

ELECTRONIC FILING

CASE MANAGEMENT

JURY MANAGEMENT

ONLINE PAYMENTS

ONLINE PUBLIC ACCESS

ELECTRONIC CITATIONS

INTERGOVERNMENTAL
DATA EXCHANGES



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"Supporting Courts; Ensuring Justice"

2016 ACAP Systems Conference

"Supporting Courts; Ensuring Justice"

Preparing for Unplanned Change: Disaster Recovery and Continuity of Operations (DR/COOP)

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Administrative Office of the Courts

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Disaster Recovery (DR) & Continuity of Operations (COOP) 101

Cecil Davis

Disaster Recovery Overview

- Disasters
- Types of Plans
 - Emergency Response Plan
 - Disaster Recovery Plan
 - Continuity of Operations Plan



Disaster!!!

- Event causing great damage



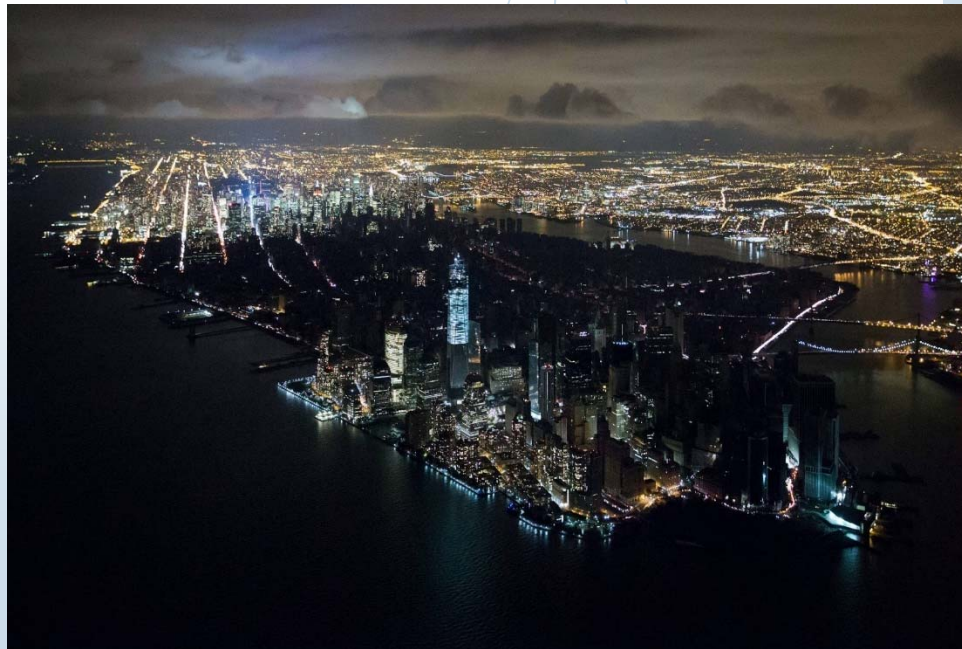
Types of Disasters

- Natural disasters
 - Floods, hurricanes, tornados or earthquakes
 - Prevention is impossible



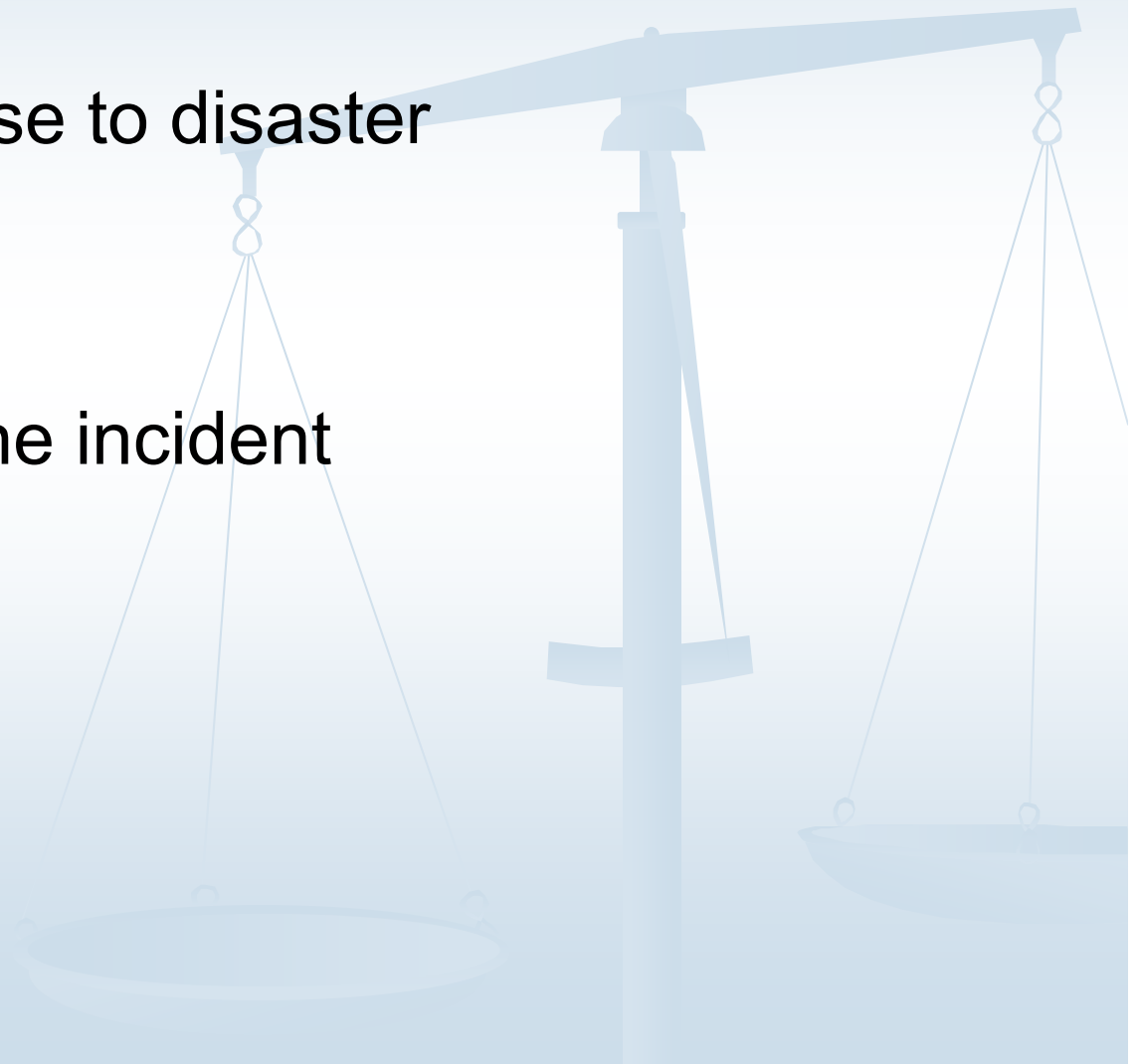
Types of Disasters (Cont.)

