseline Models
  - Used to answer “What If” questions

The Capacity Management Process



Financial Management

- Financial Management is used to provide information about the costs of delivering IT services that support customer business needs
- Financial control of costs is a must!
- Cost factors include (PP) :
  - Equipment Costs
  - Organization Costs
  - Transfer Costs
  - Accommodation Costs
  - Software Costs

Financial Management - 2

- Different Types of Costs (PP)
  - Fixed – Unaffected by the level of usage
  - Variable – Varying according to the level of usage
  - Direct – Usage specific to one service
  - Indirect or Overhead – Usage not specific to one service
  - Capital – Not diminished by usage
  - Revenue or running – diminish with usage

Financial Management - 3

- Continuous Cost Awareness
  - Recover from customers the full costs of the IT services provided (RM)
  - Ensure that customers are aware of the costs they impose on IT (PP, RM, PMC)
  - Ensure that providers have an incentive to deliver agreed quality and quantity of services (ISM)

Financial Management - 4

- Main Financial Management Processes
  - Budgeting – The process of predicting and controlling the spending of money within the enterprise
    - Periodic negotiation cycle to set budgets (PP)
    - Day-to-day monitoring of the current budgets
  - IT Accounting – The set of processes that enable the IT organization to fully account the way its money is spent
  - Charging – The set of processes required to bill a customer for the services applied to them.

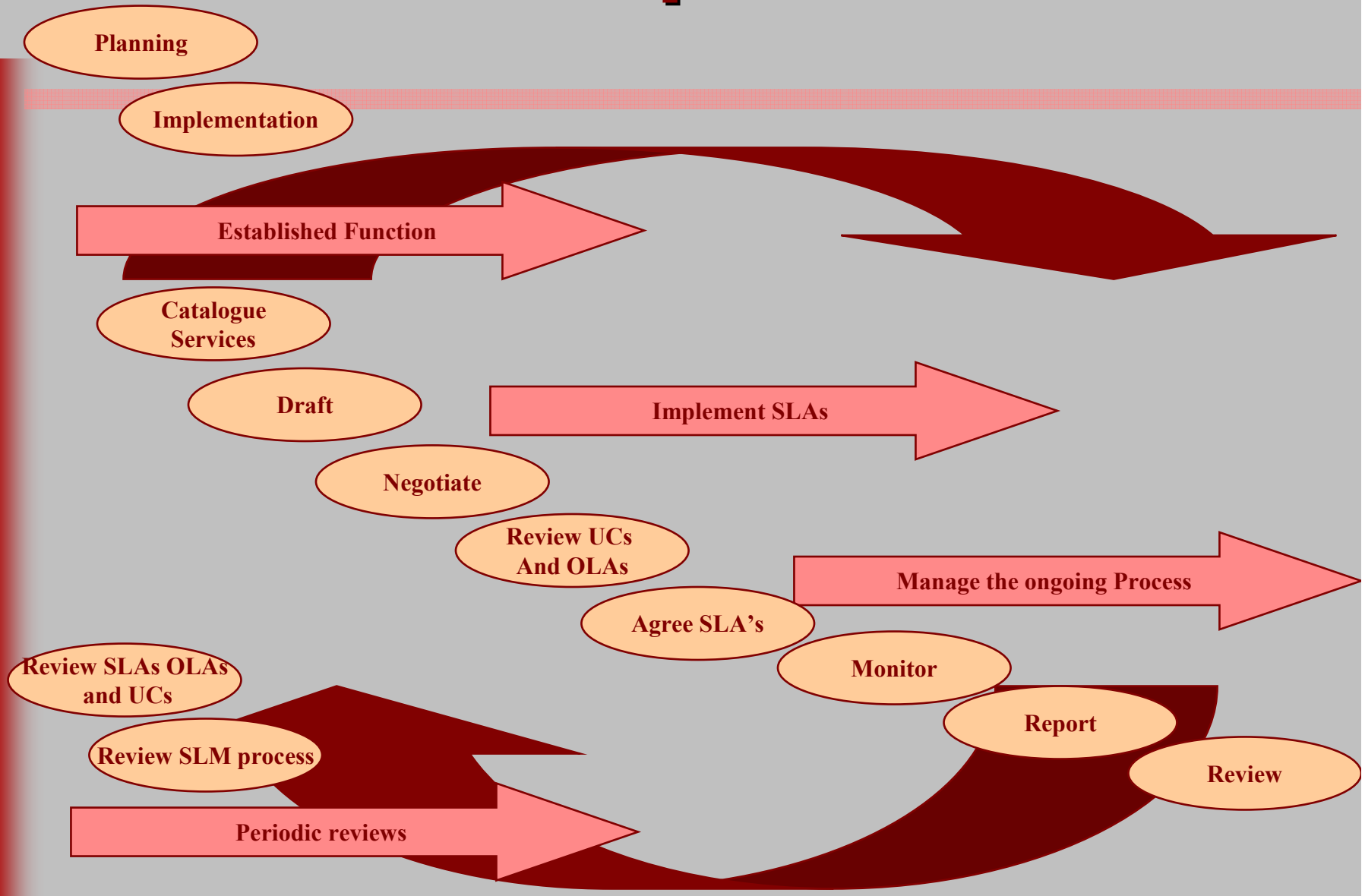
Service Level Management

- Service Level Management is designed to provide the balance between the Demand for IT services and the Supply of IT services by:
  - Knowing the requirements of the business
  - Knowing the capabilities of IT

Service Level Management - 2

- Service Level Management strives for:
  - Business-like relationship between customer and supplier (SAM – ISM)
  - Improved specification and understanding of service requirements (RD, REQM)
  - Greater flexibility and responsiveness in service provision
  - Balance customer demands and cost of services provision (REQM)
  - Quality Improvement (PPQA, VER)
  - Objective Conflict Resolution (RD, PP)

The SLM process



Service Support Functions

- Service Desk
- Incident Management
- Problem Management
- Change Management
- Configuration Management
- Release Management

Service Desk

- The Service Desk is the primary point of contact for all: (CM, REQM)
  - Calls
  - Questions
  - Requests
  - Complaints
  - Remarks
- Service Desk Main Functions
  - Restore the service as quickly as possible
  - Manage the incident life-cycle
  - Support business activities
  - Generate reports, communicate and promote issues

Service Desk - 2

- Service Desk Essentials
  - Serve as the single point of contact (CM, REQM)
  - Provide Customer Interface, Business Support, Incident Control and Management Information
  - Concentrate on incident life-cycle management
  - Determine Incident priority by business impact and urgency (REQM, CM)
  - Conduct assessment of priorities to determine the deployment or manpower and other resources (REQM)
  - Escalate issues to the proper next level as necessary (REQM, PPQA)

Incident Management

- Incident Management focuses on:
  - Restoring normal service as quickly as possible
  - Minimizing the adverse impact on business operations
  - Ensuring that the best possible levels of service quality and availability are maintained according to the SLAs (SAM – ISM)

