

***DCAG***

**Auditing Contingency Recovery  
Plans and Implementing  
Business Continuation Strategies  
for the future.**

***Presented by:***

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# Schedule of Events

<b>I.</b>	<b>Introduction and Overview of Seminar</b>	<b>09:00</b>
<b>II.</b>	<b>Auditing Contingency Plans</b>	<b>09:15</b>
	<b>A. Contingency Planning Concerns</b>	<b>09:30</b>
	<b>B. Overview of Contingency Planning</b>	<b>10:00</b>
	<b>C. Auditing Contingency Recovery Plans</b>	<b>10:30</b>
	<b>D. Discussion of actual Recovery Audits</b>	<b>11:00</b>
	<b>Lunch</b>	<b>12:00</b>
<b>III.</b>	<b>Strategies for Eliminating Audit Exceptions</b>	<b>1:00</b>
	<b>A. Implementing Contingency Recovery Practices</b>	<b>1:20</b>
	<b>B. Optimizing Data Processing Operations</b>	<b>2:00</b>
	<b>C. Getting Started and Project Plan</b>	<b>3:00</b>
	<b>D. Discussion and actual work experiences</b>	<b>4:00</b>
	<b>E. Closing statements and wrap-up</b>	<b>4:30</b>

# Auditing Contingency Recovery Plans

## **I. Performing a Risk Assessment:**

### **A. General Recovery Parameters:**

- 1. Contingency Operations,**
- 2. Business Restoration,**
- 3. Lead Times,**
- 4. Responsibility for Disaster Recovery.**

### **B. Disaster Recovery Needs:**

- 1. Develop Recovery Plans,**
- 2. Enhance Project Life Cycle and Systems Management,**
- 3. Test Recovery Plans,**
- 4. Implement Recovery Operations,**
- 5. Maintain Recovery Plans,**
- 6. Insure protection of business assets,**
- 7. Assure adherence to Regulatory requirements.**

**8. Assure Insurance requirements are met.**

**9. Assure Vendor Contracts and Reciprocal Agreements are in place and maintained.**

**C. Develop Recovery Plan(s), as per existing Standards and Procedures.**

**D. Monitor Recovery Test(s) and Post Mortem meetings.**

**E. Review Recovery Plan Maintenance Standards and Procedures.**

**F. Review Problem and Crisis Management Standards and Procedures.**

# **Contingency Planning Strategy**

## **II. Implementing Contingency Planning:**

**A. Risk Assessment.**

**B. Organizational Structure:**

- 1. Contingency Command Center,**
- 2. Contingency Coordinators,**
- 3. Recovery Teams.**

**C. Standards and Procedures Manual.**

**D. Recovery Plan Testing.**

**E. Recovery Plan Maintenance.**

# **Optimizing Data Processing Operations**

## **III. Systems Management and Controls:**

### **A. Problem and Crisis Management:**

- 1. Help Desk,**
- 2. Problem Escalation,**
- 3. Recovery Procedures.**

### **B. Change Management and Quality Assurance.**

### **C. Inventory and Asset Management.**

### **D. Operations and Network Control Center Operations.**

### **E. Evaluation Process and Effectiveness Measurements.**

# ***DCAG Services***

## **Company Overview:**

- \* **Established in 1979,**
- \* **Founder, Thomas Bronack, is president and CEO.**

**DCAG supplies Data Processing and Office Support services, which include:**

- \* **Full-range of Consulting Services,**
- \* **Permanent Placement,**
- \* **Temporary Placement,.**
- \* **Outsourcing.**

# ***DCAG Contingency Planning Services***

- \* Providing solutions for Information Systems problems.**
- \* Unique understanding of Systems Management.**
- \* Knowledge of Equipment Manufacturers, Software Suppliers, and Leasing.**
- \* DCAG can assist through the following services:**
  - ◆ Inventory and Configuration Management,**
  - ◆ Analyzing the use of Resources to meet Business Needs,**
  - ◆ Enterprise - Wide platform configurations and connectivity,**
  - ◆ Disaster Avoidance and Contingency Planning procedures,**
  - ◆ Asset Management,**
  - ◆ Systems Management disciplines,**
  - ◆ EDP Security and Access Controls,**
  - ◆ Business Optimization,**
  - ◆ Documentation and Training services,**
  - ◆ Full range of Engineering, Development and Implementation services,**
  - ◆ Full range of Support and Maintenance services.**

# **Presentation Agenda:**

- **Contingency Planning concerns,**
- **Auditing Contingency Recovery Plans,**
- **Strategies for eliminating Audit Exceptions going forward,**
- **Implementing Contingency Recovery practices and testing recovery plans,**
- **Optimizing data processing operations, while safeguarding business facilities and processes.**

# Contingency Planning Concerns

- **Why you need a Recovery Plan,**
- **Overview of Contingency Planning,**
- **Establishing Contingency Planning,**
- **Contingency Planning Functions and Responsibilities,**
- **Creating, Testing, and Implementing Contingency Plans,**
- **Supporting and Maintaining Contingency Plans.**

# Why you need a Recovery Plan

## \* Justifying the Need for a Recovery Plan.

- Enterprise-Wide Commitment
- Disaster and Business Recovery Planning implementation.
- Risk Management implementation.

**“For Contingency Planning to be successful, a company-wide commitment, at all levels of personnel, must be established and funded. Its purpose is to protect the company, its business, its shareholders, and its employees.”**

## \* Laws and Regulators.

- Controller of the Currency (OCC).
  - OCC-177 Contingency Recovery Plan.
  - OCC-187 Identifying Financial Records.
  - OCC-229 Access Controls.
  - OCC-226 End-User computing.

**“Define all Regulatory, Legal, Financial, and Industry rules and regulations that must be complied with, and assign the Risk Manager with the duty of insuring that these exposures are not violated”.**

## \* Penalties.

- Three Times the Cost of the Outage.
- Jail Time is possible.

**“Have the Legal and Auditing Departments define the extent of Risk and Liabilities, in terms of potential and real Civil and Criminal damages that may be incurred.”.**

## \* Insurance.

- Business Interruption Insurance.
- Directors and Managers Insurance.

**“Once you have defined your exposures, construct an insurance portfolio that protects the business from sudden damages that could result from a disaster event.”**

## **The best Insurance against disasters.....**

**" The best protection against disasters is  
a current and accurate Recovery Plan,  
that is frequently tested...."**

**"Both Disaster Recovery Plan(s) for data centers, and Business Recovery Plan(s) for office locations must be implemented. Combining all recovery planning efforts will improve the organization's ability to protect itself from encountered disaster events, while training personnel to react to potential disaster events and conditions."**

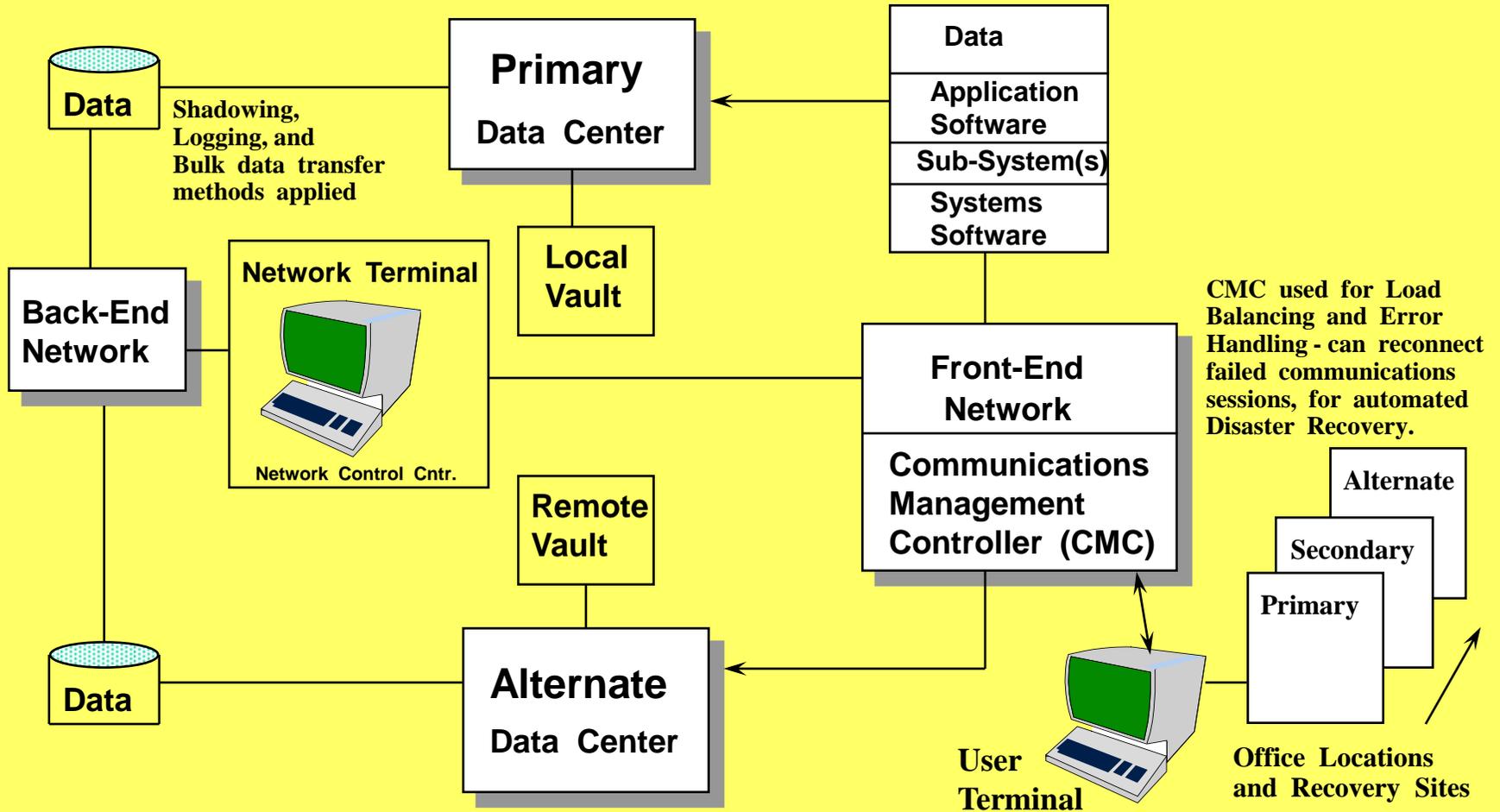
# Overview of Contingency Planning

- \* Overview of data processing environment,
- \* Application Profile,
- \* Application Interconnections,
- \* Contingency Recovery Disciplines,
- \* Contingency Recovery Interfaces,
- \* Contingency Recovery Structure.

# Overview of Data Processing

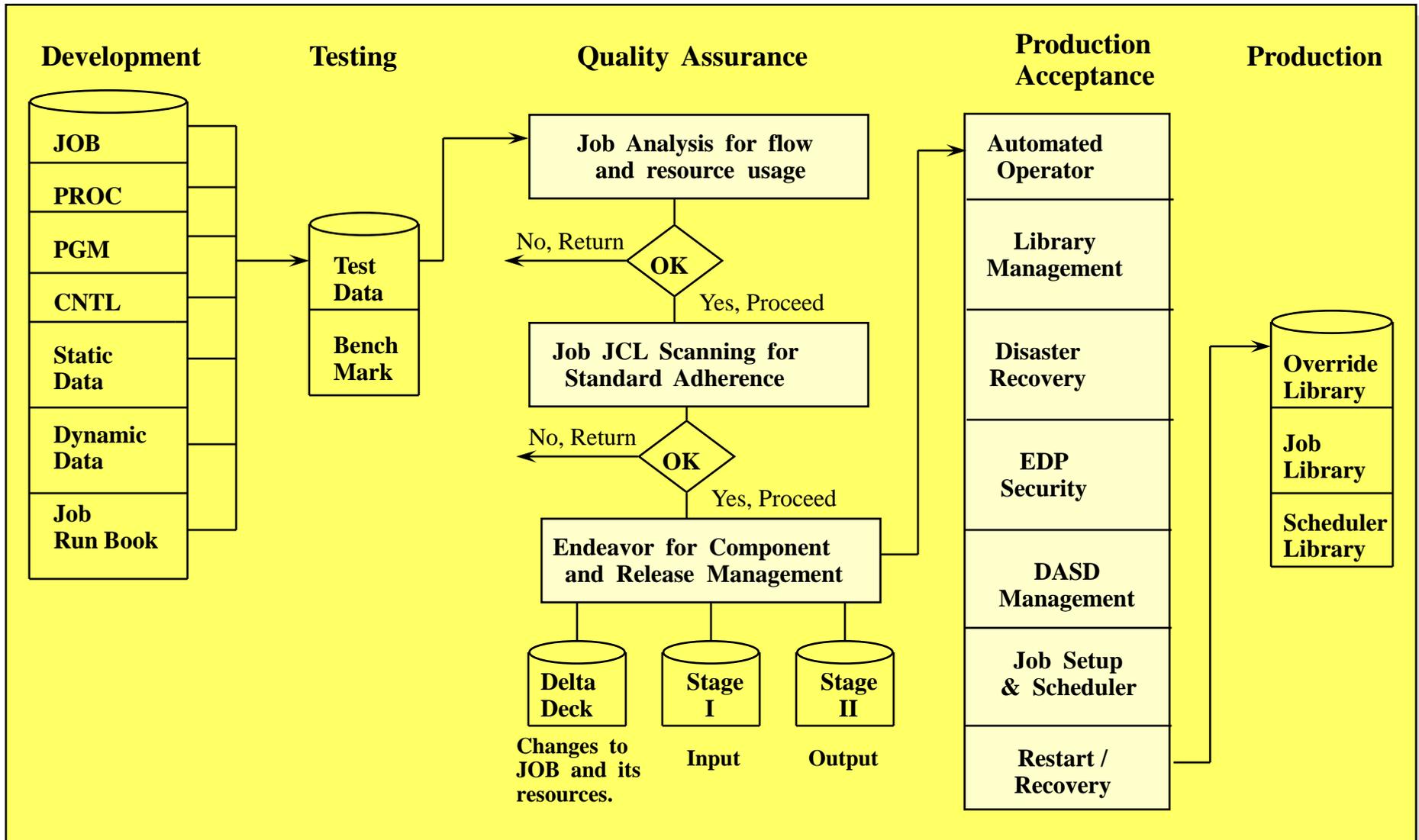
- \* **General Overview,**
- \* **Job Development through Production Acceptance,**
- \* **Overview of Mid-Range Environments,**
- \* **Overview of Local Area Networks,**
- \* **Vital Records Management and Electronic Vaulting,**
- \* **Application Profile,**
- \* **Application Interconnections.**