- Man-made disasters
 - Hazardous materials spills, infrastructure failure, virus, fires
 - Prevention is possible

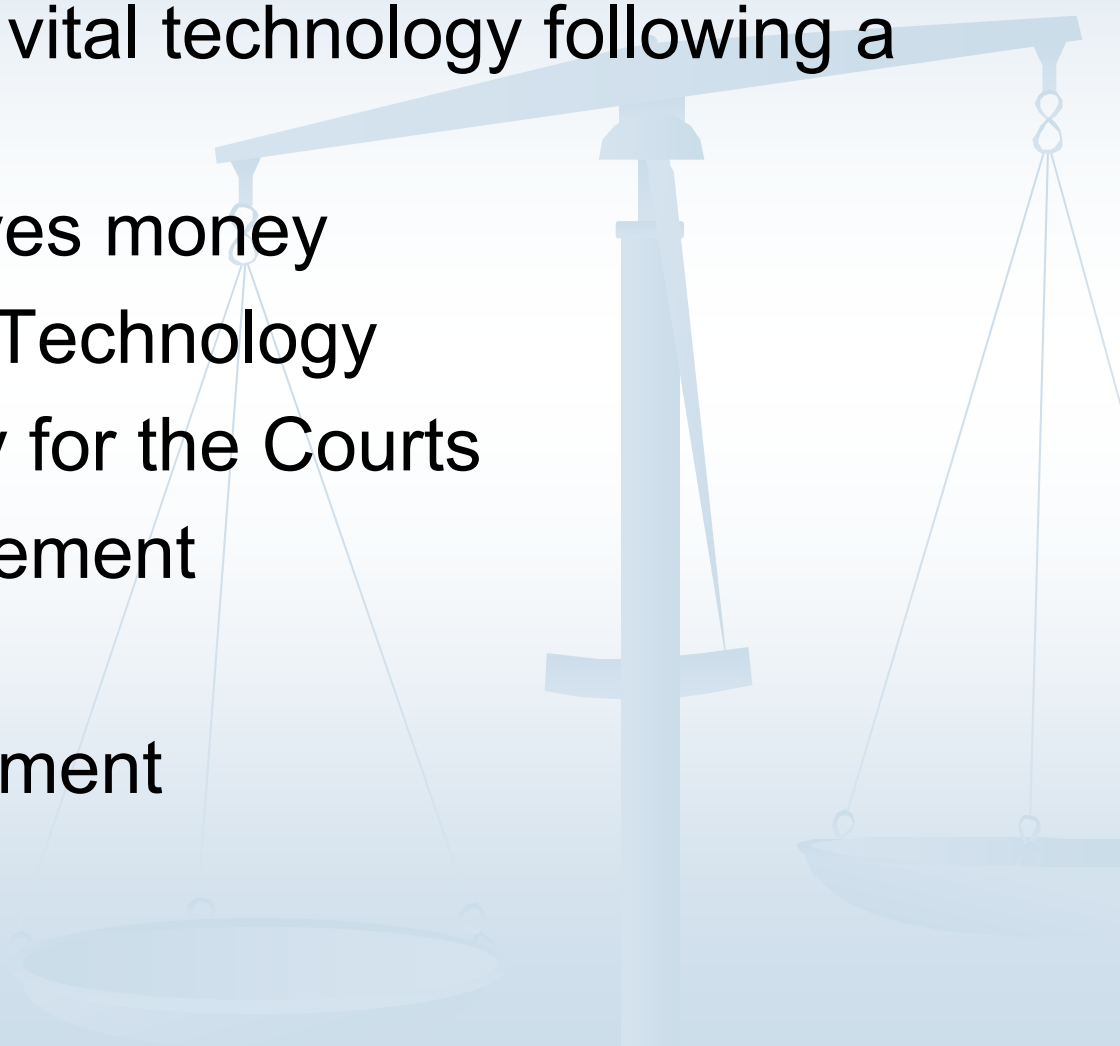


What is Emergency Response?

- Initial response to disaster
- Purpose
 - Save lives
 - Stabilize the incident



What is Disaster Recovery?

- Ability to recovery vital technology following a disaster
 - Preparation saves money
 - DR focuses on Technology
 - Vital technology for the Courts
 - Case Management
 - E-Filing
 - Jury Management
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Control Measures