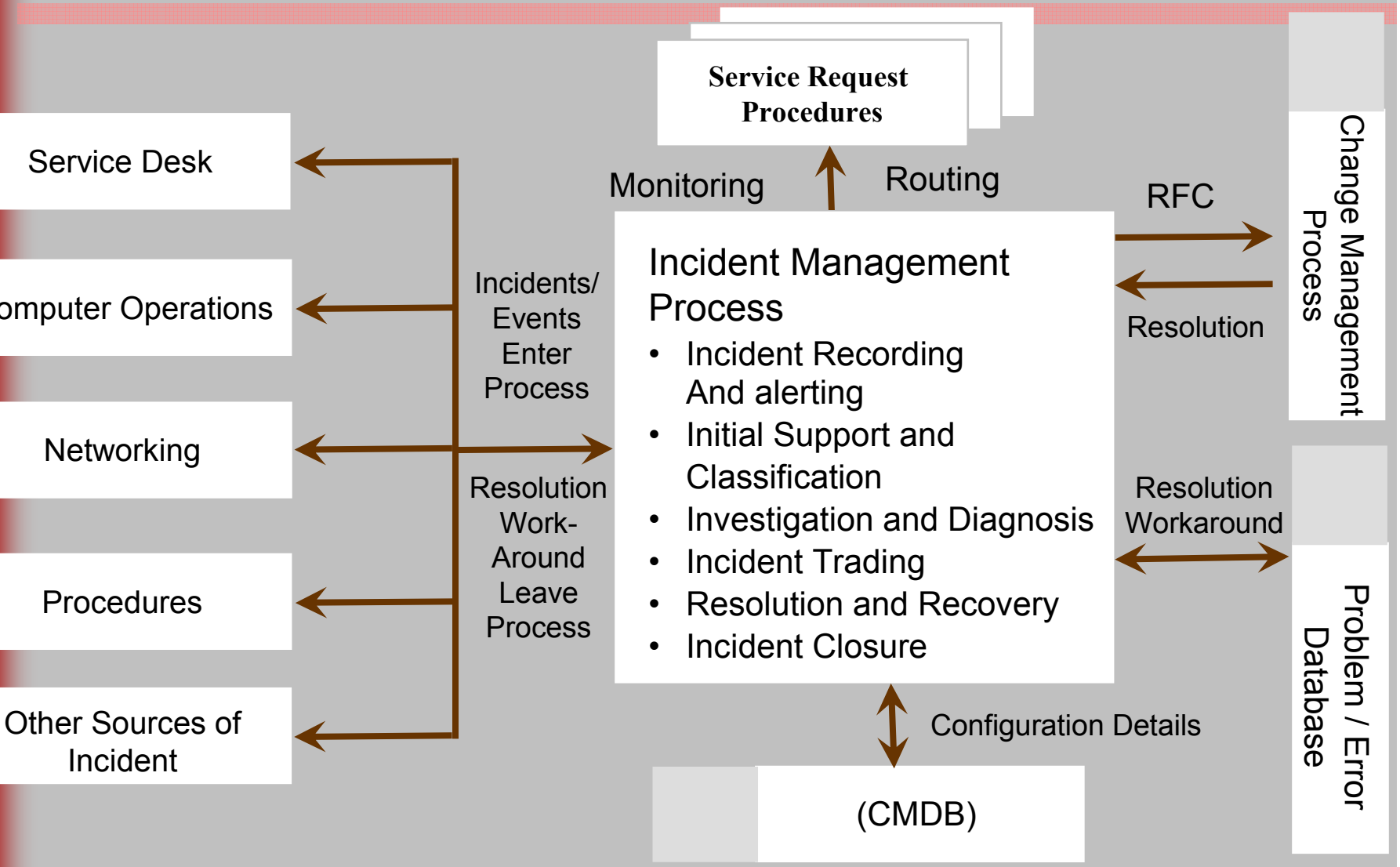
Incident Management - 2

- Incident Management Terms
  - Incident - any event which is not part of the standard operation of a service and which causes or may cause an interruption to or a reduction in the quality of that service
  - Work-Around – Intermediate method of avoiding an Incident or Problem
  - Service Request – Every Incident not being a failure in the IT infrastructure
  - Problem – The unknown root cause of one or more incidents (CAR)

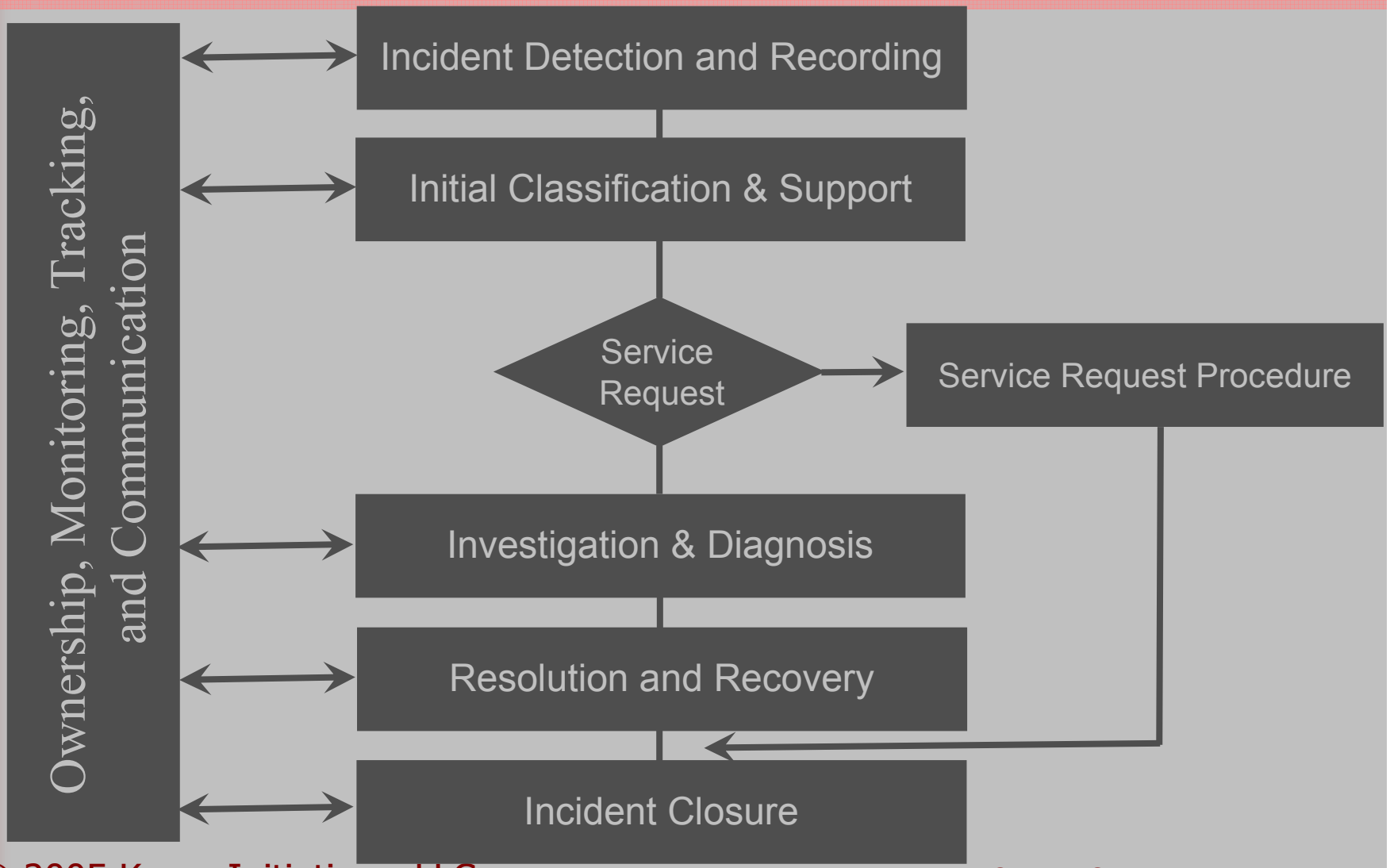
Incident Management - 3

- Known Error – A condition that exists after the successful diagnosis of the root cause of a problem when it is confirmed that a Configuration Item is at fault (CAR)
- Priority – Impact on the business + Urgency / Effect upon business deadlines (PP)
- Category – Classification of a group of Incidents (Applications, Hardware, etc.)
- Escalation – Escalating the incident up the management chain (REQM, PPQA)