# General Overview.

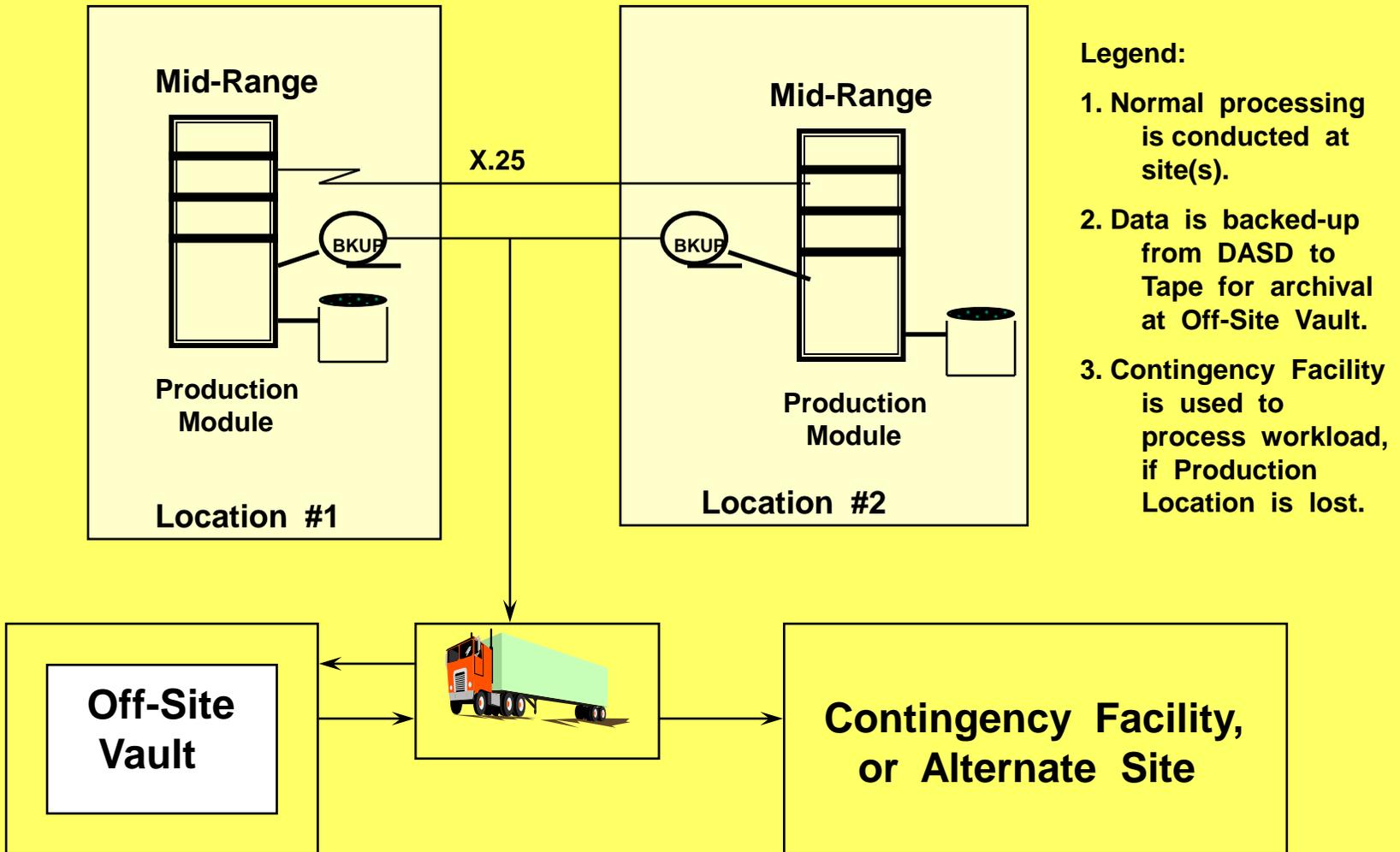


***“Keeping data in sync at Primary and Alternate Site...”***

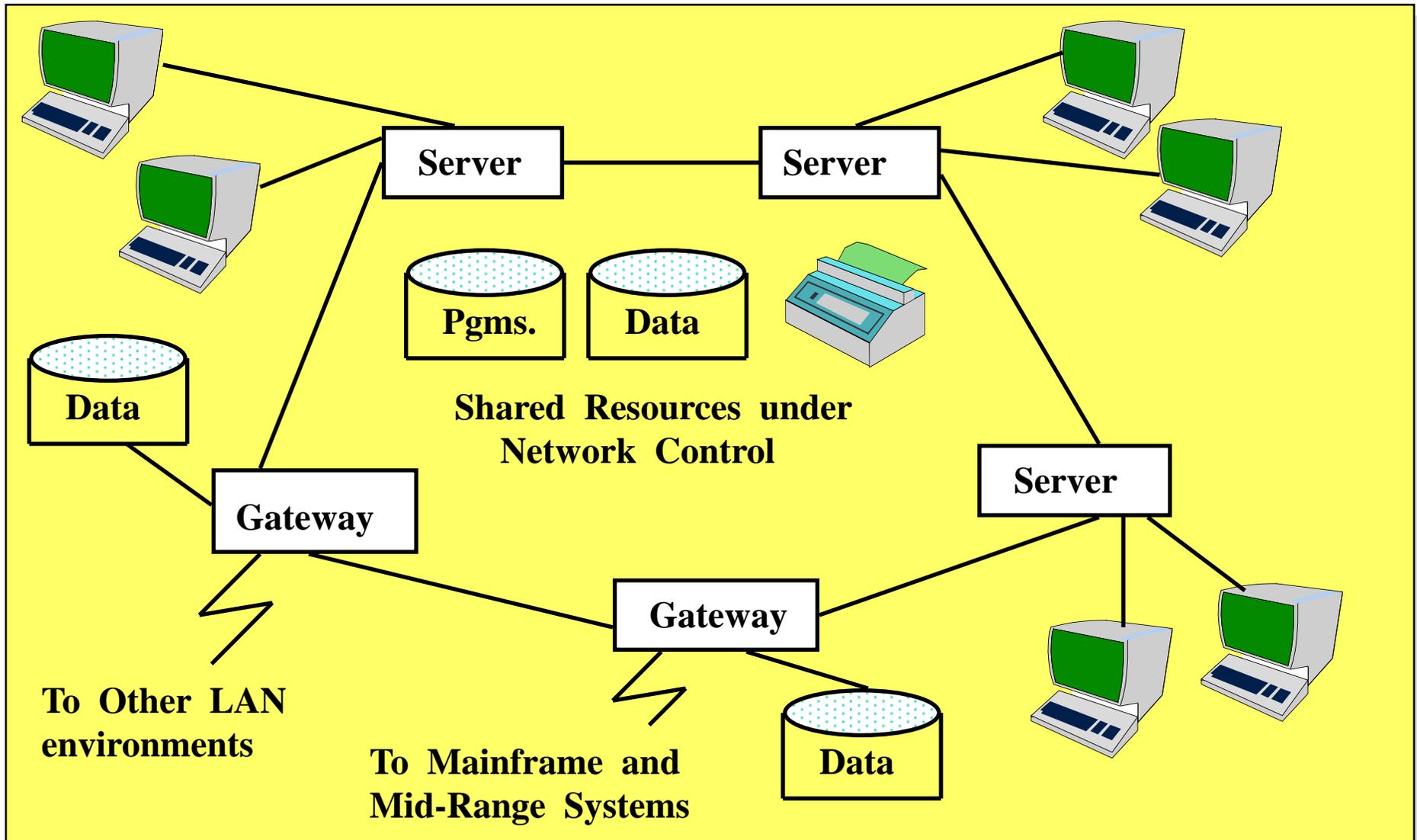
# Job Development through Production Acceptance