- Preventive measures
- Detective measures
- Corrective measures



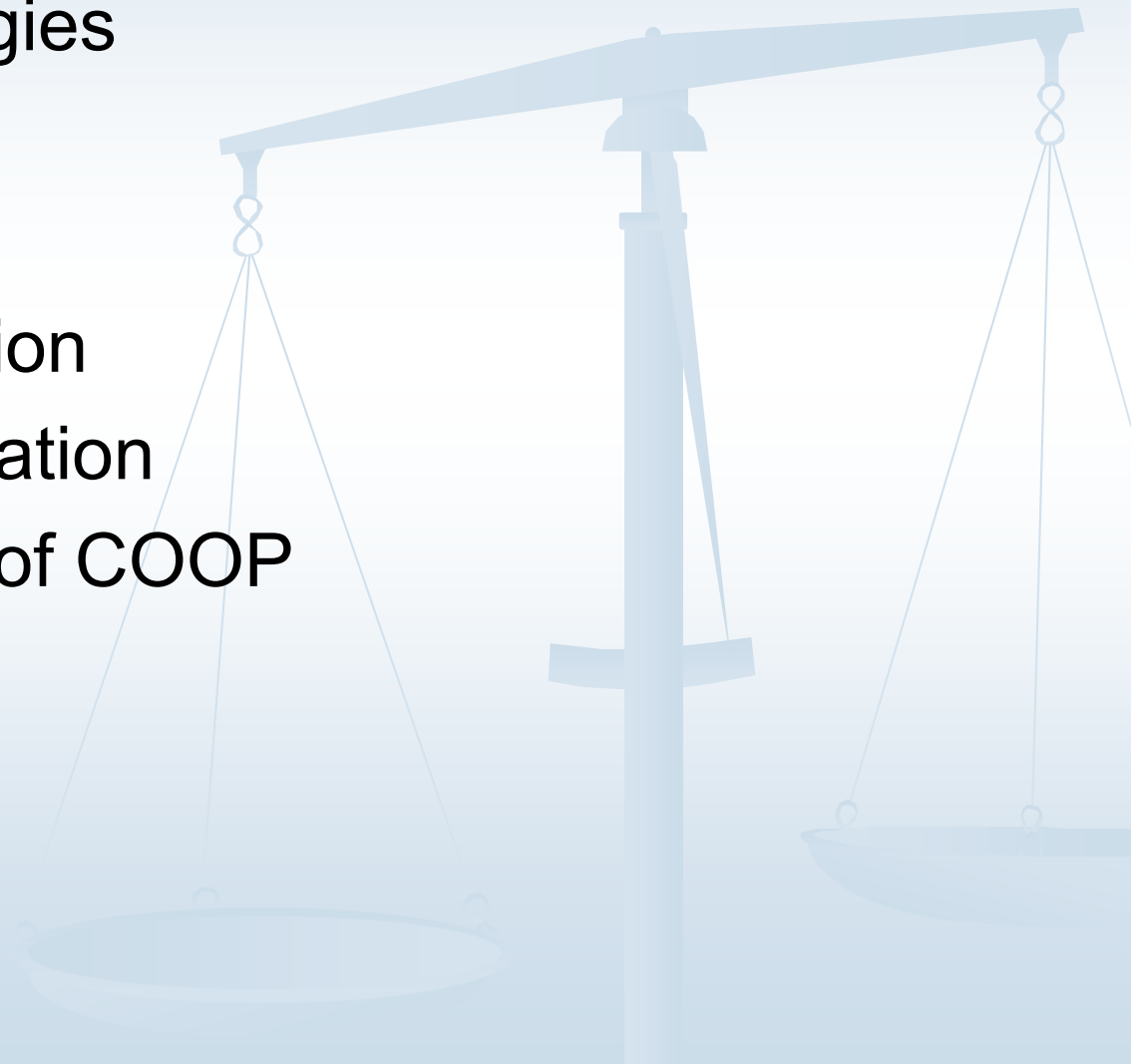
DR Strategies

- COOP objectives
 - Recovery Point Objective
 - Recovery Time Objective



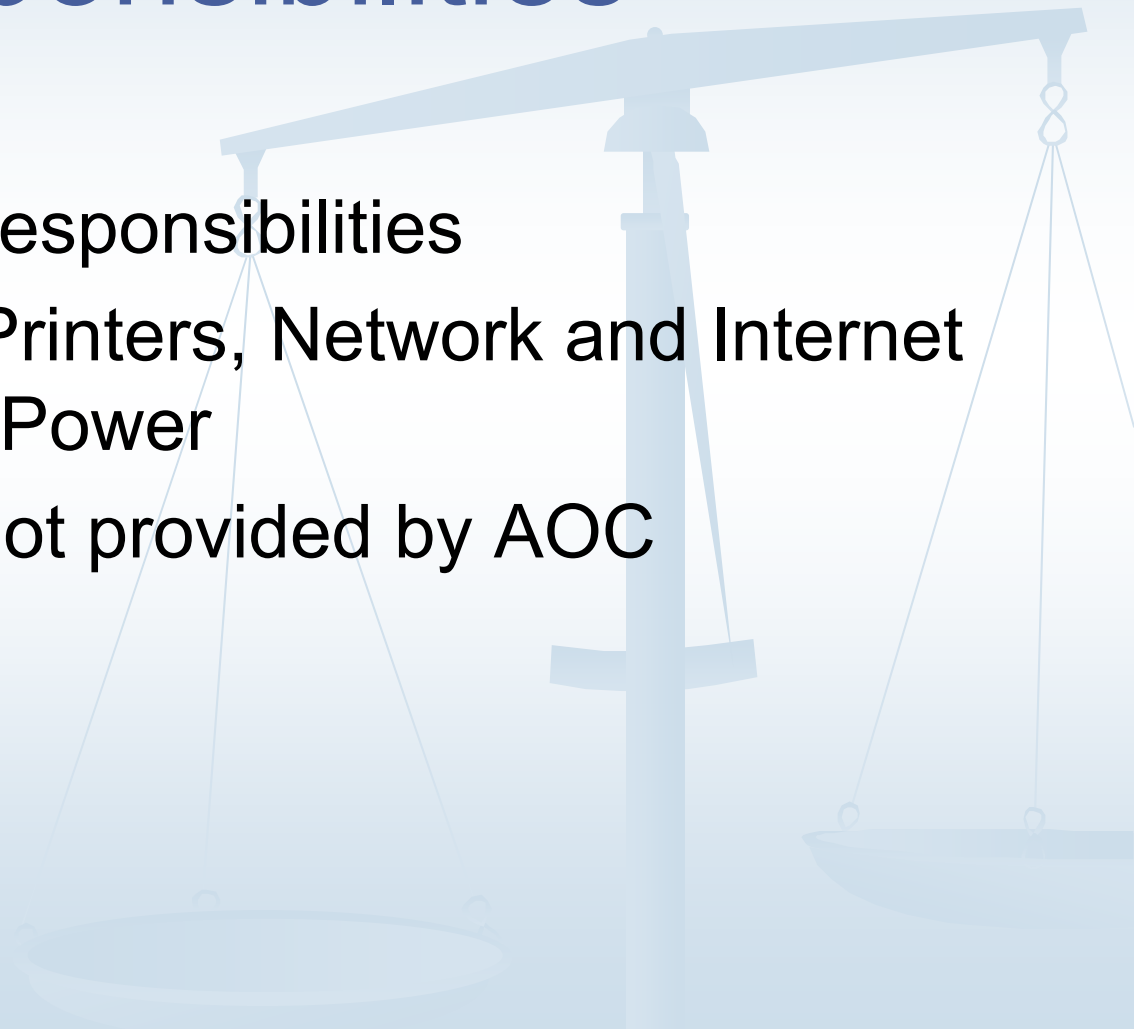
Disaster Recovery Strategies

- Types of strategies
 - Back-ups
 - RAID
 - Site Replication
 - Cloud Replication
- DR is a subset of COOP