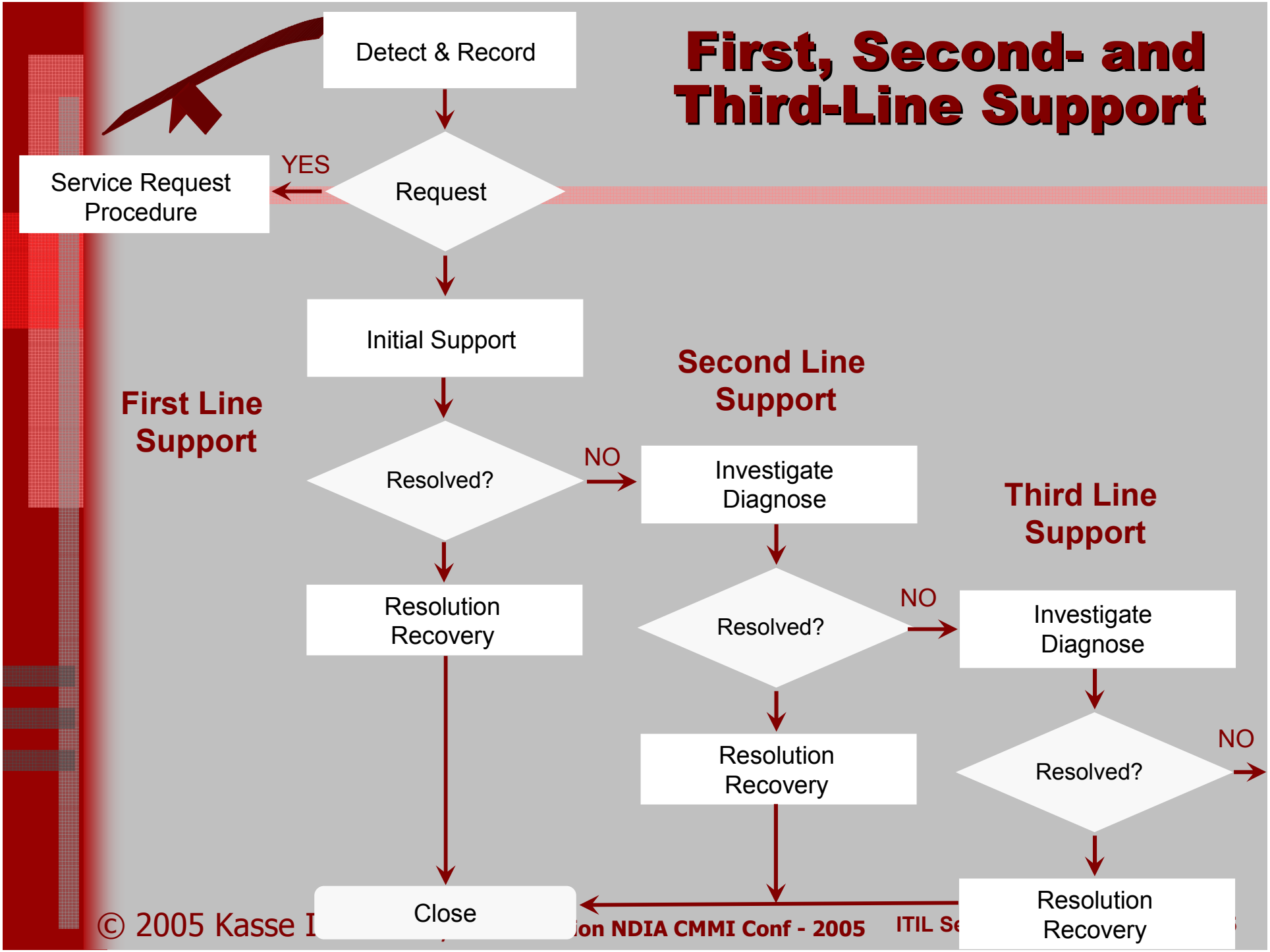
Scope of Incident Management



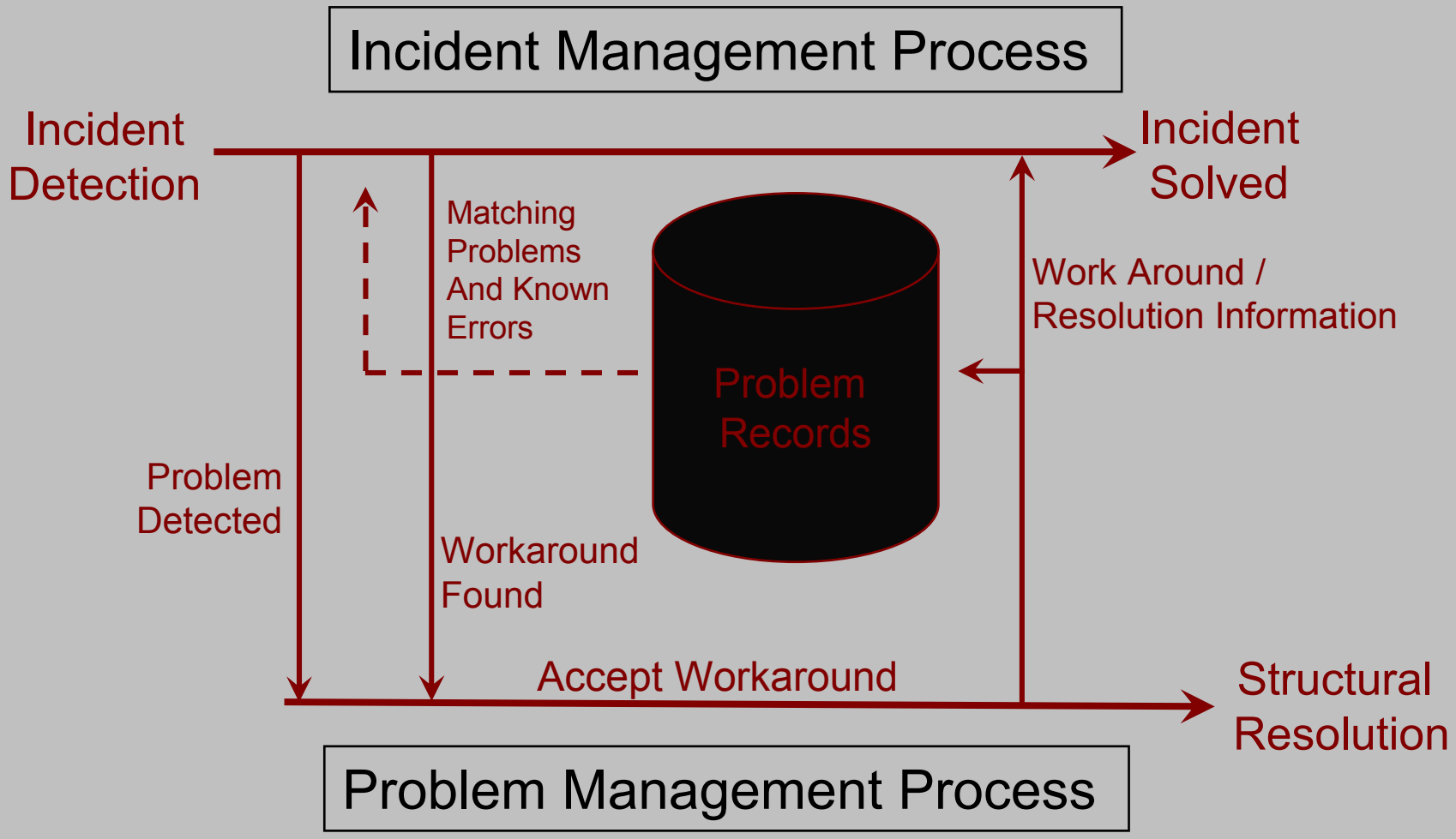
Incident Lifecycle



First, Second- and Third-Line Support



Handling Incident Work-Arounds and Resolutions



Problem Management

- Problem Management stabilizes the IT Services through:
  - Minimizing the consequences of incidents
  - Removal of the root causes of incidents (CAR)
  - Prevention of incidents and problems (OID, OPD, OPF)
  - Prevent recurrence of Incidents related to errors (CM, OPD, OPF, OID)
- End goal is not to be the best in fixing incidents but to become proactive and stop the problems from occurring in the first place