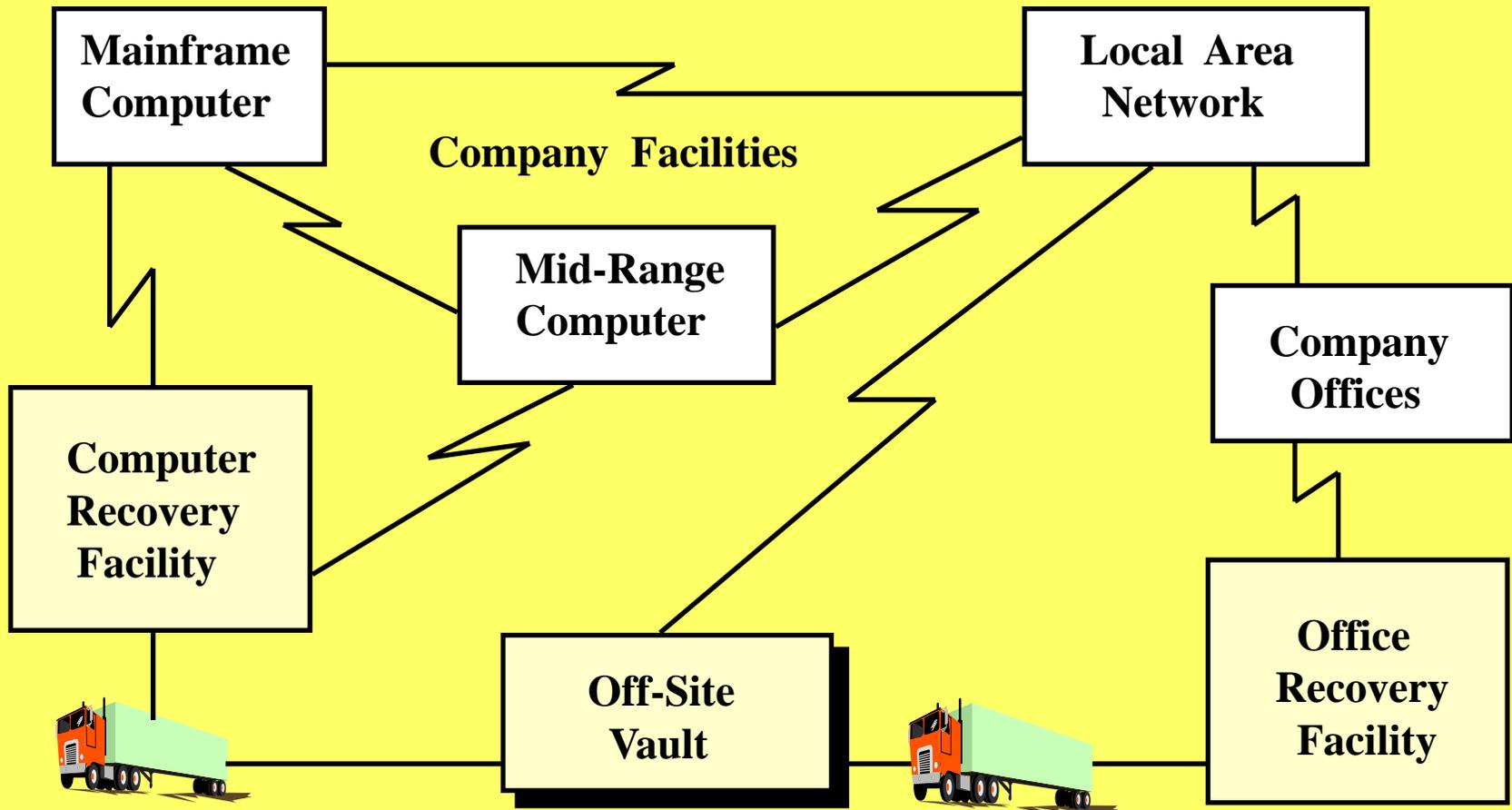
# Overview of Mid-Range Environments



# Overview of Local Area Network Environments

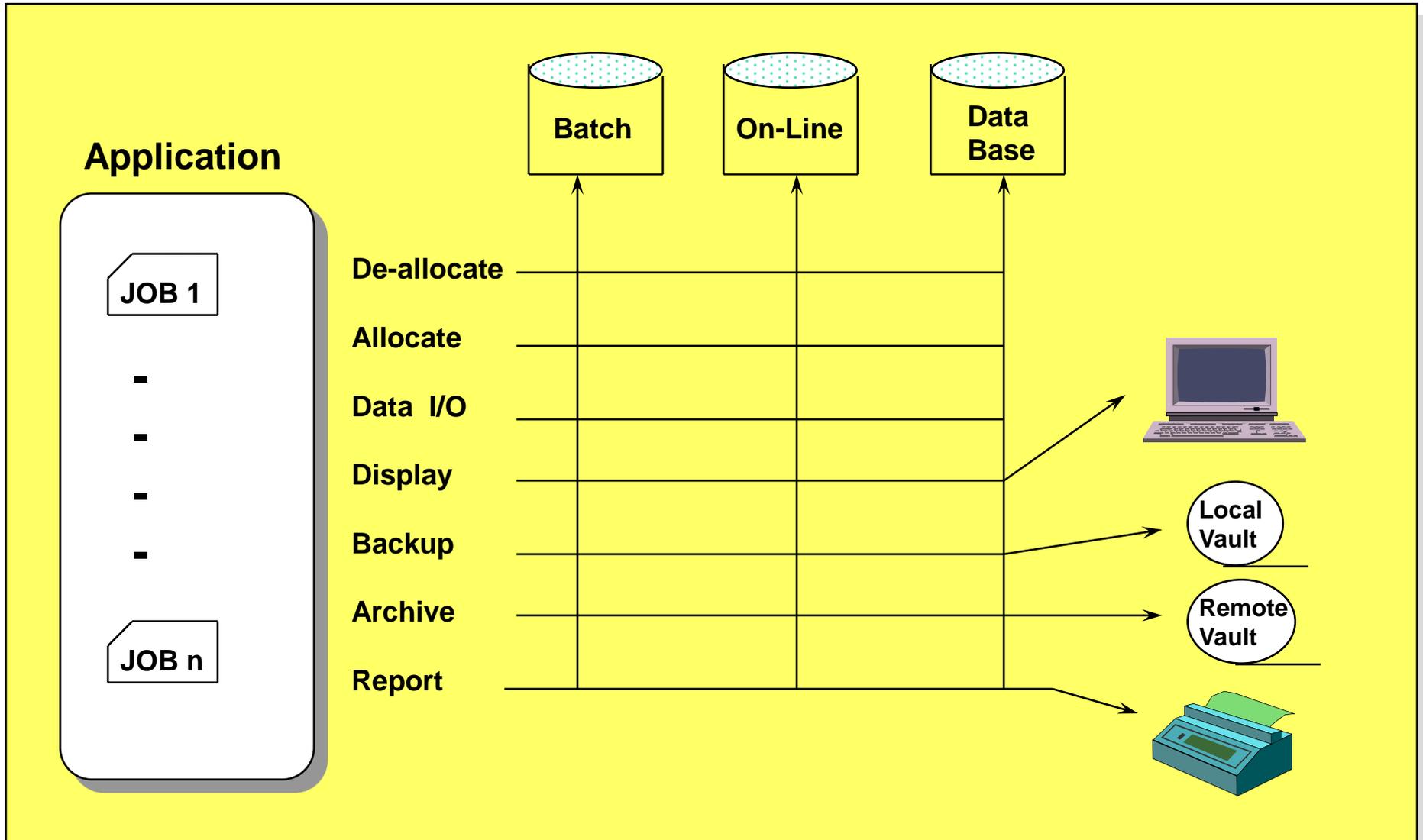


# Vital Records Management and Electronic Vaulting

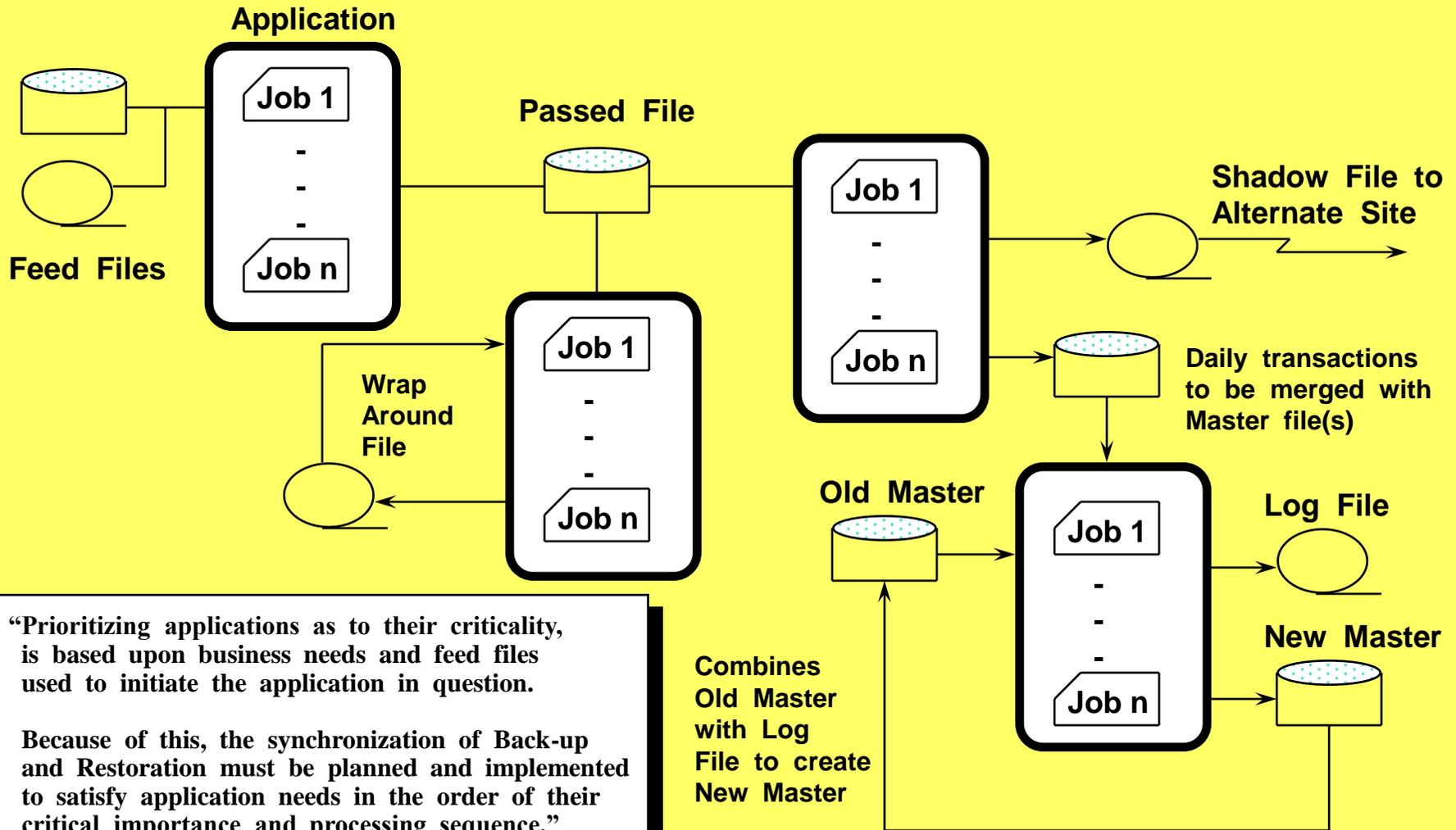


**Recovery Facilities and Vital Records Management**

# Application Profile



# Application Interconnections



“Prioritizing applications as to their criticality, is based upon business needs and feed files used to initiate the application in question.

Because of this, the synchronization of Back-up and Restoration must be planned and implemented to satisfy application needs in the order of their critical importance and processing sequence.”

# **Auditing Contingency Recovery Plans**

- \* How disasters occur, and avoiding them,**
- \* Contingency Recovery Disciplines,**
- \* Contingency Recovery Interfaces,**
- \* Contingency Recovery Structure,**
- \* Contingency Recovery Standards and Procedures,**
- \* Contingency Recovery Testing,**
- \* Maintaining Contingency Recovery Plans.**

# How disasters occur, and avoiding them....

“Since disasters are no more than problems affecting critical components, it stands to reason that the elimination of standards violations will reduce problems and avoid the likelihood of disasters.”

**Disaster**

An unscheduled business interruption.

**Problem**

Problems cause disasters when they affect critical business services Problems are defined as deviations from standards, or missed business delivery.

**Standards and Procedures**

To safeguard against Disasters, insure that standards are validated for critical resources

**Business Continuity**  
Disaster Avoidance Disciplines

**Environment**

**Regulations and Legal Requirements**

**Equipment**

Single Point of Failure

**Auditor**

Corporate & EDP

**Software**

System, Sub-System, Application.

**DATA**

Vital Records Management  
Vaulting, Recovery, Access Controls.

**People**

Job Descriptions

**Locations**

Business Recovery

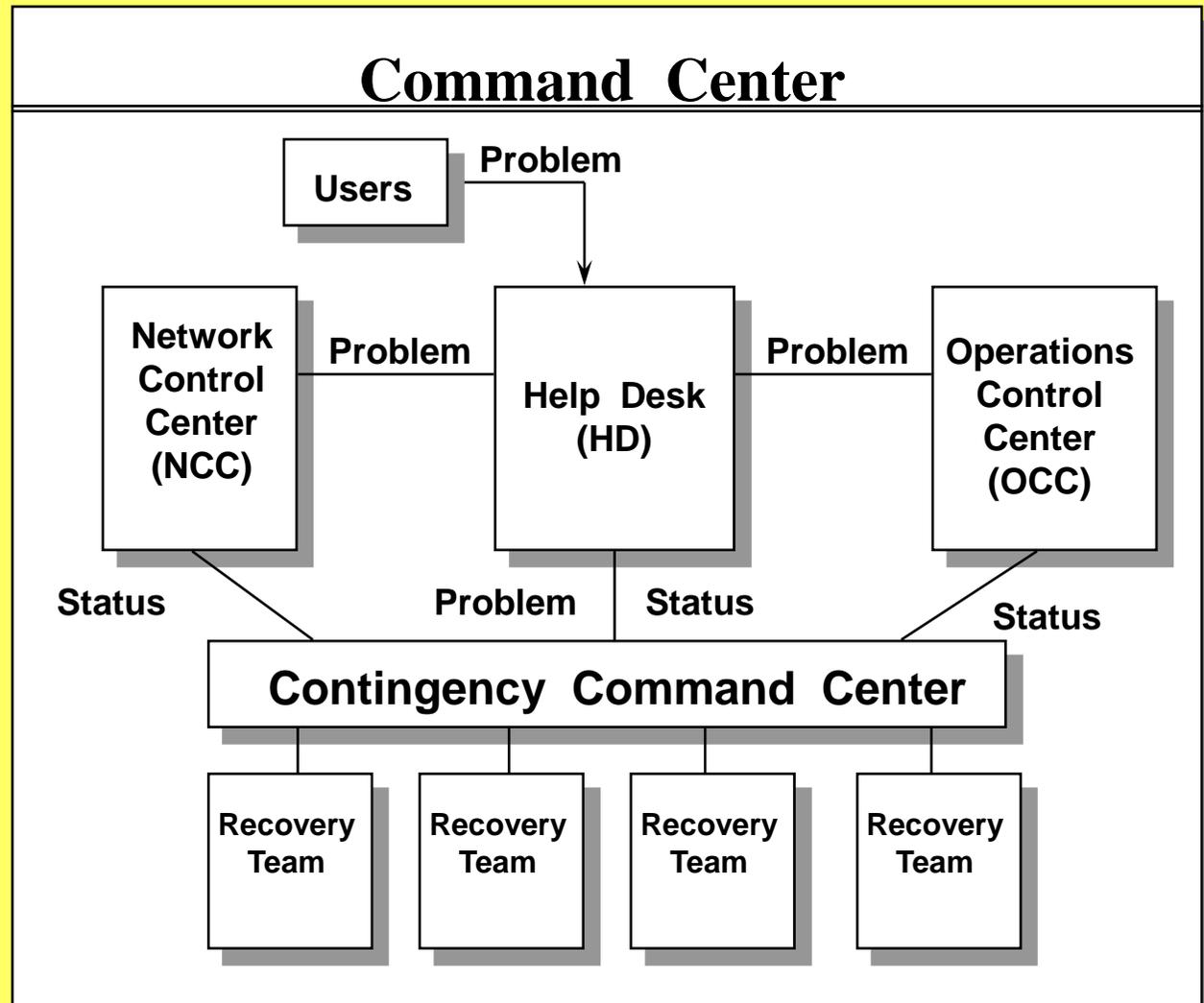
**Vendors**

Recovery Site, Vault.