Disaster Recovery Responsibilities

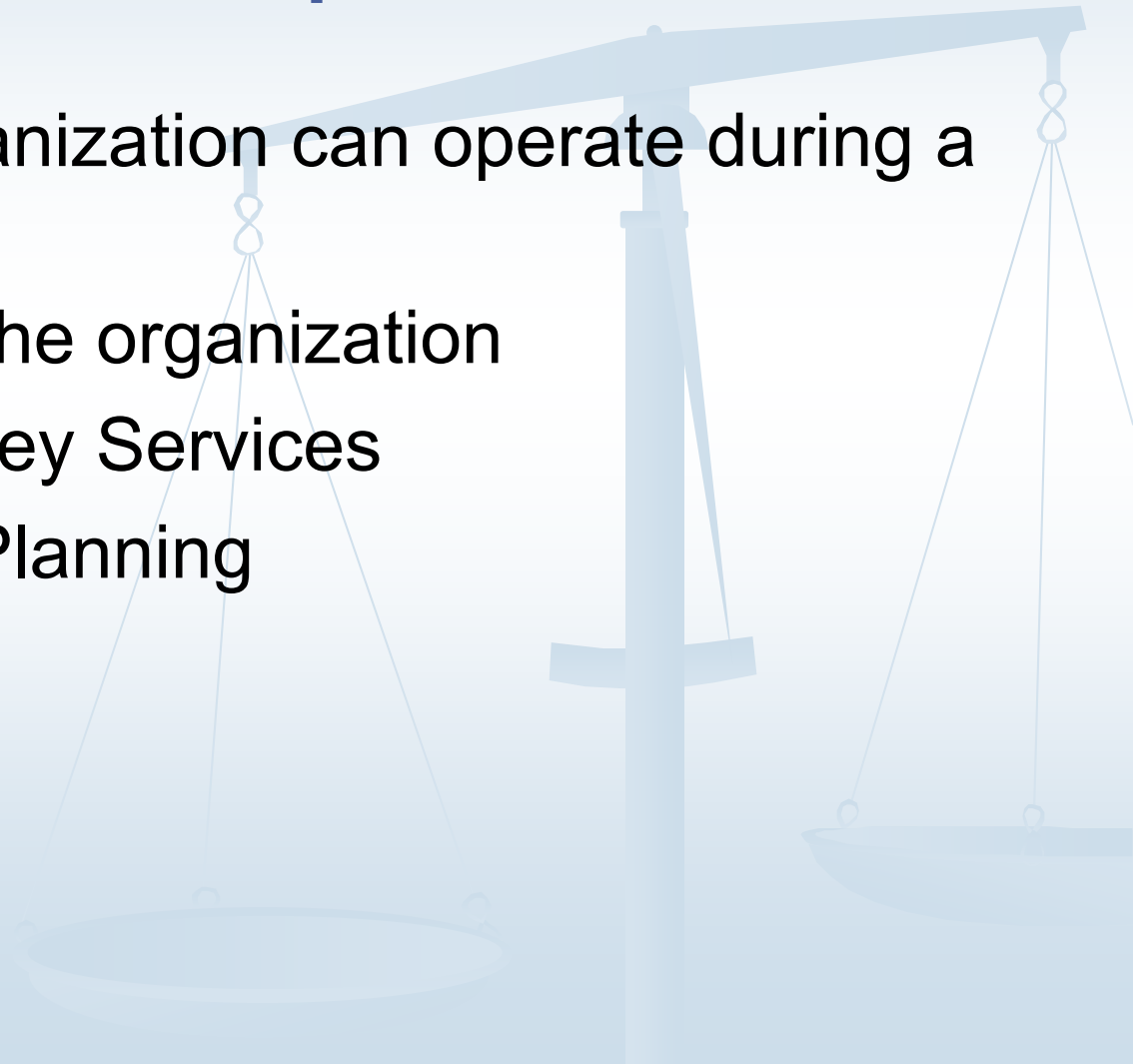
- Court staff DR responsibilities
 - Computers, Printers, Network and Internet Service, and Power
 - All services not provided by AOC



What is COOP?

Continuity of Operations

- Ensuring an organization can operate during a disaster
 - Resilience in the organization
 - Recovery of Key Services
 - Contingency Planning