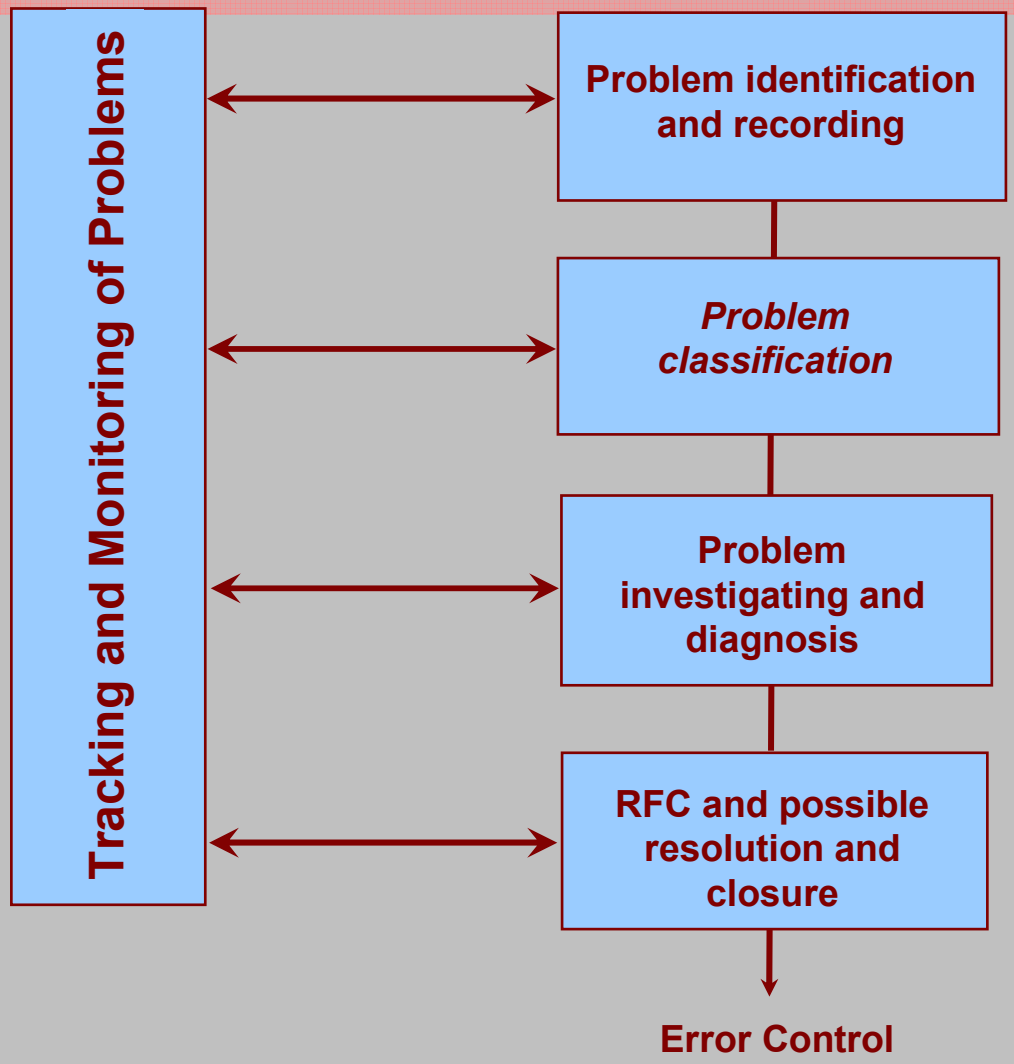
Problem Management - 2

- Inputs to Problem Management process
  - Incident details (CM)
  - Configuration details (CM)
  - Defined work-arounds
- Outputs from Problem Management process
  - Known errors
  - Requests for change
  - Updated Problem Records including work arounds and solutions

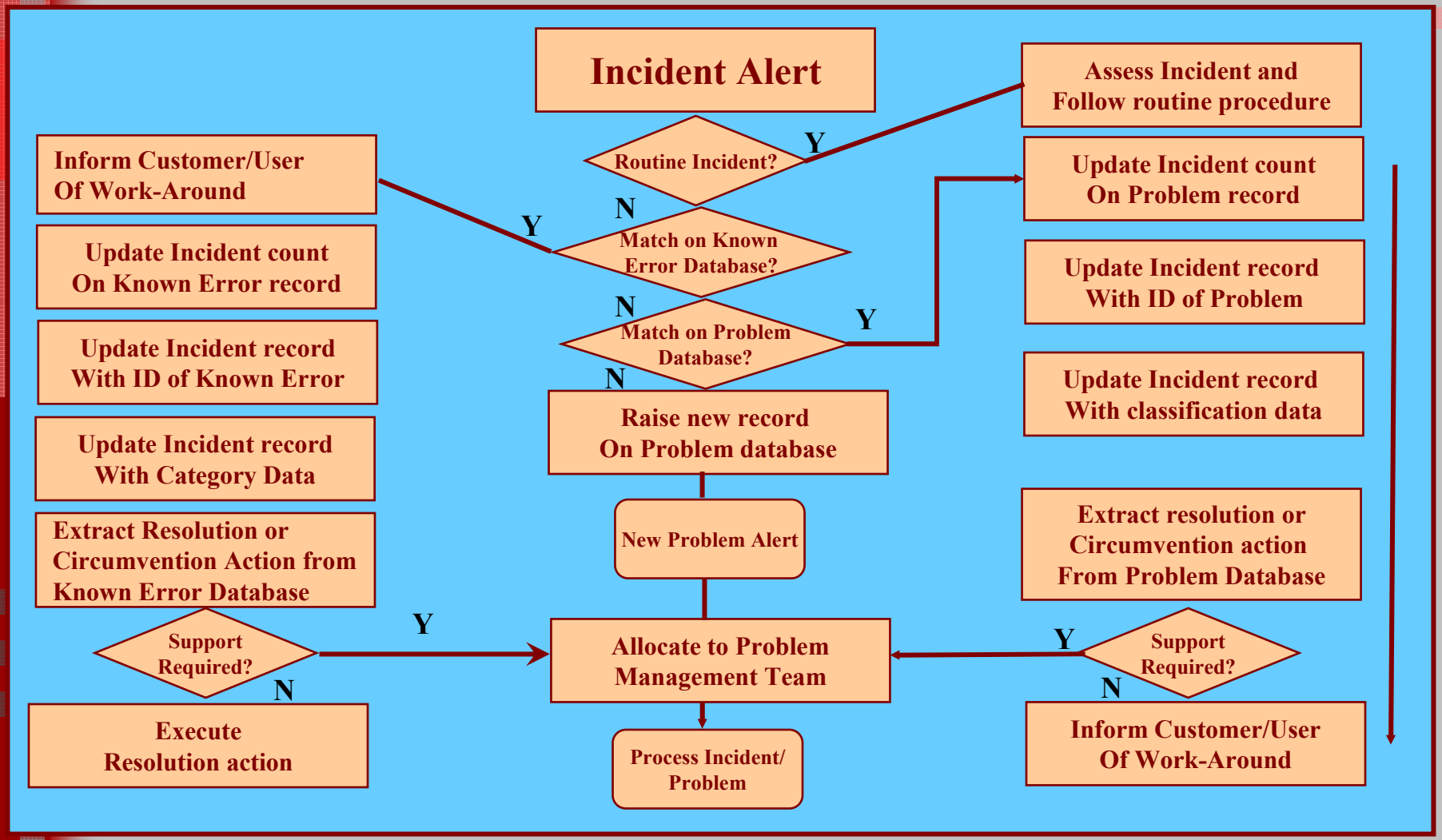
Problem Management - 3

- Known Errors resulting from development should be made known to the Helpdesk (GP 2.7 – Identify and Involve Relevant Stakeholders)
- Proactive Problem Management focuses on:
  - Trend Analysis
  - Targeting Support Action
  - Providing Information to the Organization