# Contingency Command Center -- Overview

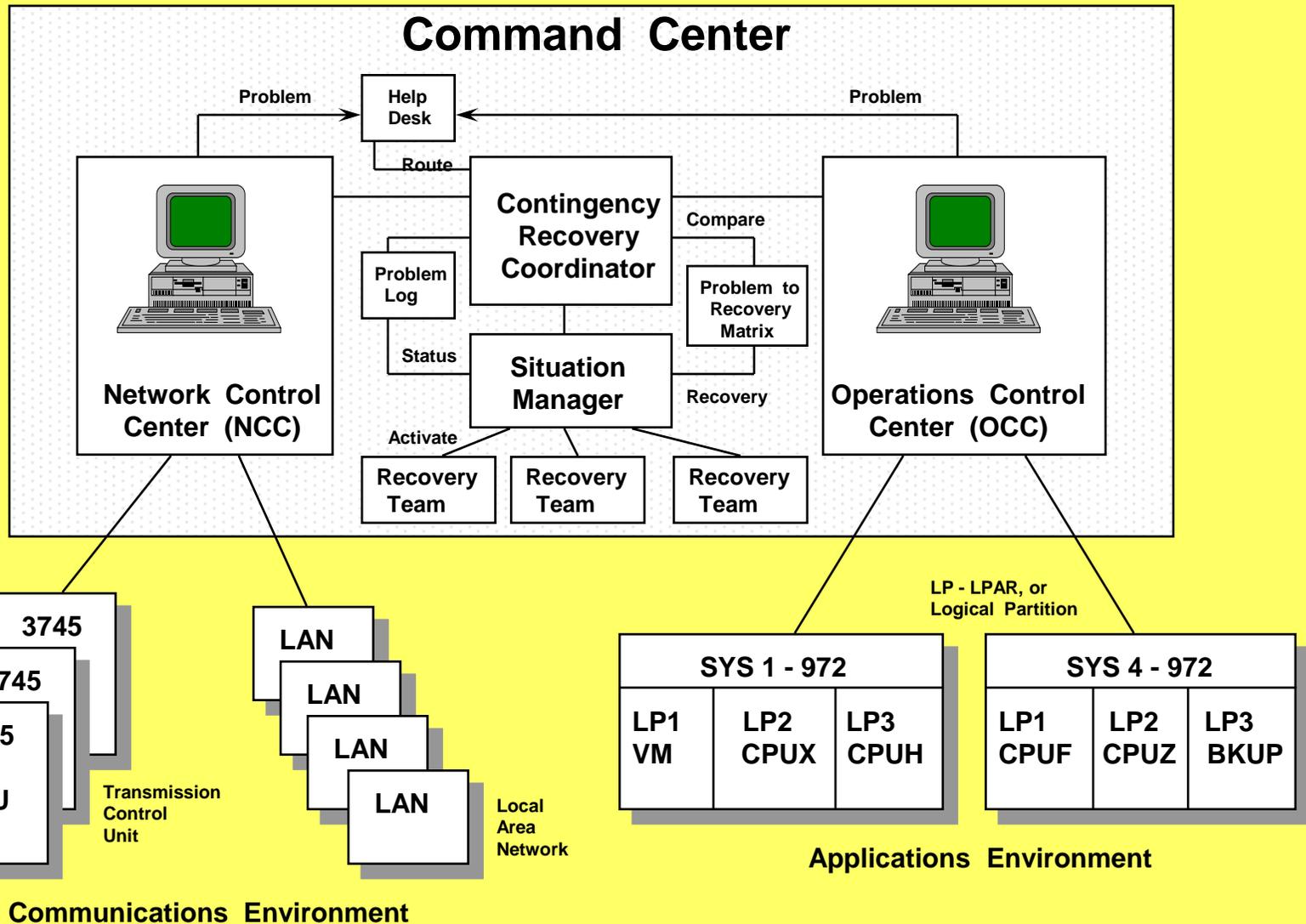
## Contingency Command Center:

- Housed within Command Center,
- Activated during Emergencies,
- Relates problems to Recovery Plan,
- Activates appropriate Recovery Team(s),
- Coordinates Recovery Actions,
- Maintains status on disaster and crisis situations,
- Communicates with;
  - Network Control Center,
  - Operations Control Center,
  - Help Desk,
  - Technical Staff, and
  - Management.
- Will escalate recovery actions, if necessary.



# Command Center Interactions

*“Providing a centralized control point for application and communications support, the Command Center can recognize problems and activate appropriate recovery teams in response to crisis situations.”*



# Specific Recovery Techniques

## On-Line Recovery

Transaction Messages and Codes  
Forward Recovery

## Data Recovery

DASD Management responsibilities  
Data Base responsibilities  
Backup and Restore procedures  
Vital Records Management

## Communications Recovery

Problem Circumvention's

## Automated Recovery via Communications Management Controller

Load Balancing and Error Recovery

## Incorporating Recovery within Change Control

Error Messages and Abnormal Completion (ABEND) Codes  
Testing Recoveries prior to Quality Control.

## Help Desk

Problem Scripts

## Diagnostic Approach

## Batch Recovery

Job Overrides  
Proc Recovery Steps  
Messages and Abend Codes

Job Card

Job Override

Proc Steps

Production Steps

Proc COND  
Steps  
for Recovery

Recovery Steps  
driven by COND  
statements on  
Production Steps.

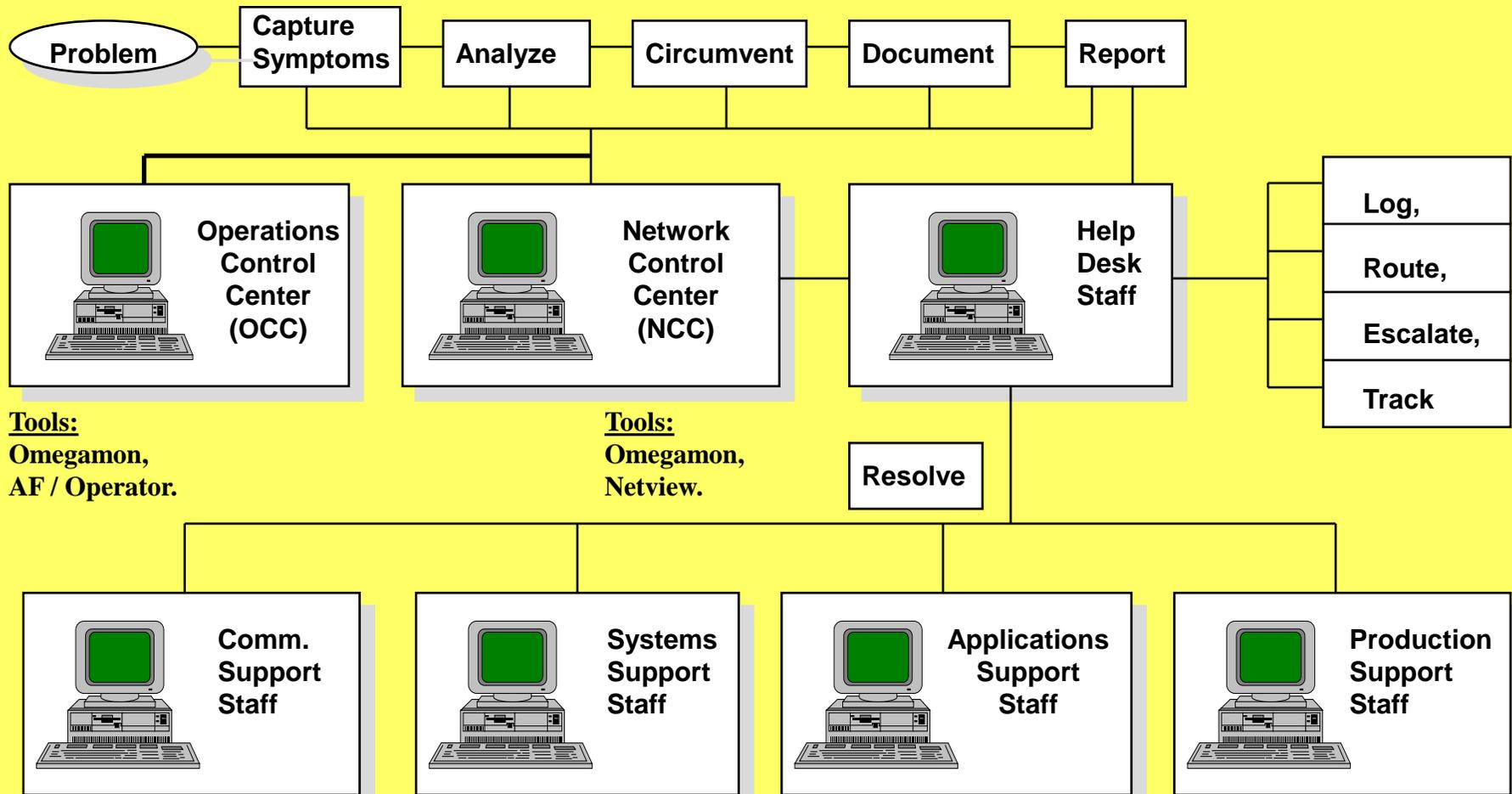
## Job Runbook

Job Profile,  
Set-up,  
Processing,  
Balancing,  
Output Distribution,  
Error Conditions,  
Recoveries,  
Contacts.