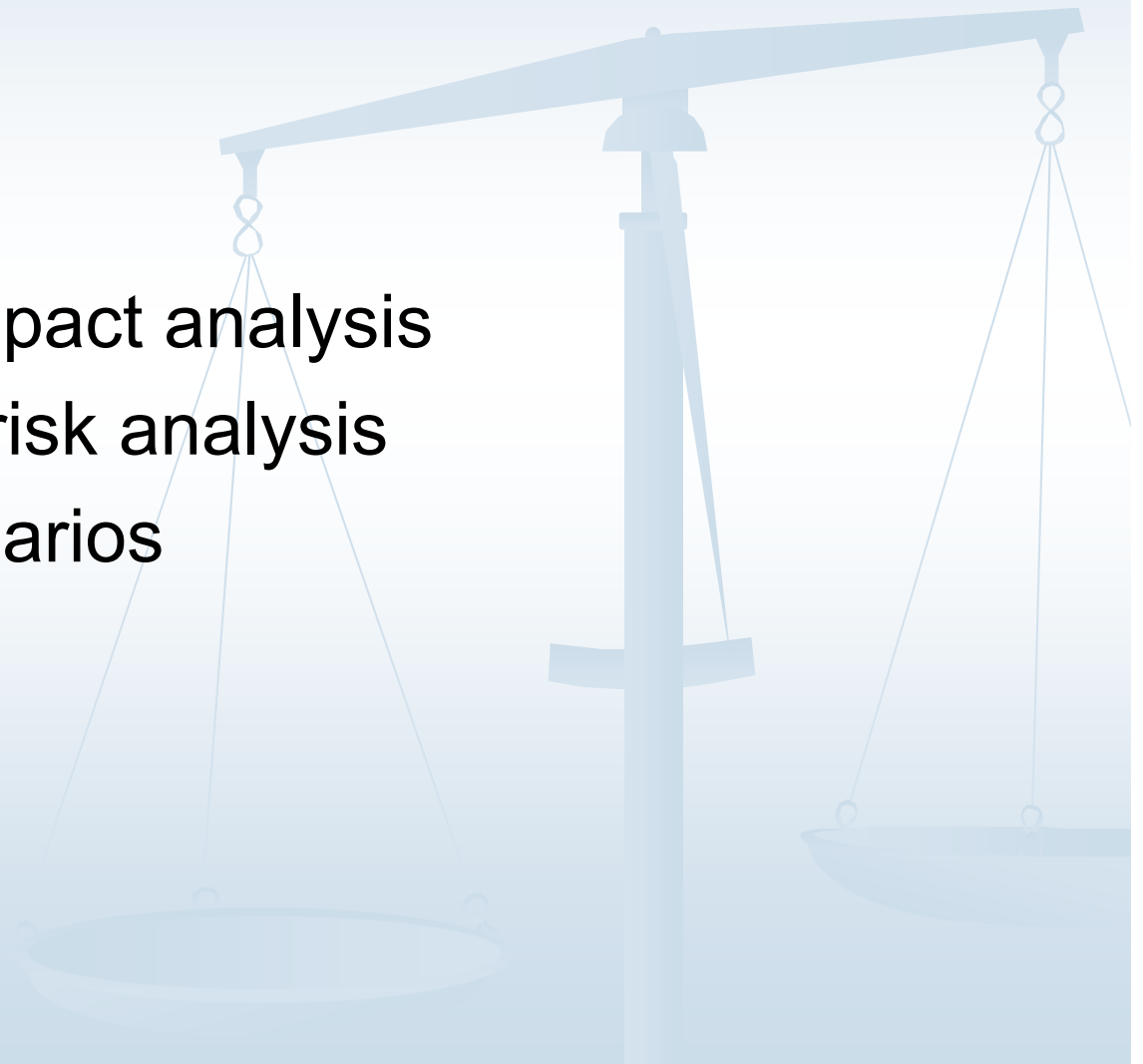
Developing COOP

- Steps in developing COOP
 - Analysis
 - Recovery requirements
 - Solution design
 - Testing and organizational acceptance



COOP Analysis

- Analysis
 - Business impact analysis
 - Threat and risk analysis
 - Impact scenarios



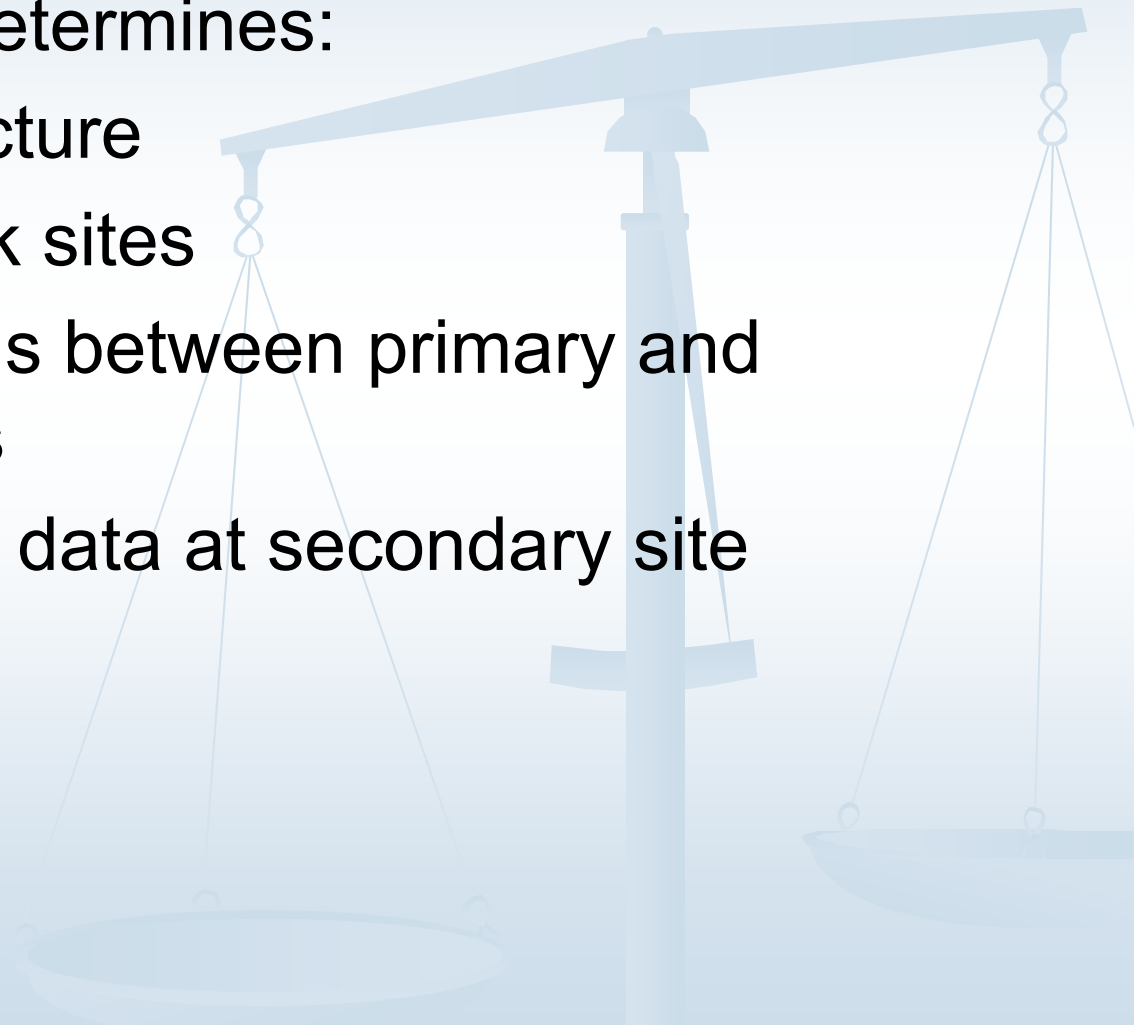
COOP Inventories

- Office Equipment
- Computers
- Printers



COOP Solution Design

- Solution Design determines:
 - Command structure
 - Secondary work sites
 - Communications between primary and secondary sites
 - Application and data at secondary site



COOP Testing



- Testing Purpose
 - Organization acceptance that COOP solution will work
- Types of Tests
 - Crisis management team exercise
 - Switchover from primary to secondary site
 - Switchover from secondary to primary site
 - Business process tests
- Biannual tests



Making it Personal: The AOC's Road to Disaster Recovery

Ben Houston

Justice Building Network

- 1984
 - “Lenny” + 4 dumb terminals
 - IBM PC



“Lenny”



Network (Cont.)



- Mid-90's
 - Migrated CMS to conventional servers
 - Established first “network” in Justice Building
- 1999 – 2002
 - Justice Building construction and renovation
 - Extended network cabling to all desktops
 - ACAP program established