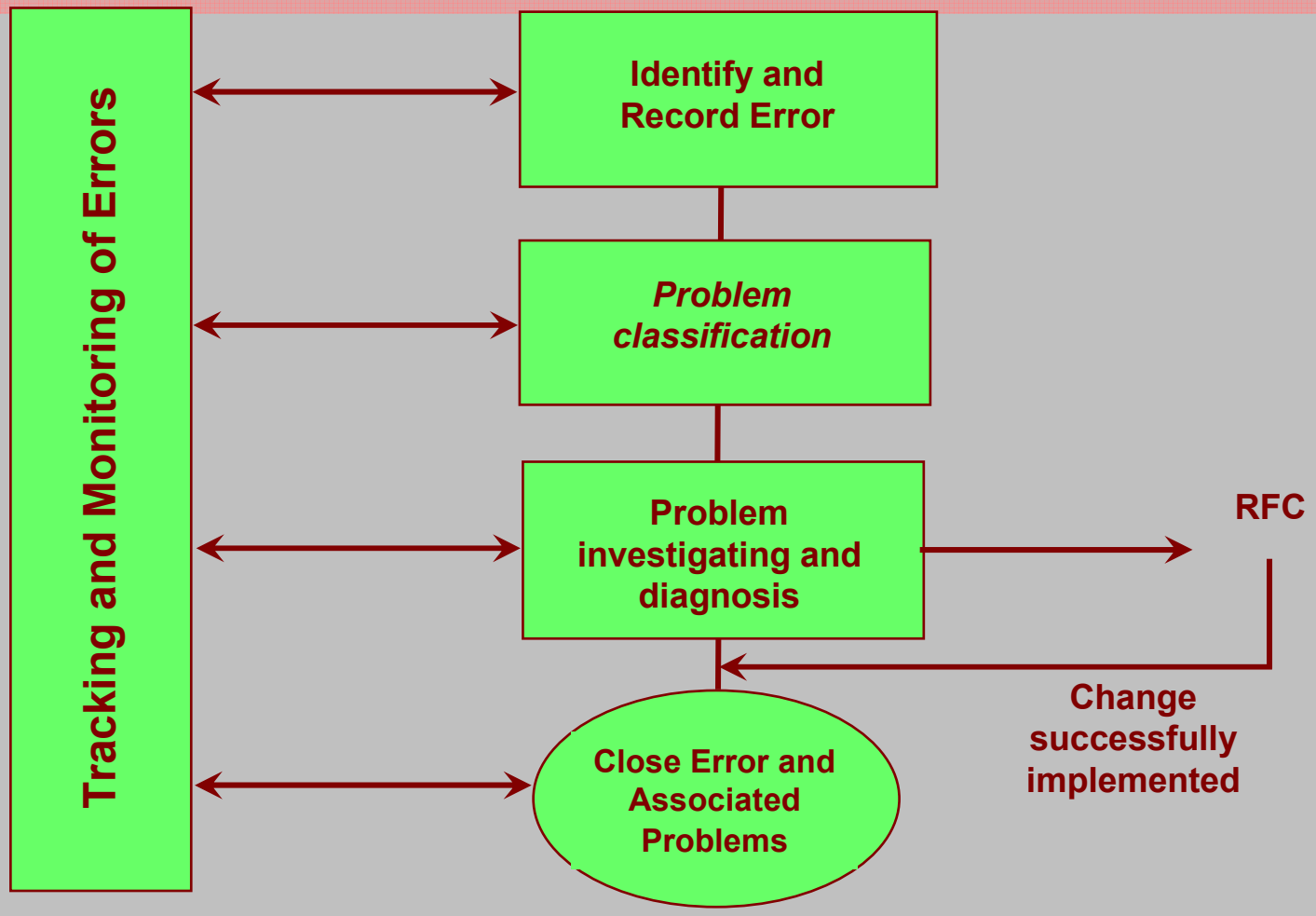
Problem Control



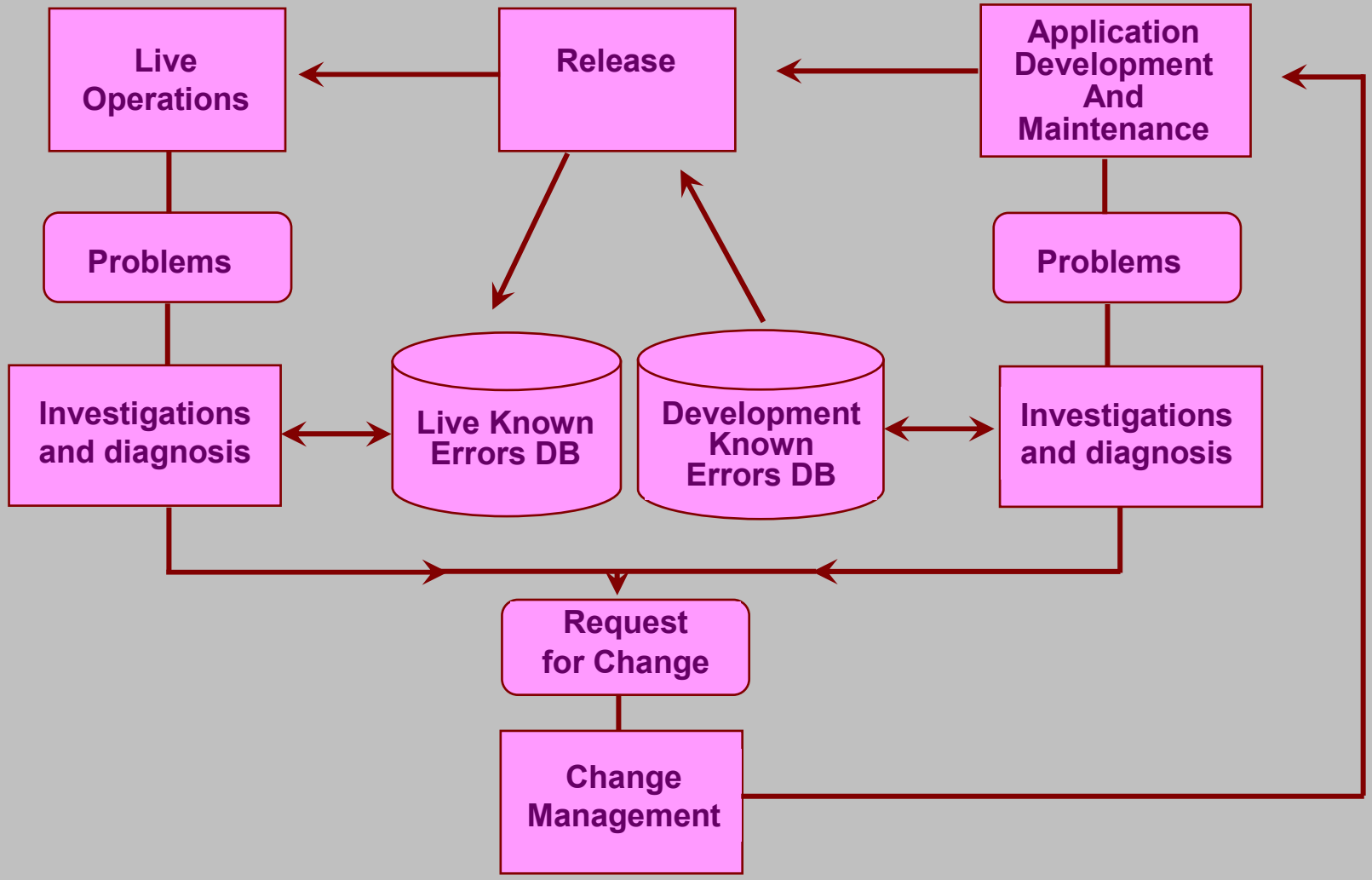
Incident-Matching Process Flow



Error Control



Error Cycle in the Live and Development Environments



Change Management

- Change Management is implemented to implement approved changes efficiently, cost effectively and with minimal risk to the existing and to the new IT infrastructure
- Change Management tasks include:
  - Filtering Changes (REQM, CM)
  - Managing Change Process (CM)
  - Managing Changes (CM)
  - Chairing CAB (CM)
  - Review and Closure (CM)
  - Management Information (CM, GP 2.7)

Change Management - 2

- Change Management Process (CM)
  - Request for a change
  - Registration and Classification
  - Monitoring and Planning
  - Approving
  - Build and Test
  - Authorize Implementation
  - Implementation
  - Evaluate

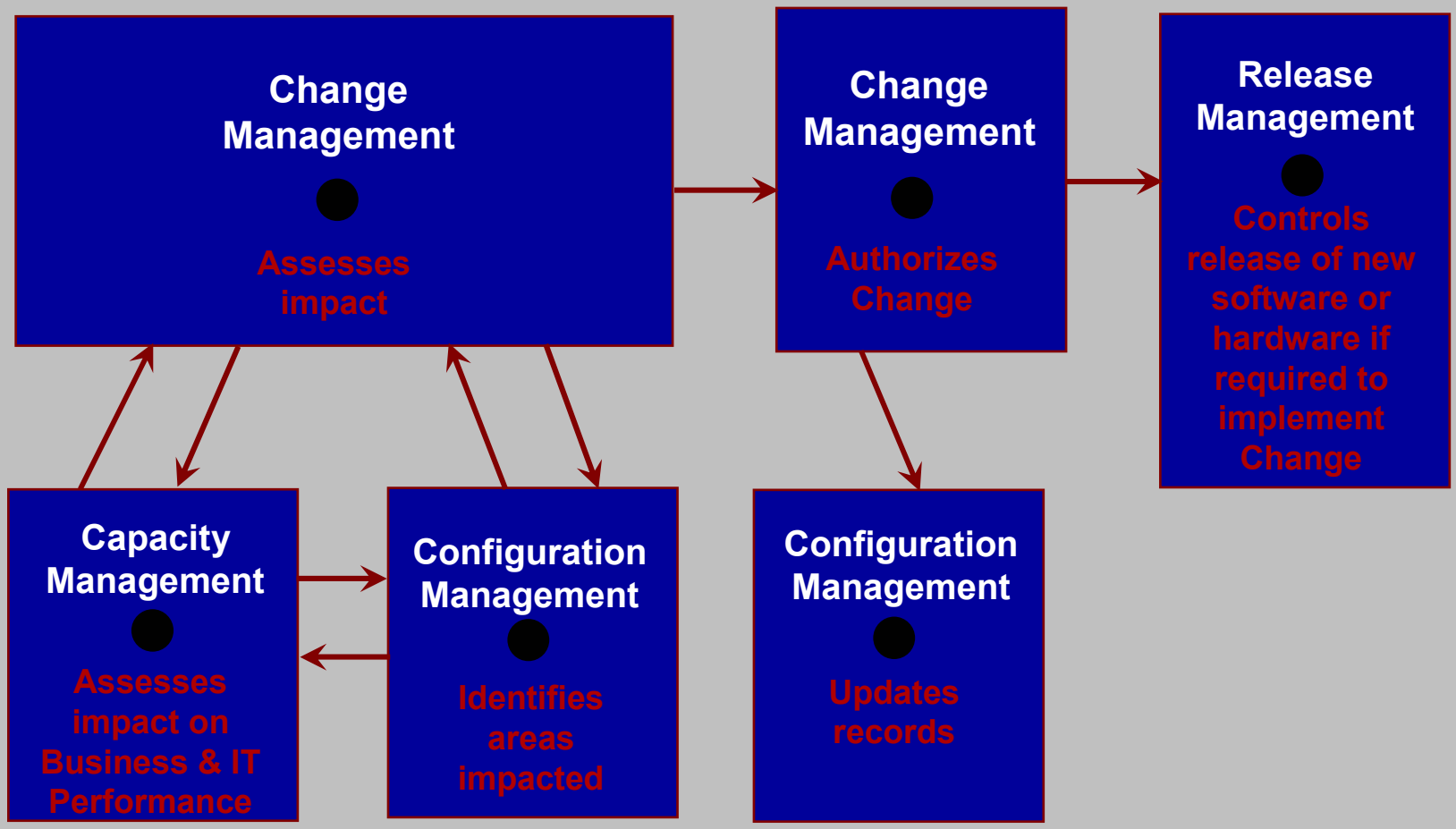
Change Management - 3

- Impact of a Change should be formulated according to incident classifications such as:
  - Category 1 – Little impact on current services
  - Category 2 – Clear impact on services
    - Request for Change (RFC) must be discussed in the Change Advisory Board
  - Category 3 – Significant impact on the services and the business
    - The RFC will have to be submitted to the board level Executive Committee