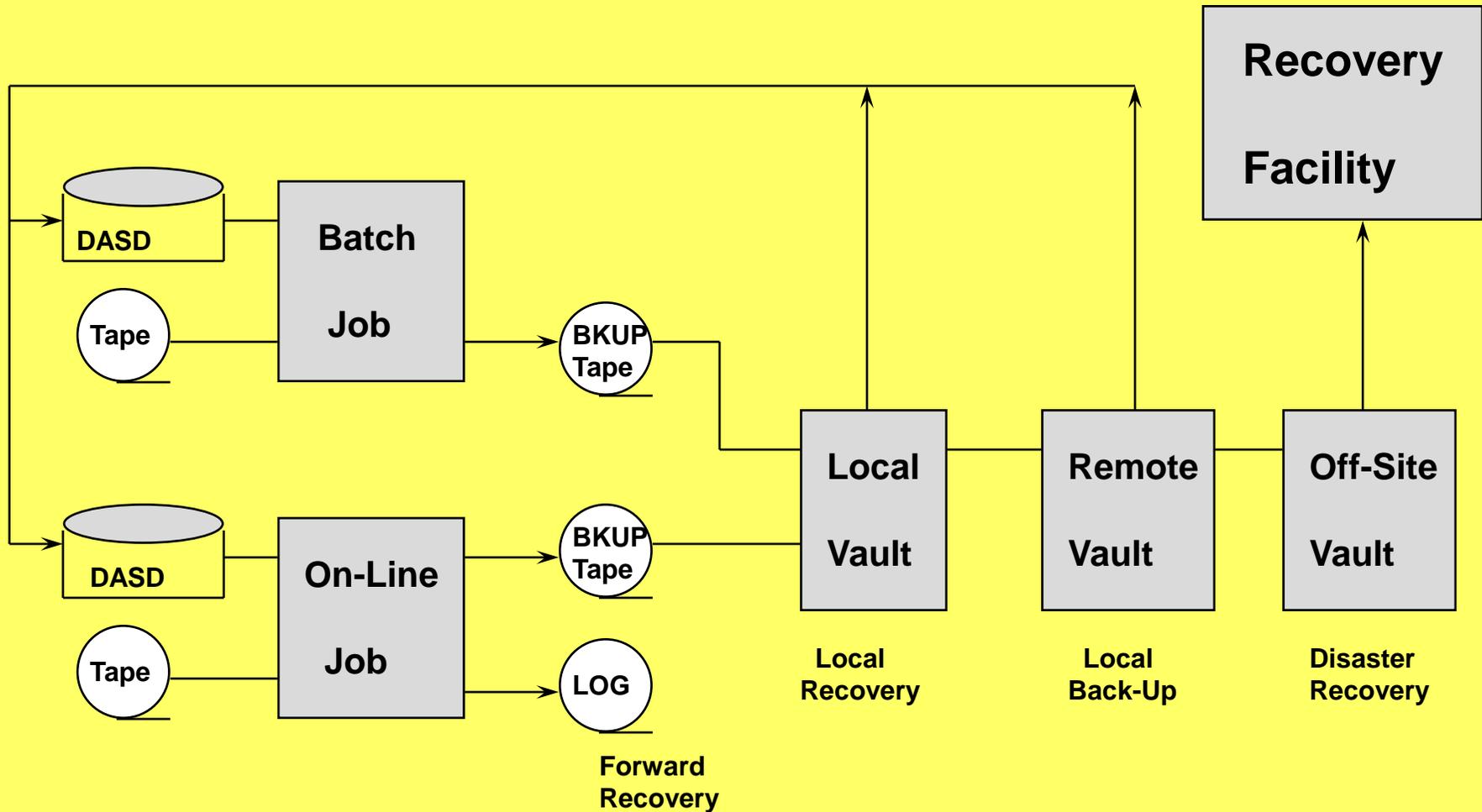
## Messages and Codes

Meaning  
Actions to take  
Possible Causes

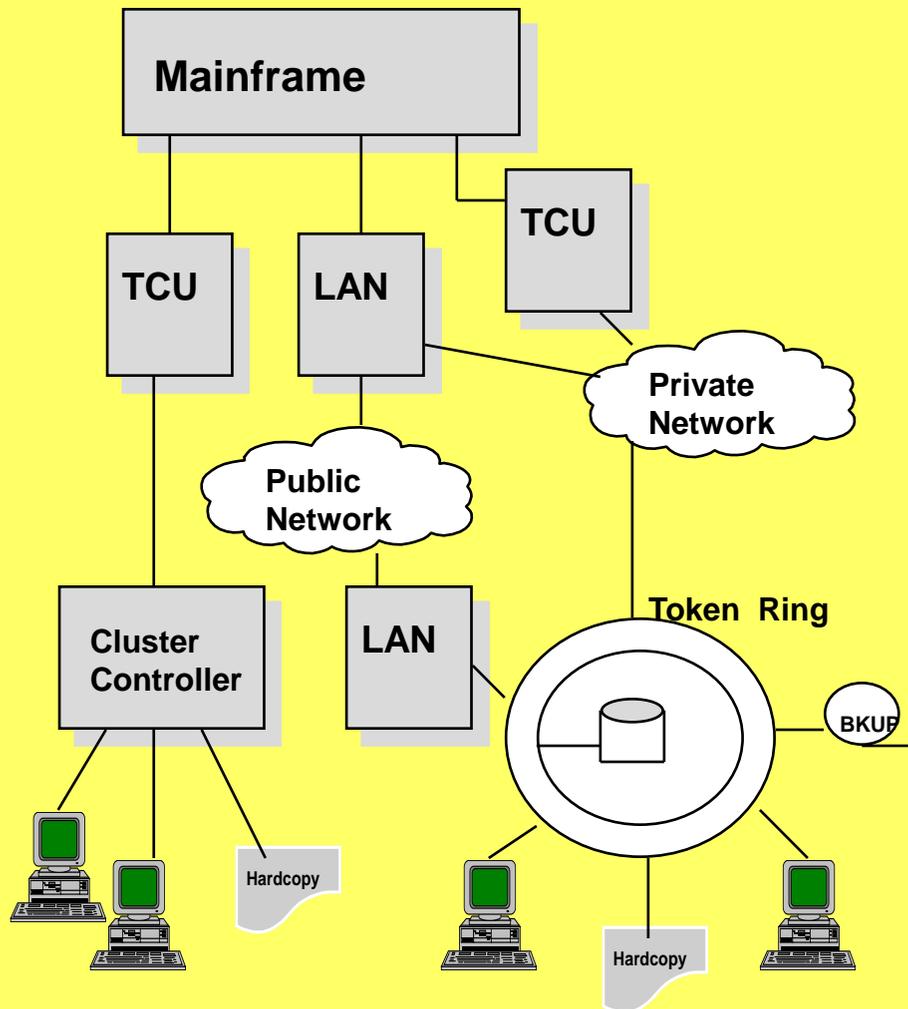
# Recovery Techniques and Personnel Involvement



# Data Recovery Techniques



# Communications Recovery Techniques



Communications Sessions are established between users connected on terminals (or PCs) and mainframe resident applications. These sessions are transmitted over communications lines and through Transmission Communications Controllers (TCU's), or Local Area network (LANs). Data can be forwarded through Private Networks (i.e., owned by company), or Public Network (i.e., the Internet, America On-Line, MSN, etc.).

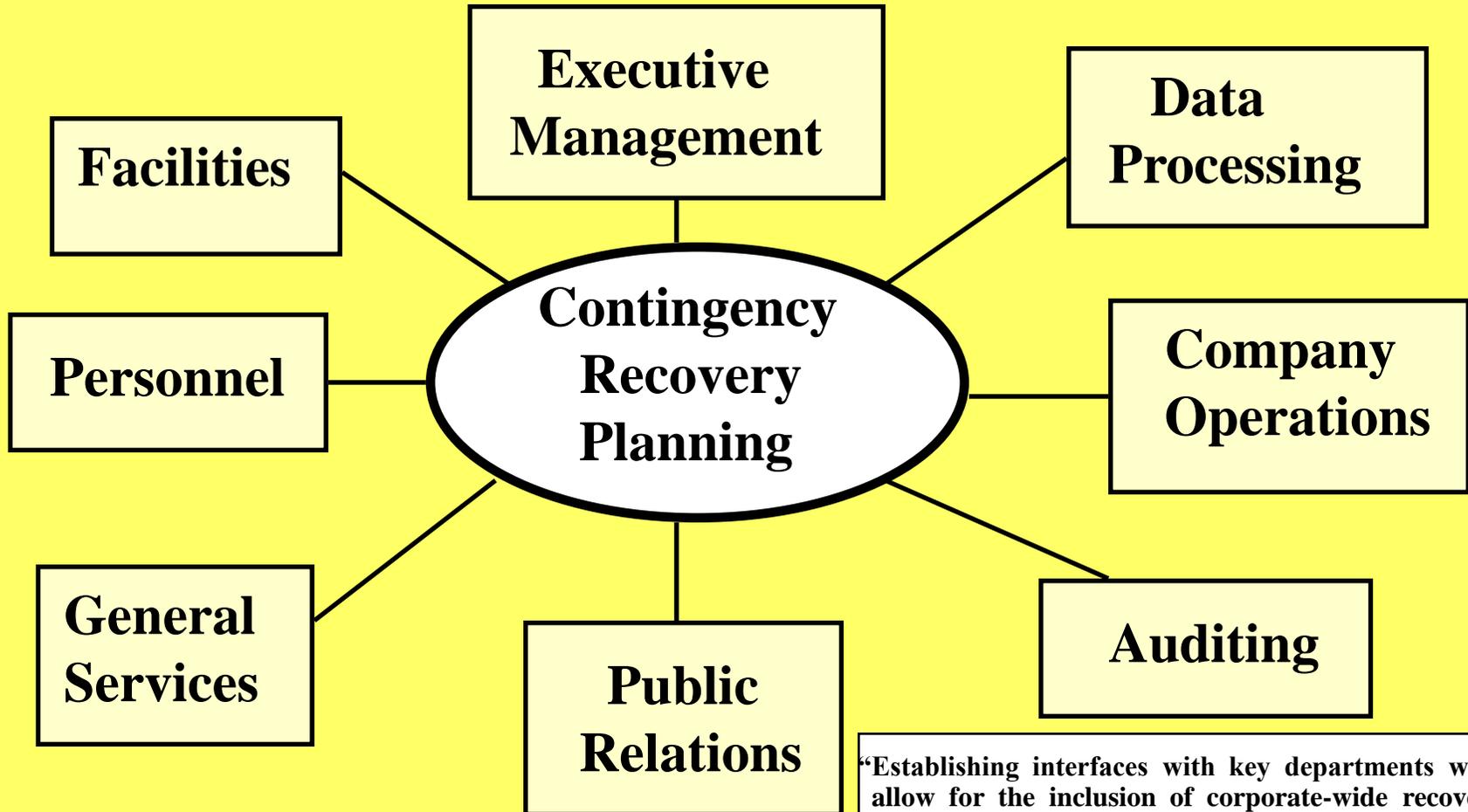
When problems arise, the NCC Operator can take corrective action by varying the failing component off-line and activating a back-up component (if an alternate is available). The elimination of a Single-Point-Of-Failure, so that recovery operations can be accomplished, is the most advantageous method for maintaining availability within the communications environment.

Back-Up data files should be created for all critical information resident in the communications environment. These Vital Records should be safeguarded in the same fashion as was described for Data Recovery (Local, Remote and Off-Site Vaulting).

# Contingency Recovery Disciplines

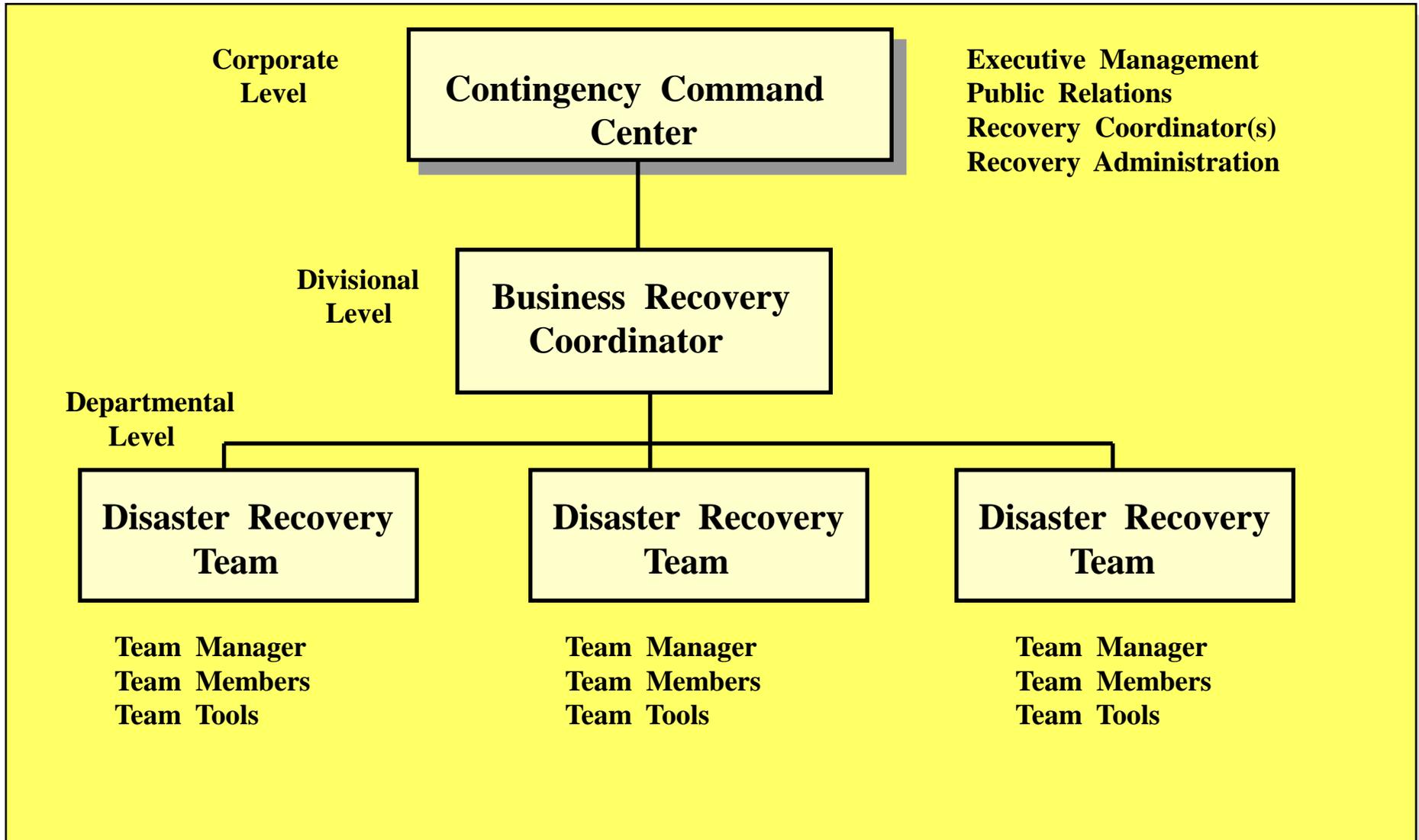


# Contingency Recovery Interfaces



“Establishing interfaces with key departments will allow for the inclusion of corporate-wide recovery procedures (i.e., Security, Salvage & Restoration, etc.) in department specific Recovery Plans.”

# Contingency Recovery Structure



# **Contingency Recovery Standards and Procedures**

- \* Regulatory Requirements,**
- \* Critical Business Applications,**
- \* Critical Support Services,**
- \* Data Sensitivity and Access Controls,**
- \* Contingency Structure and Teams,**
- \* Develop, Test and Maintain Recovery Plans for Data Processing and Business Locations,**
- \* Training for team members and awareness for entire staff.**

## **Contingency Recovery Testing**

- \* Unit testing for each Recovery Plan,**
- \* System testing for various recovery scenarios,**
- \* Tools for Recovery Teams,**
- \* Log events and conduct Post Mortems,**
- \* Include New Technology whenever possible,**
- \* Upgrade company-wide Standards and Procedures, as needed.**

## **Maintaining Contingency Recovery Plans**

- \* Have hardcopy Contingency Plans numbered,**
- \* Update Recovery Plans after tests, or when New Technologies are added,**
- \* Provide reviews of Updated Plans,**
- \* Distribute hardcopy versions of New Plans to designated individuals,**
- \* Maintain Log of hardcopy Plans.**

# **Strategies for Eliminating Audit Exceptions**

- \* Production Acceptance, Quality Control and Project Life Cycle,**
- \* Data Sensitivity and Vital Records Management,**
- \* Utilizing Automated Tools,**
- \* Elimination of Single-Point-Of-Failure concerns,**
- \* Inventory / Asset Management,**
- \* Problem and Crisis Management,**
- \* Work-Flow automation through Re-Engineering processes,**
- \* Training and Awareness programs.**

# Implementing Contingency Planning practices

- \* Contingency Recovery Goals,**
- \* Disaster Recovery Objectives,**
- \* Business Recovery Objectives,**
- \* Risk Management Objectives.**

# Contingency Recovery Goals

- \* Safeguard against business interruptions,**
- \* Protect Corporate Assets,**
- \* Recover from encountered disasters, or prolonged outages.**

# **Disaster Recovery Objectives**

- \* Define critical jobs and their components,**
- \* Coordinate Vital Records Management,**
- \* Create / Test / Maintain Contingency Plans,**
- \* Incorporate new technologies and practices that improve the recovery process,**
- \* Maintain the Contingency Plans in a constant state-of-readiness.**

# **Business Recovery Objectives**

**\* Corporate Asset Protection,**

**\* Inventory Control,**

**\* Business Continuity,**

**\* Office Recovery.**

# **Risk Management Objectives**

- \* Evaluate Risks and Exposures (Cost Justification),**
- \* Obtain required insurance and formulate reciprocal agreements to protect resources,**
- \* Assure proper EDP Security and Access Controls,**
- \* Insure adherence to Legal and Regulatory needs,**
- \* Formulate and manage Vendor agreements,**
- \* Provide management reporting.**

# Optimizing Data Processing Operations

- \* Corporate and Departmental Recovery Responsibilities,**
- \* Workload Re-Engineering to obtain information at the point of its inception, or alteration,**
- \* Crisis and Problem Management drives Recovery Operations,**
- \* Automated Recoveries incorporated into environment,**
- \* Well trained staff and Frequently Tested Recovery Plans.**

# Corporate and Departmental Recovery Responsibilities

## Corporate Responsibilities

**Security** Department for building access, Police, Fire, and Emergency Medical.

**Facilities** for Salvage & Restoration.

**Personnel** for casualties and First Aid Training.

**Public Relations** for statements to Press and other types of Media.

**Purchasing** for equipment acquisition.

**Administration** for office supplies and coordination of logistics and Essential Services / Suppliers.

**Leasing** to obtain equipment.

**Legal and Audit** departments to insure compliance to regulatory requirements.

**Audit** to review recovery plans for compliance to business needs.

## Recovery Planning

**Define Recovery Sections** to be completed by **Corporation** and individual **Departments**.

Define **Disaster Recovery Manual** sections, their format and content.