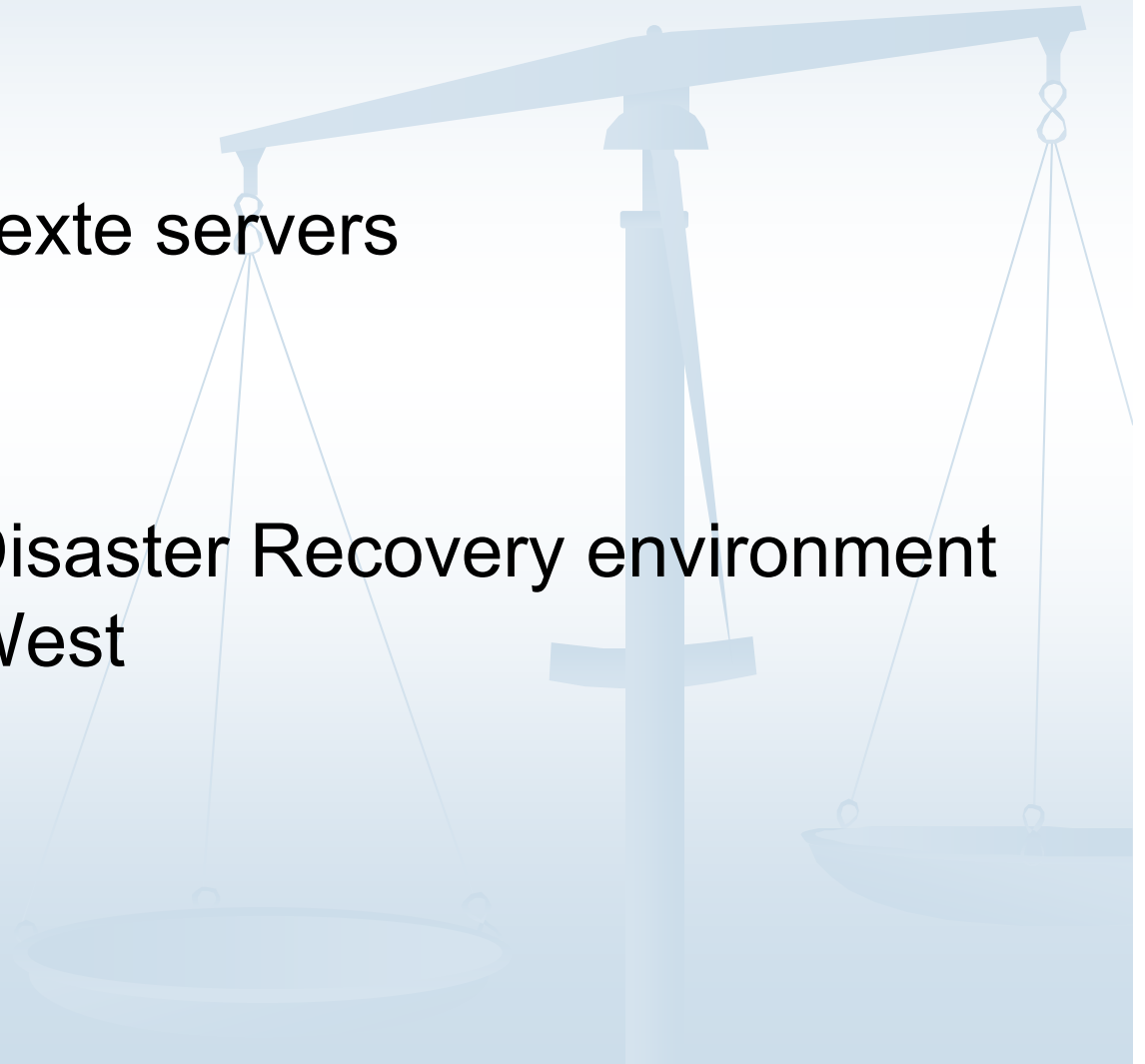
Network (Cont.)



- 2002
 - Purchased first servers for Contexte
 - Installed first firewall for perimeter security
- 2008
 - Upgraded Contexte servers
 - Migrated from single instance databases to RAC for high availability and redundancy

Network (Cont.)

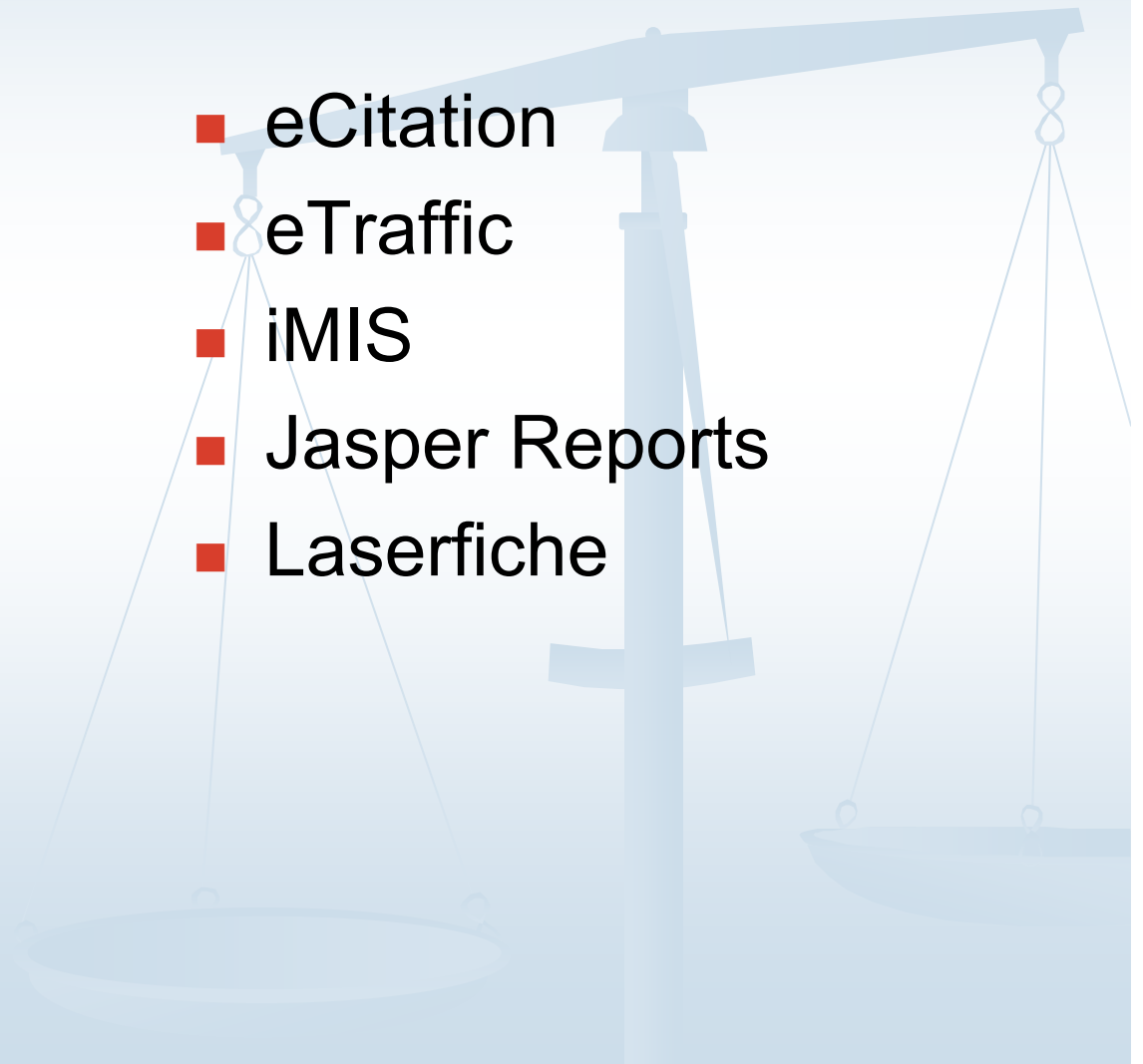
- 2014
 - Upgraded Contexte servers
- 2015
 - Established a Disaster Recovery environment at Datacenter West