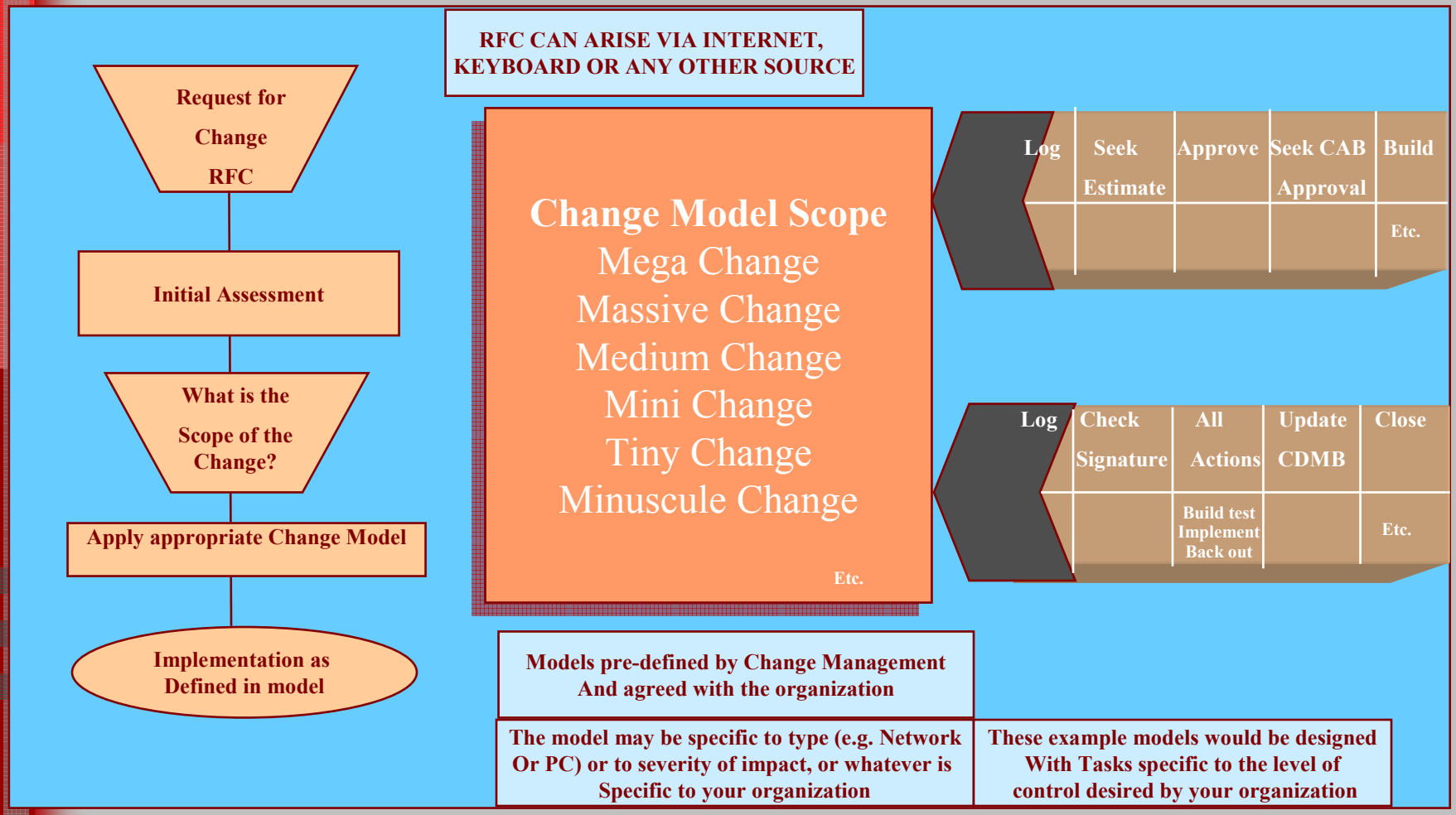
Change Management - 4

- Changes should be prioritized according to the business objectives and strategic planning
- A Change “Backout” plan must always be possible
- Change management always ends with a review of the change (CM)

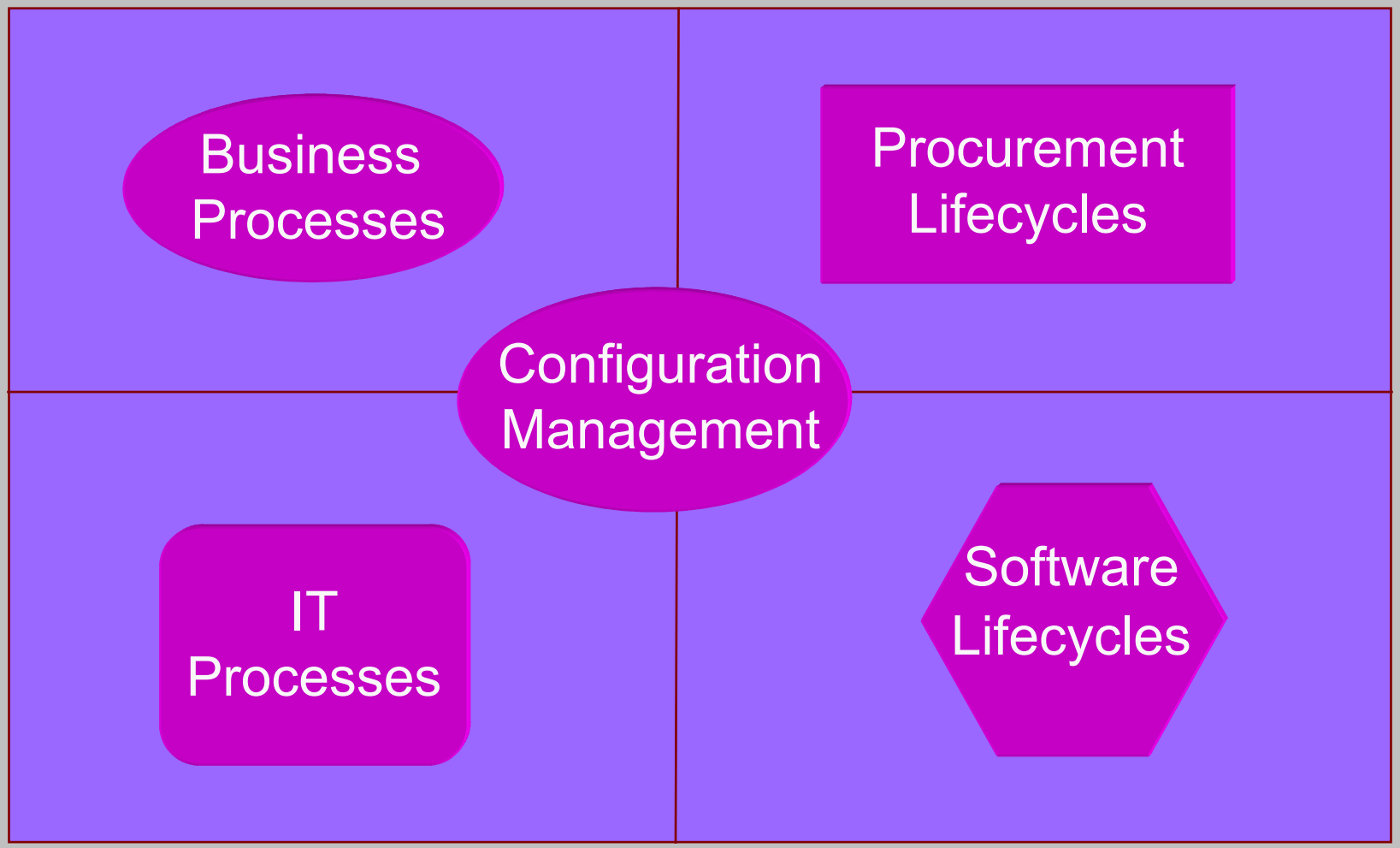
Relationship between Capacity Management, Change Management, Configuration Management, and Release Management