Establish **Contingency Recovery Organizational** Structure.

Formulate **Disaster Recovery Teams**.

**Create** Disaster Recovery Plans.

**Test and Implement** Disaster Recovery Plans.

Formulate **Disaster Definition and Declaration** procedures.

**Coordinate** disaster event to Disaster Team activation process.

**Maintain** Disaster Recovery Plans.

## Recovery Sites

**Contingency Command Center**  
- Small to Large, in relationship with scope of disaster event.

**Data Center Recovery Site**

**Office Recovery Site**

## Problem Management

**Problem** definition and escalation procedures.

**Change Management** for New and Altered applications and environments.

**Help Desk** procedures and scripts to address problem events, with escalation process in place for declaring disasters and activating Disaster Teams.

# Contingency Recovery Functions and Responsibilities

## Define Business and Regulatory Requirements.

- Risk Assessment and Data Sensitivity Study.
- Vital Records and Vault Management.
- Critical Job Stream analysis.
- Recovery Facility requirements definition.

## Create, Test, and Maintain Contingency Plans.

- Formulate Recovery Teams, with Team Leaders and Recovery Coordinator.
- Establish a Contingency Command Center organization.
- Train recovery personnel and provide tools, if needed.
- Create Recovery Plans and test their ability to safeguard business operations.
- Insure that Recovery Plans are maintained in a current and accurate manner.
- Report to management on the corporations ability to recover business applications and continue supplying services to clients.
- Formulate recommendations to improve recovery operations through new technologies and procedures.

## Use Automated Tools and Interfaces, if possible.

# **The ideal environment**

- \* Informational areas automatically supply Contingency Recovery information.**
- \* Contingency Plans automatically updated.**
- \* Frequent Testing of Contingency Plans.**
- \* Well trained staff.**

# Getting Started

- \* **Strong Management Backing and Commitment.**
- \* **Contingency Planning Committee.**
- \* **Risk Assessment and Business Impact Analysis (BIA).**
- \* **Personnel Job Functions and Responsibilities.**
- \* **Contingency Plan Creations.**
- \* **Contingency Teams and Tools.**
- \* **Vendor and Reciprocal Agreements.**
- \* **Frequent Testing and Maintenance of Contingency Plans.**

# Project goals and deliverables.

part 1 of 2

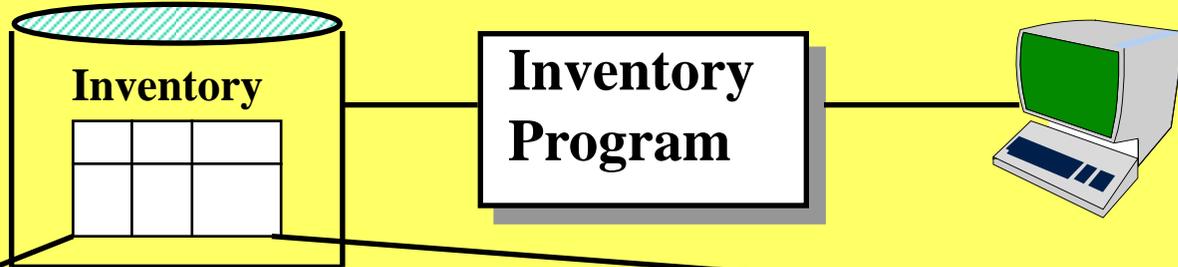
- 1. Validated inventory of resources.**
- 2. Work Load Analysis completed.**
- 3. Work Station Configurations defined.**
  - Upgradeable resources identified.**
  - Obsolete resources identified for Surplus disposal.**
  - Migration Plan for consolidating resources developed.**
- 4. Contingency Recovery Plan created.**
  - Critical Resource Review conducted.**
  - Recovery personnel selected and trained.**
  - Single point of failure identified and eliminated.**
  - Problem Management procedures used to circumvent problem situations before they become a crisis.**
  - Tested current and accurate Recovery Plan.**

# Project goals and deliverables.

part 2 of 2

5. **Asset Management System implemented.**
  - **Asset Management Repository implemented.**
  - **Vendor and Manufacturer Agreements negotiated.**
  - **Personnel interface activated.**
  - **Responsible for Asset Acquisition, Redeployment, and Termination.**
6. **Systems Management disciplines implemented.**
7. **Performance Optimization procedures in place.**
8. **Documentation materials created.**
9. **Training provided to personnel.**

# Inventory Management System

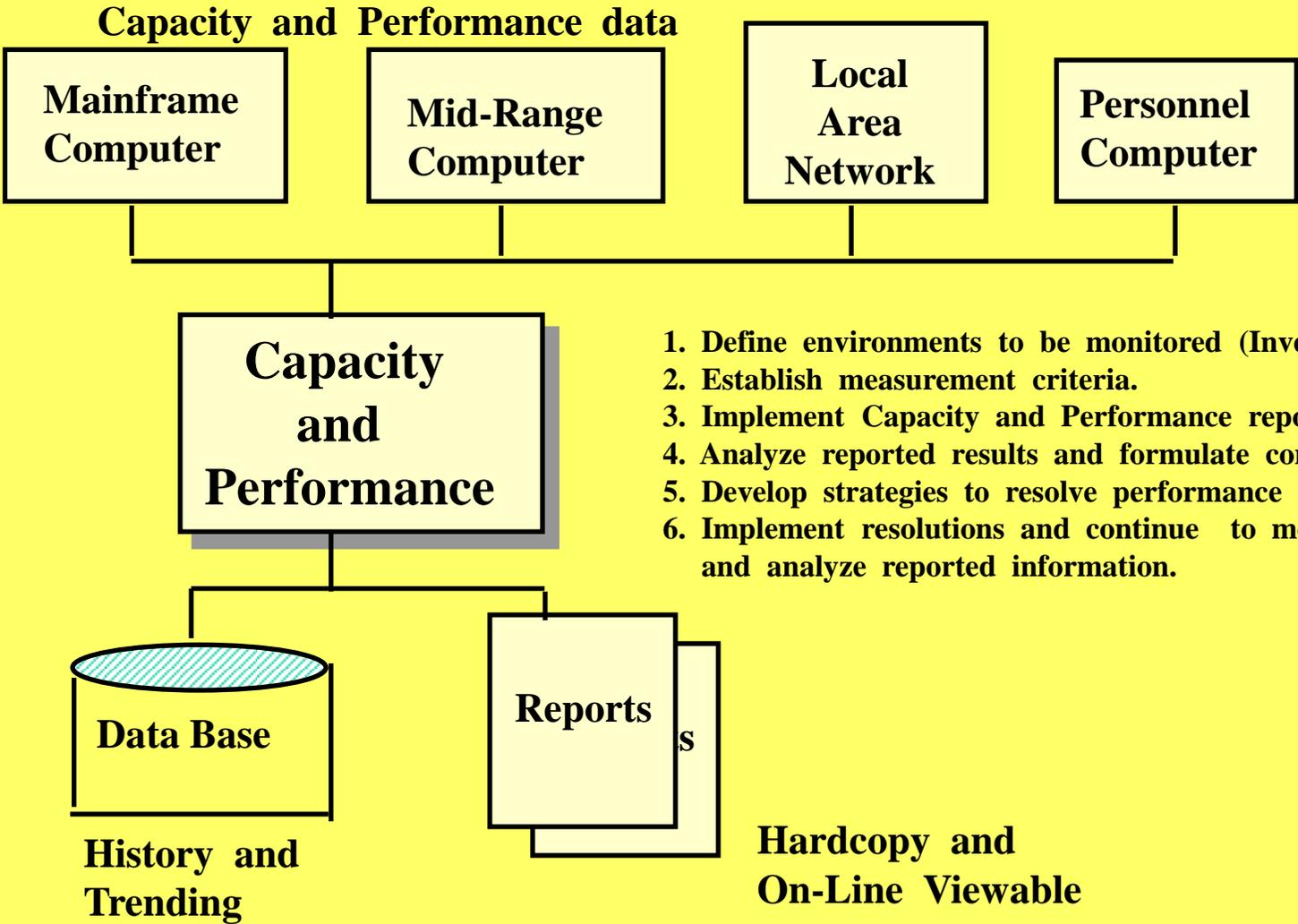


Resource Category:	Type:	Serial No.:	Criticality :	Location:	Vendor:	Contract Type:
Hardware						
Software						
Fixed Asset						
Personnel						
Personal Computers						
LAN						

# **Inventory Management Tasks**

- \* Validate inventory and financial records.**
- \* Categorize resources by; owner, type, location and vendor.**
- \* Identify inefficiencies in resource configurations.**
- \* Formulate resource configurations that are best suited to support present and future business needs.**
- \* Select vendor(s) to support business needs.**
- \* Determine end-user cost allocations and charge-back.**
- \* Negotiate Volume Purchase Agreements with vendors to optimize financial considerations for resources.**
- \* Process is becoming easier through Windows/XP and Windows/NT accounting records and utilities.**

# Work Load Analysis

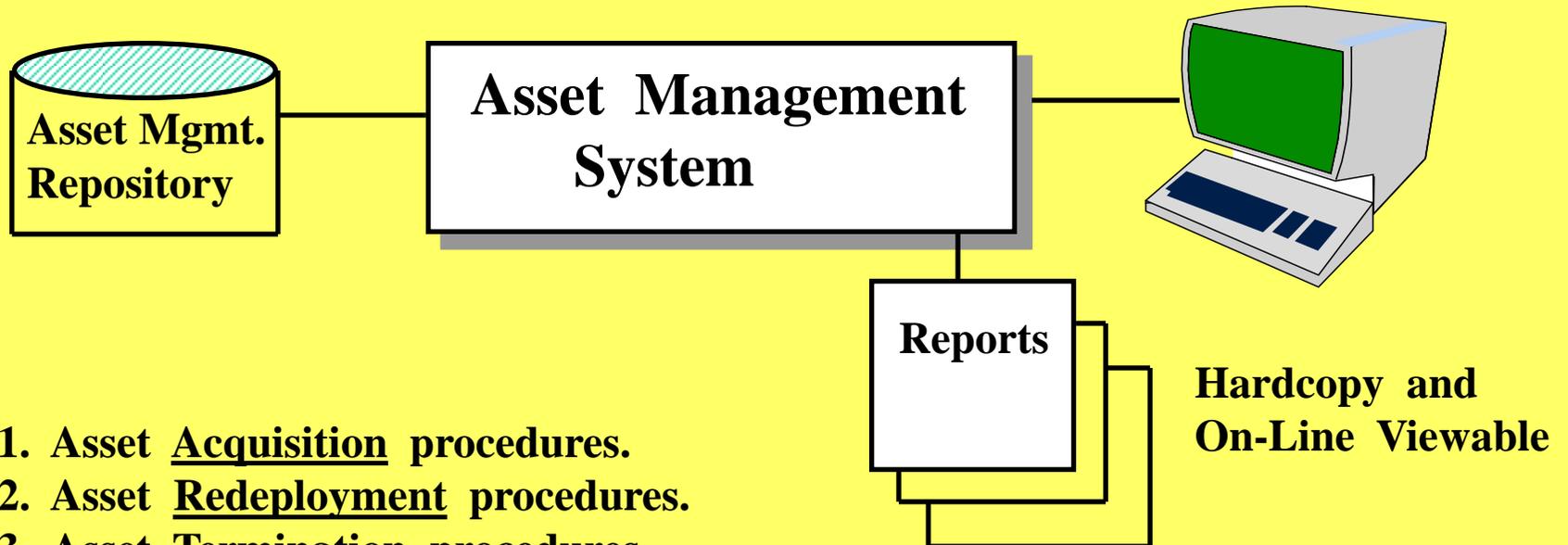


# Define Work Station Configurations

<b>Job Function:</b>	<b>LAN</b>	<b>PC Configuration</b>	<b>Applications</b>	<b>Tools</b>