AOC Applications

- Contexte
- CourtConnect
- Juror/MyJuryInfo
- Electronic Filing
- DNET

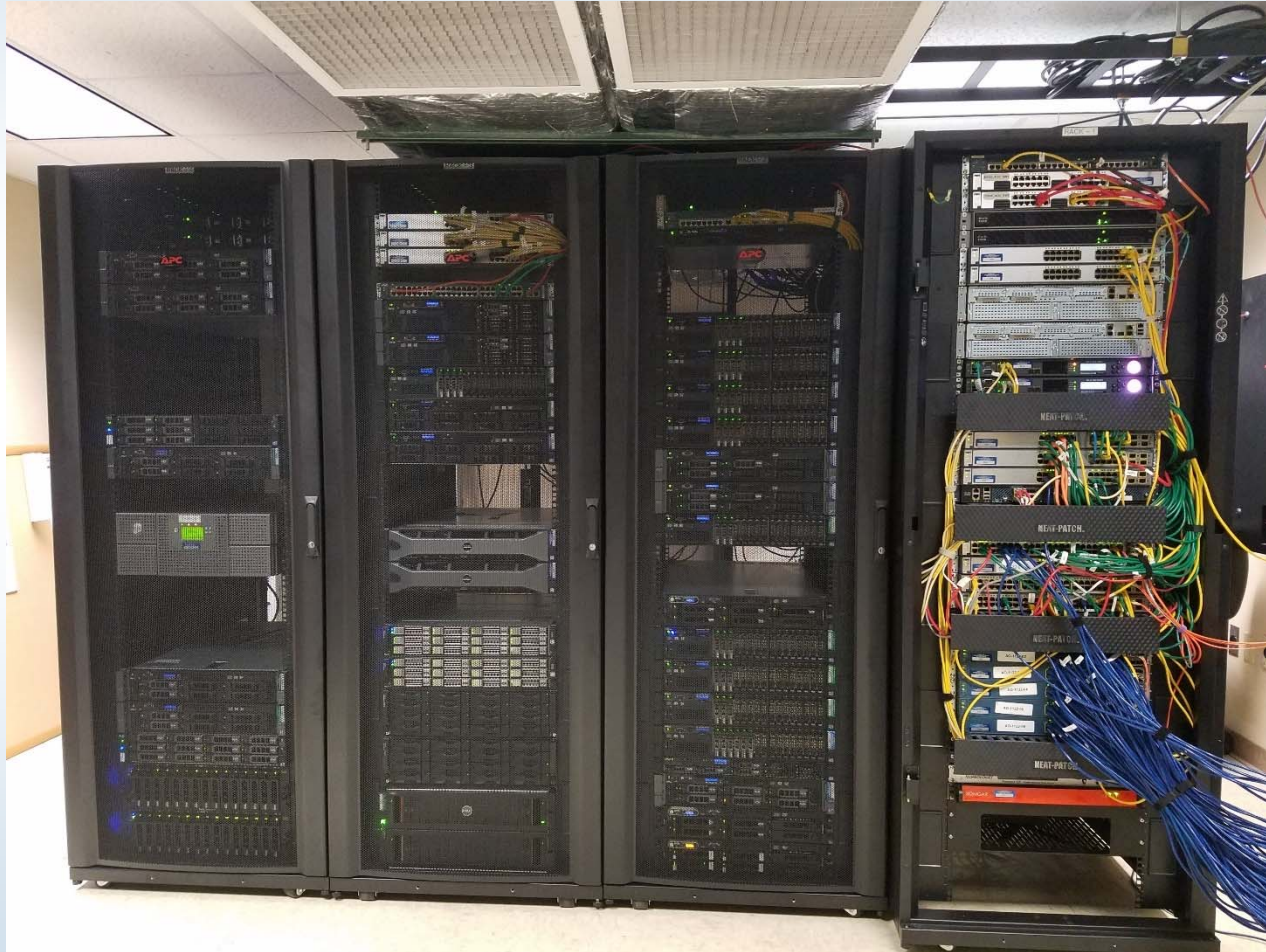
- eCitation
- eTraffic
- iMIS
- Jasper Reports
- Laserfiche