An Approach for Standard Change Management Procedures



Scope for Extending Change Management and Configuration Management Control



Configuration Management

- Configuration Management (CM)
  - Provides information on the IT Infrastructure to all other processes and the IT Management
  - Enables control of the infrastructure by monitoring and maintaining information on:
    - Resources needed to deliver services
    - Configuration Item status and history
    - Configuration Item relationships

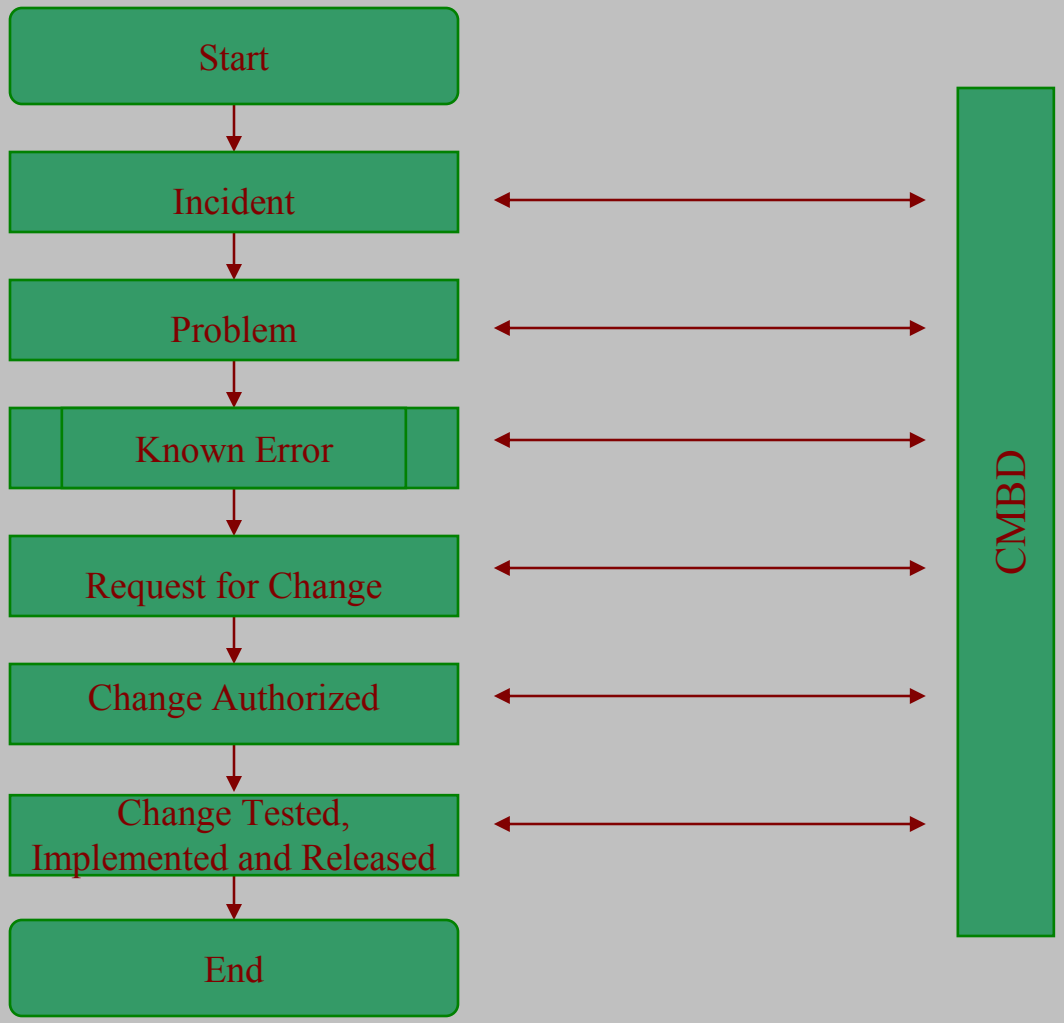
Configuration Management - 2

- Configuration Management Tasks
  - Identification and naming
  - Management Information
  - Verification (VER, PPQA)
  - Control
  - Status Accounting
- Configuration Management Database
  - Contains all relevant details of each Configuration Item
  - Contains details of the important relationships between CIs

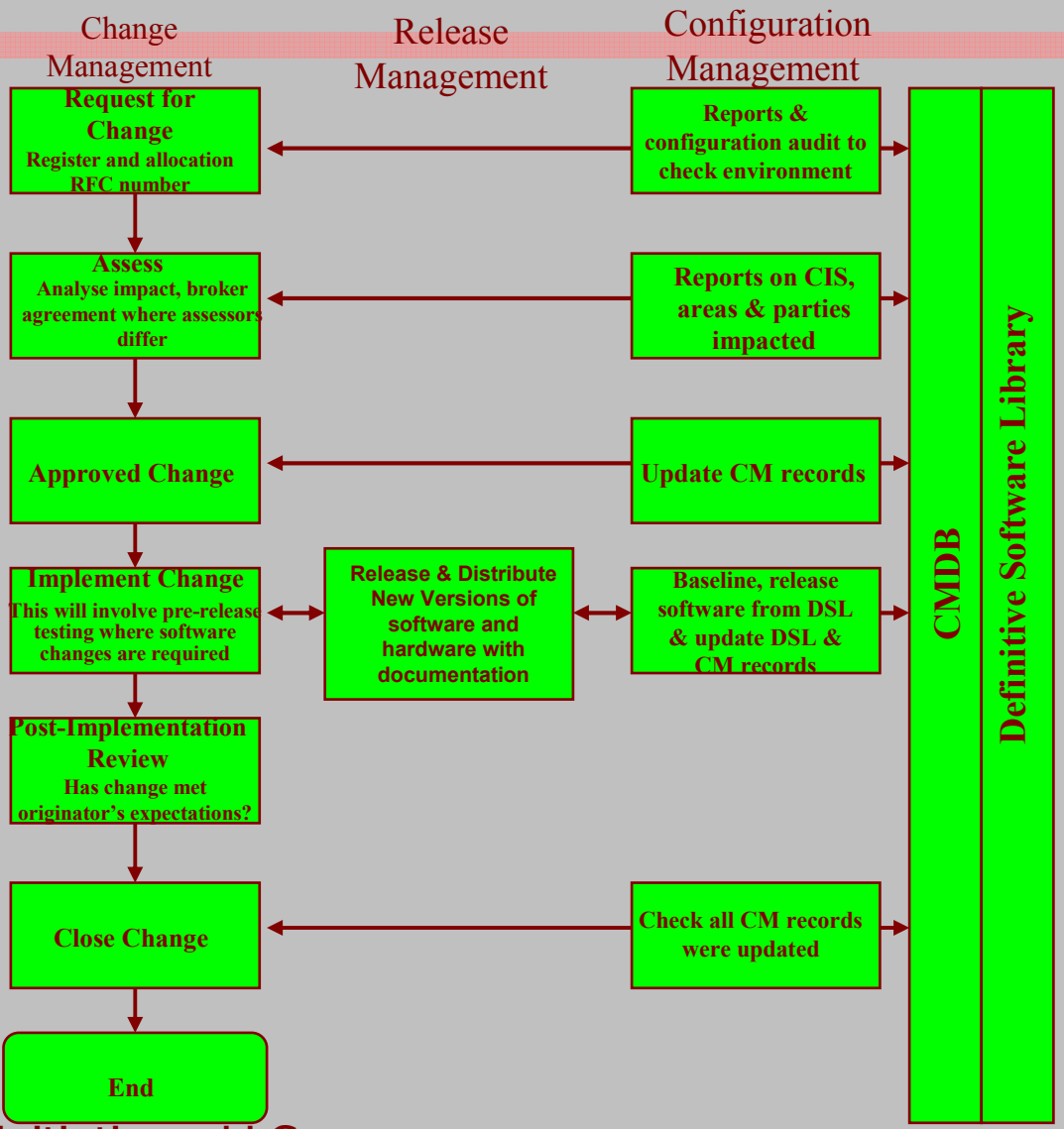
Configuration Management - 3

- Configuration Item
  - Is needed to deliver a service
  - Is uniquely identifiable
  - Is subject to change
  - Can be managed
  - Has a category, relationships, attributes and a status
- Configuration Management support all other processes!