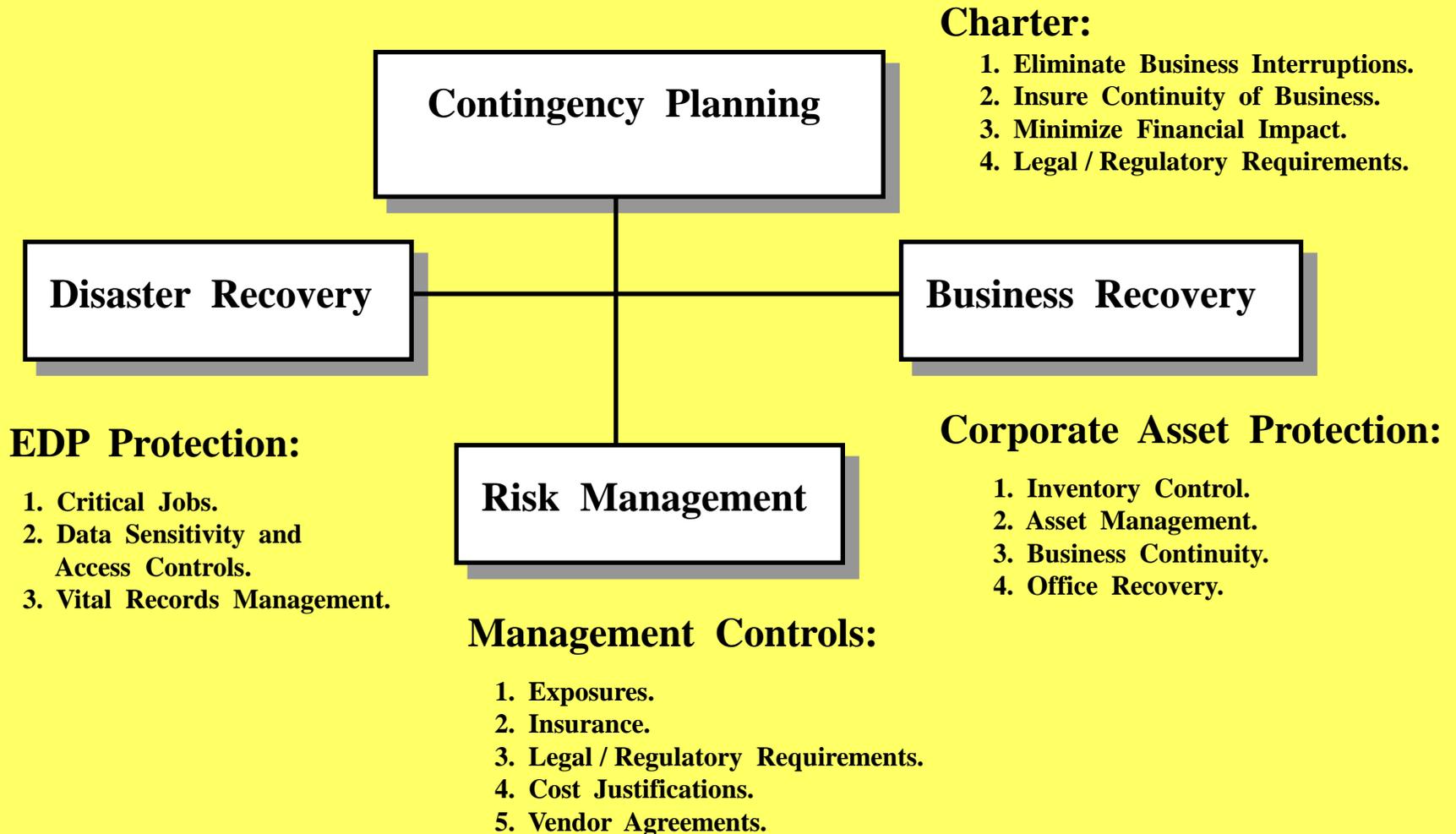
- 1. Define configurations needed to support Job Functions, by type.**
- 2. Identify upgradeable resources.**
- 3. Identify obsolete resources.**
- 4. Establish equipment and application guidelines, company-wide.**
- 5. Create Vendor relationships for resources and software.**

# Asset Management System

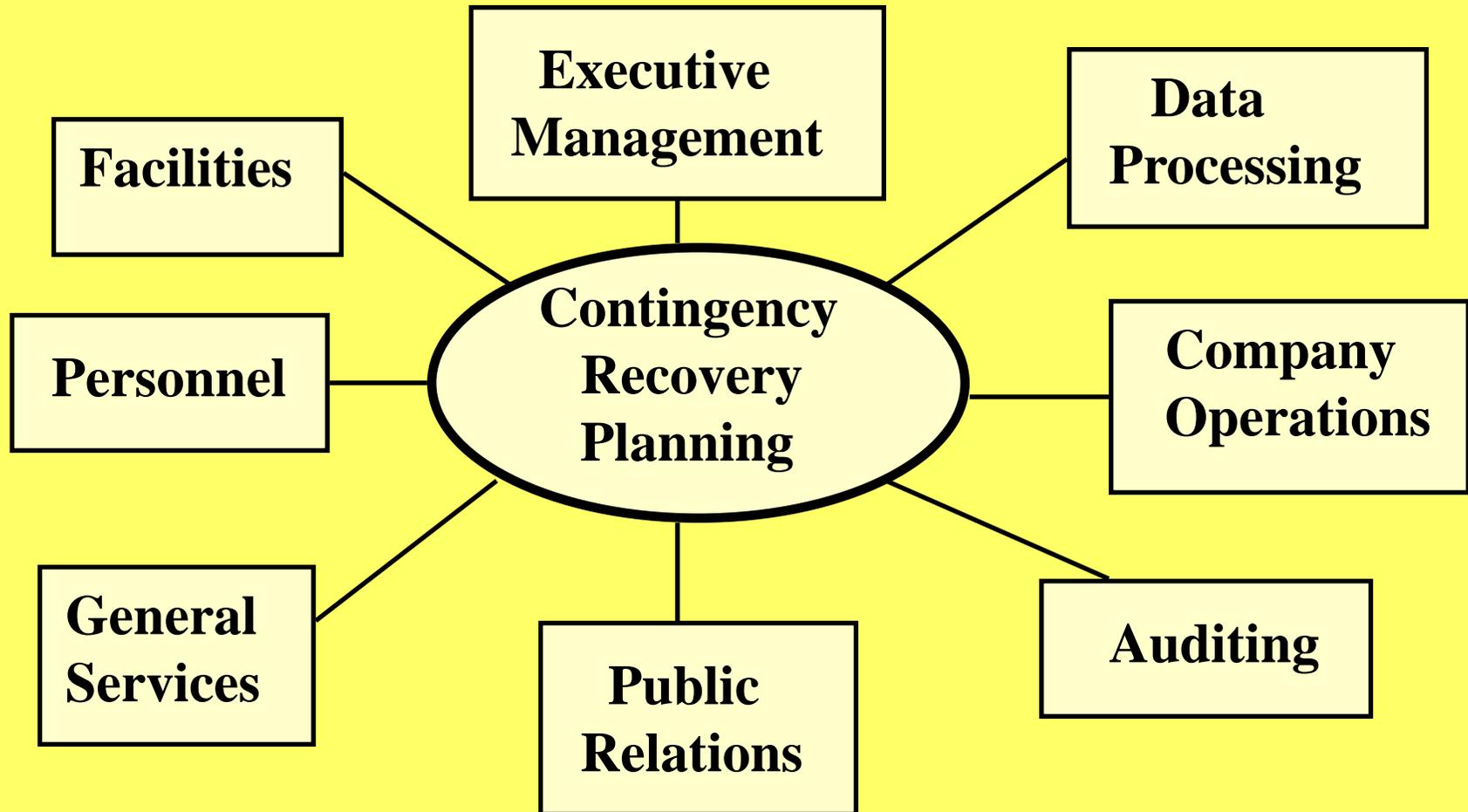


1. Asset Acquisition procedures.
2. Asset Redeployment procedures.
3. Asset Termination procedures.
4. Asset Move List for relocations.
5. Business Recovery Asset List, by location and criticality.
6. Vendor and Manufacturer Agreements.
7. Personnel interface to guaranty adherence to Asset Management standards and procedures.

# Contingency Planning



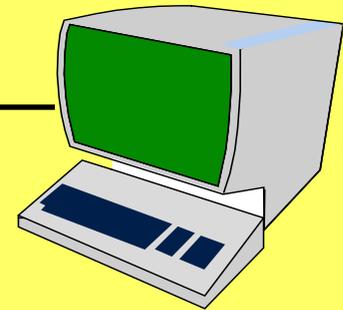
# Contingency Recovery Interfaces



# Capacity and Performance Management



Capacity and Performance Mgmt.