CMDB interfacing to Incident, Problem, Change and Release Management



Relationship between Configuration, Change and Release Management



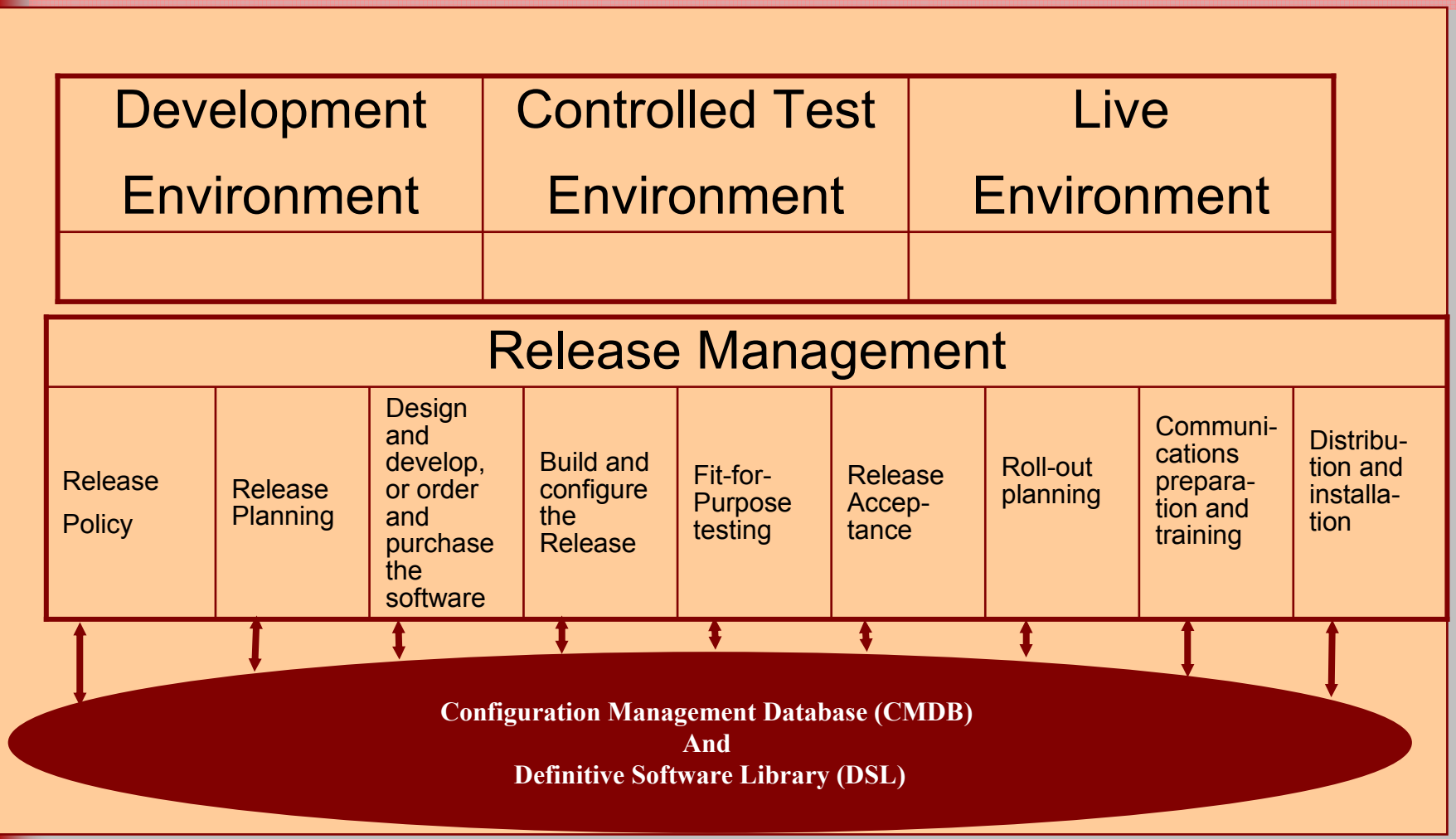
Release Management

- Release Management provides service support by:
  - Safeguarding all software and related items (CM)
  - Ensuring that only tested / correct version of authorized software and hardware are in use
  - Ensuring that the right software is in the right place at the right time
  - Ensuring that the right hardware is in the right place at the right time

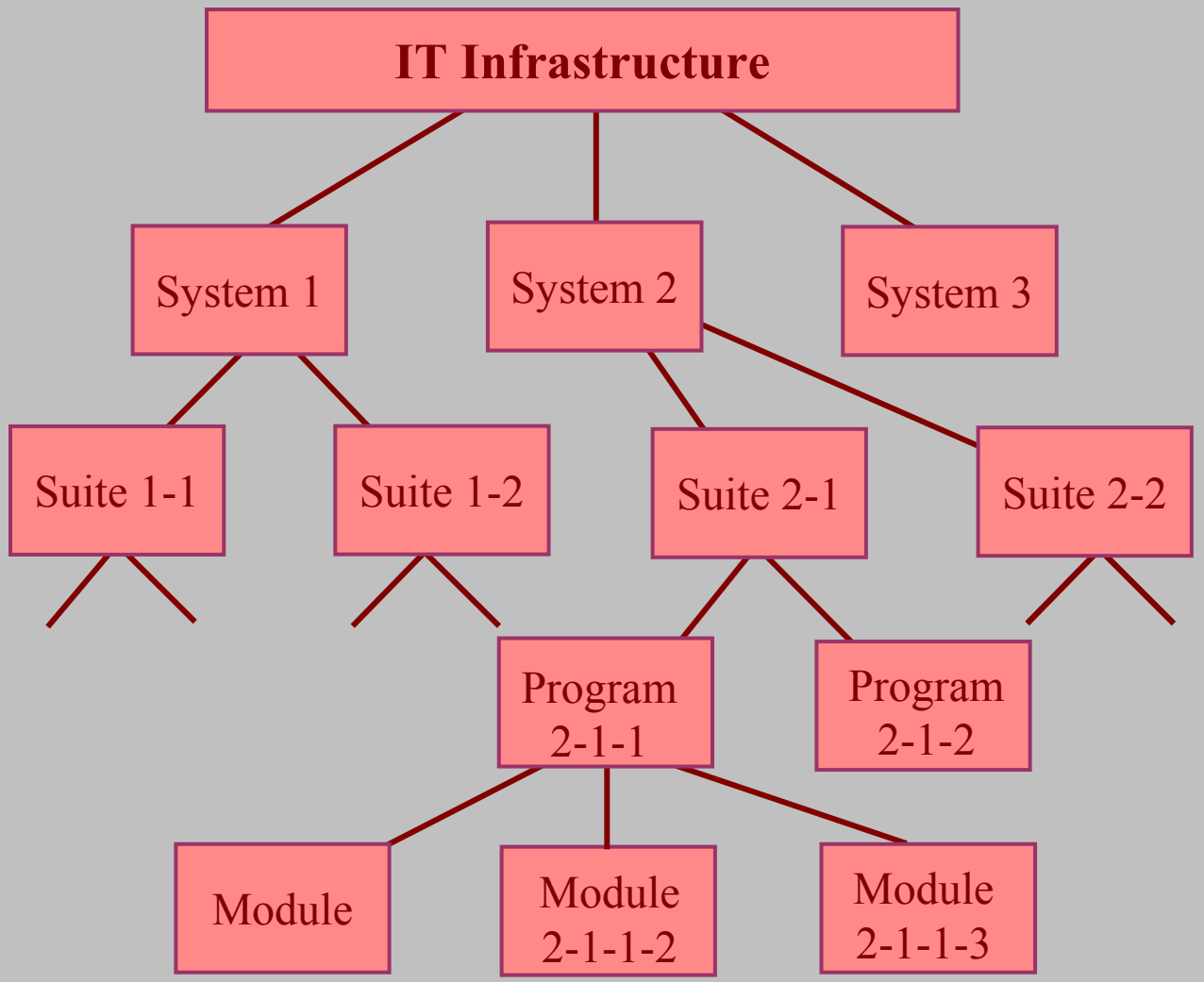
Release Management - 2

- Releases are done under the control of Change Management (CM)
- Release Management tasks include:
  - Define the release policies
  - Controlling the Software Library
  - Controlling the Hardware Storage
  - Distributing the Software and Associated CIs
  - Carrying out Software audits
  - Managing the software releases
  - Overseeing the build of the software releases

Major Activities in Release Management (VER – VAL)



Simplified Example of an IT Software Infrastructure



Definitive Software Library and CMDB relationship