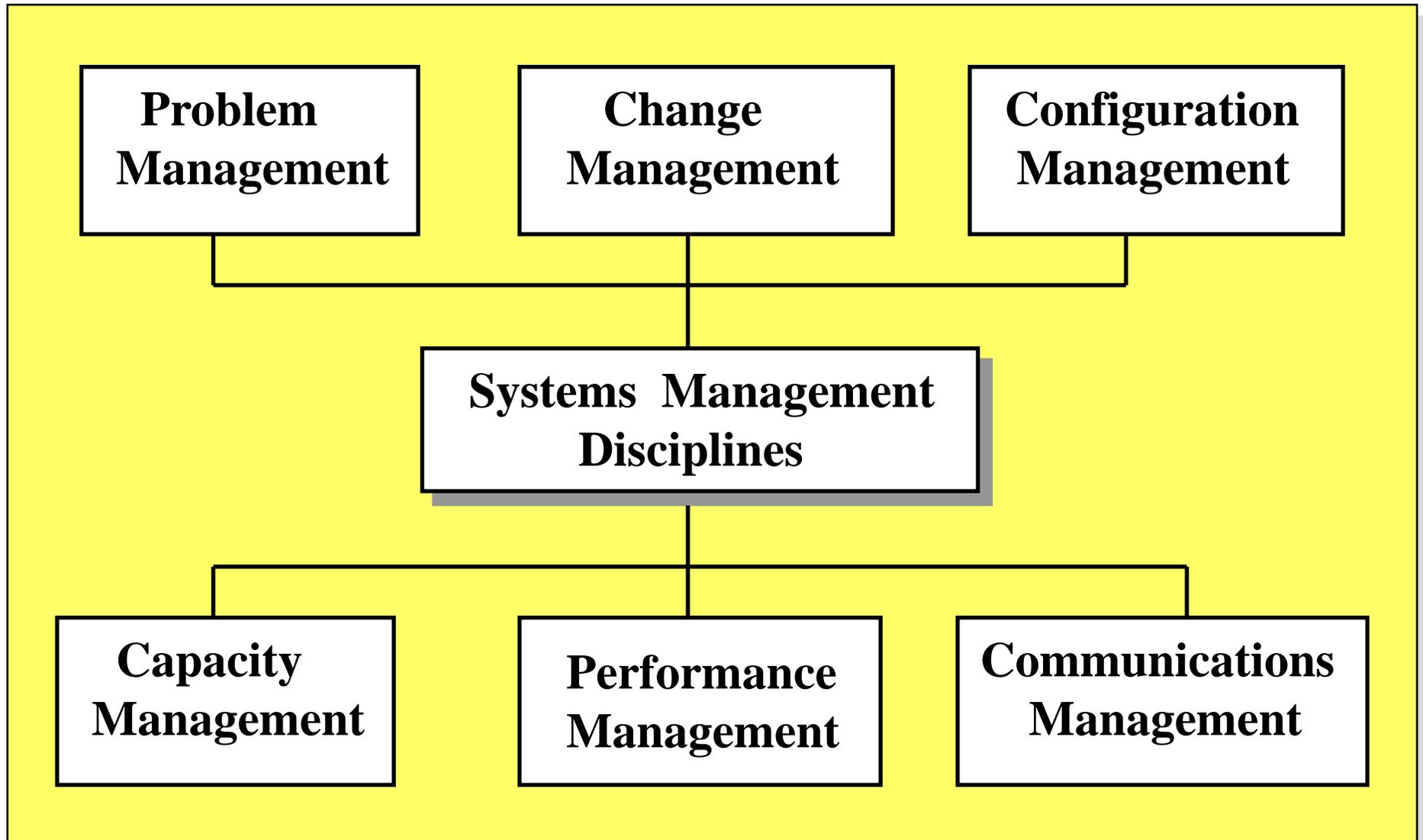


Reports

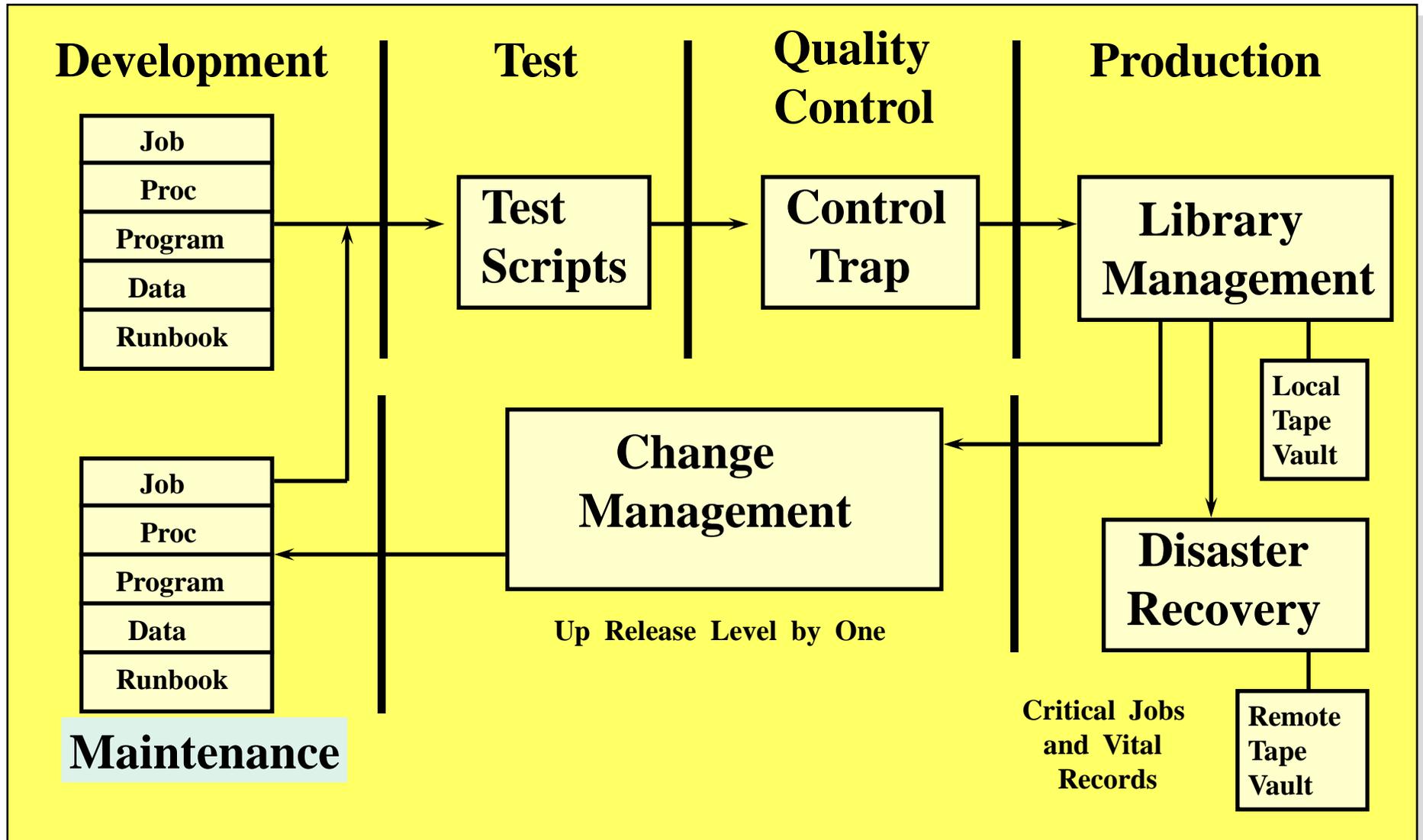
Hardcopy and On-Line Viewable

1. Critical Path Applications and Jobs.
2. Capacity and Performance Management Report Analysis.
3. Isolation of Performance Flaws, or inadequate Capacity.
4. Strategies to resolve Performance Flaws and obtain additional Capacity.
5. Report to management on findings and recommendations.
6. Utilize Asset Management System to acquire, redeploy, or terminate resources.

# Systems Management Disciplines



# Component and Release Management



# Inventory Management

- **Identify inventory records,**
- **Validate inventory and financial records,**
- **Identify resources by; owner, type, location and vendor,**
- **Establish current resource configurations,**
- **Identify inefficiencies in resource configurations,**
- **Formulate resource configurations that are best suited to support present and future business needs,**
- **Determine best vendor(s) to support present and future business needs,**
- **Determine end-user cost allocations and charge-back,**
- **Negotiate Volume Purchase Agreements with vendors to optimize financial considerations for resources.**

# Resource Performance Profile

- **Identify application mix and define Critical Path,**
- **Implement Capacity and Performance reporting,**
- **Analyze reported information to isolate poorly performing applications and areas for improvement,**
- **Formulate strategies to implement Performance improvements,**
- **Present findings to management and gain approval,**
- **Review standards and Procedures to uncover areas for improvement,**
- **Optimize applications and the Critical Path,**
- **Update the Standards and Procedures to reflect performance and optimization methodologies.**

# Resource Financial Profile

- **Categorize resources by financial type (i.e., rented, leased, owned, surplus, etc.),**
- **Compare present resource mix against standardized configurations,**
- **Identify resource migration candidates and resources to be discontinued or upgraded,**
- **Formulate Resource Migration Plan to create standard configurations in adherence to management goals,**
- **Formulate vendor contractual agreements in support of resource configurations,**
- **Integrate resource configuration guidelines within the facility and resource procurement areas.**

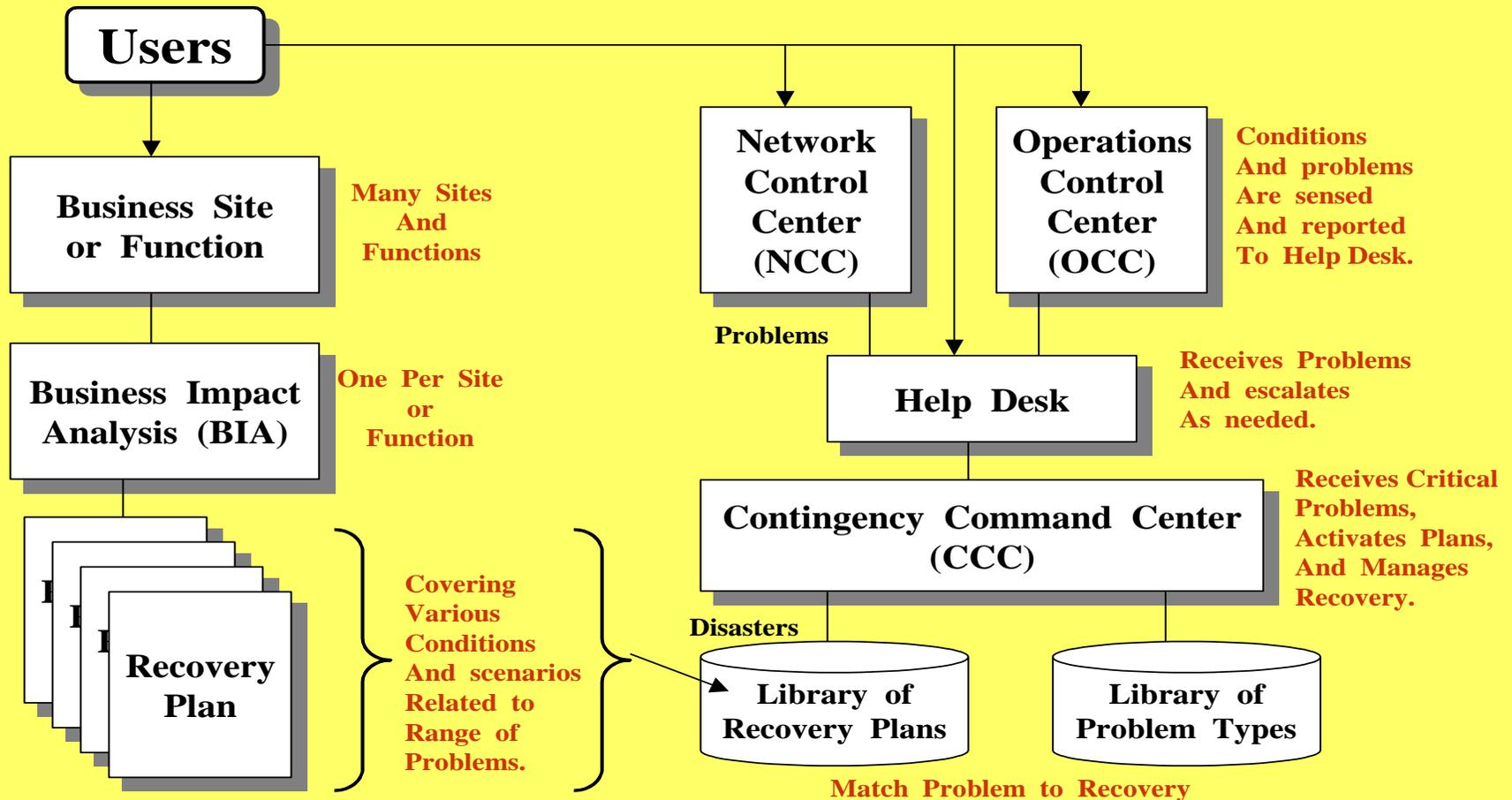
# Asset Management System

- **Establish Asset Management charter and mission,**
- **Formulate Asset Management objectives,**
- **Identify interfaces to Asset Management System,**
- **Calculate data exchanges between functional areas and the Asset Management system,**
- **Upgrade supportive literature and develop training,**
- **Develop Asset Management Implementation Plan,**
- **Develop Asset Management Roll-Out Plan,**
- **Implement Asset Management Implementation and Roll-Out Plans,**
- **Monitor results and upgrade plans, if necessary,**
- **Provide training to required personnel.**

# **Business Recovery Planning**

- **Contingency Planning Principals:**
  - **The need for a Recovery Plan,**
  - **Establishing Contingency Planning,**
  - **Contingency Planning functions and responsibilities,**
  - **Vendor contracts and reciprocal agreements.**
- **The ideal environment,**
- **Testing and maintaining the Contingency Plan,**
- **Documentation and materials requirements,**
- **Personnel training,**

# Overview of Business Continuity Planning and BIA's



Recovery Plans direct personnel to restore business operations in response to encountered problems. The Help Desk escalates critical problems, initiates recovery plans, and manages recovery activities.

# Integrating DR and BCP Plans within the Command Center

## Business Impact Analysis (BIA)

Used to identify business operations that may need recovery plans and to then rate them as to risk exposure and their need for a recovery plan. As a result of this analysis, a report and presentation is provided to management defining exposures and the difficulty associated with creating recovery plans to protect operations and adhere to regulations.

## Disaster Recovery Plan (D/R), or Business Continuity Plan (BCP)

D/R Plans are used to direct recovery procedures for specific functional areas (i.e., Data Center, Business Office, Vendor, Office Space, etc.) or conditions (i.e., Building / Floor closure, Hurricane, Flood, Loss of Power, etc.). They can cover small groups of people, or the entire organization. Recovery Plans are activated by the Contingency Command Center as a result of an encountered problem and are used to direct the actions of team members.

## Contingency Command Center connection

Ties Recovery Plans to specific problem conditions, so that when problems are reported the appropriate Recovery Plan can be identified and activated. Pre-defined recovery actions and ad-hoc recovery teams can be directed via the Contingency Command Center staff.

# Performance Optimization

- **Identification of Applications on the Critical Path,**
- **Job Scheduling weaknesses,**
- **Resource usage weaknesses,**
- **System level performance improvements,**
- **Program level performance improvements,**
- **Manual interventions,**
- **Standards and Procedures weaknesses,**
- **Personnel training and skills inventory,**
- **Project Plan creation,**
- **Management report and presentation of findings,**
- **Project Plan implementation,**
- **Standards and Procedures upgrade and personnel training.**

# Project Management

- **Project Management System,**
- **Management Checkpoints and Status Reporting,**
- **Inventory Management Project,**
- **Asset Management Project,**
- **Global Standards and Procedures Project,**
- **Disaster Avoidance and Business Recovery Planning Project,**
- **Application Performance and Software Re-Engineering Project,**
- **Systems Management Disciplines Project,**
- **Documentation and Training.**

# Benefits

- **Inventory of all Assets within a Repository,**
- **Asset Management System to optimize resource costs,**
- **Disaster Avoidance and Contingency Planning,**
- **Systems Management Disciplines,**
- **Optimized Applications and Personnel,**
- **Reduced costs and improved efficiencies,**
- **Prepared for current and future workloads.**

# Tasks to be performed

- **Formulation of Asset Management committee,**
- **Define scope and deliverable schedule,**
- **Identify project personnel,**
- **Formulate requirements definition,**
- **Develop and implement Pilot Project,**
- **Review results and implement Production Project Plan,**
- **Develop and implement Roll-Out Plan,**
- **Integrate Asset Management System with personnel responsible for resource acquisition and control,**
- **Upgrade Standards and Procedures,**
- **Provide training to designated personnel,**
- **Monitor system operation to insure optimization.**

# Services provided by *DCAG*

- \* Risk Assessment and Requirements Definition,
- \* Contingency Plan Creation and Maintenance,
- \* EDP Security and Access Controls,
- \* Vital Records and Library Management,
- \* New technologies and Strategies,
- \* Training and periodic audits of the Contingency Plan,
- \* *DCAG* can even perform all, or part, of the Contingency Planning function for its clients.

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