Justice Building Hardware

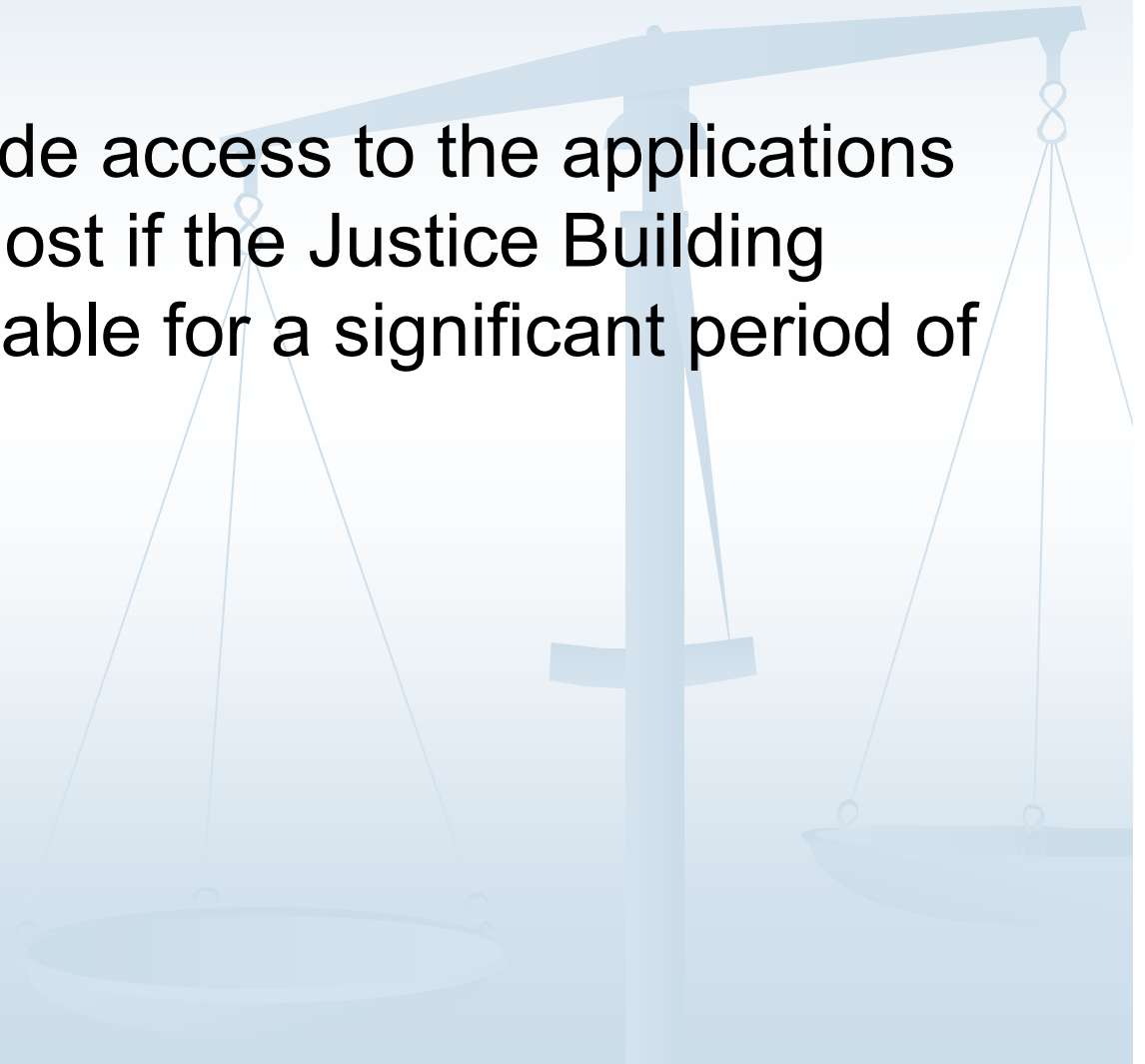
- 5 Firewalls, 2 Routers, 2 Traffic Managers
 - 9 Oracle Application Servers; 8 Oracle Database Servers; 1 Oracle Support Server
 - 5 VMware Host Servers; ~125 Virtual Guests
 - 8 Storage Systems
 - Switches/Network Tools/Other
- 

Justice Building Hardware



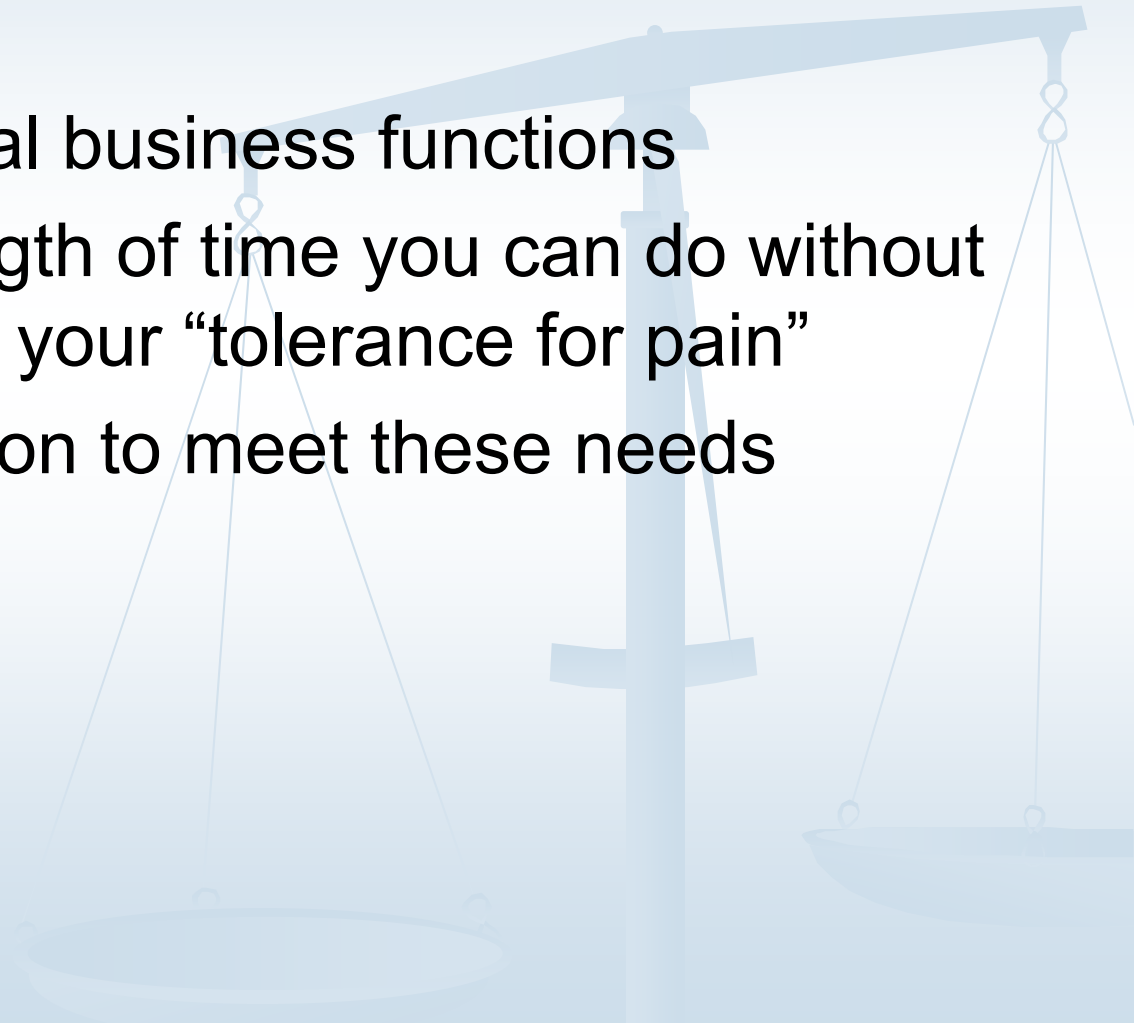
The Challenge

- How can we provide access to the applications and services we host if the Justice Building network is unavailable for a significant period of time?



The Process

- Identify your critical business functions
- Determine the length of time you can do without critical functions – your “tolerance for pain”
- Design your solution to meet these needs



Critical Business Functions

- Internet access
- Justice Building “network”
- Applications and services



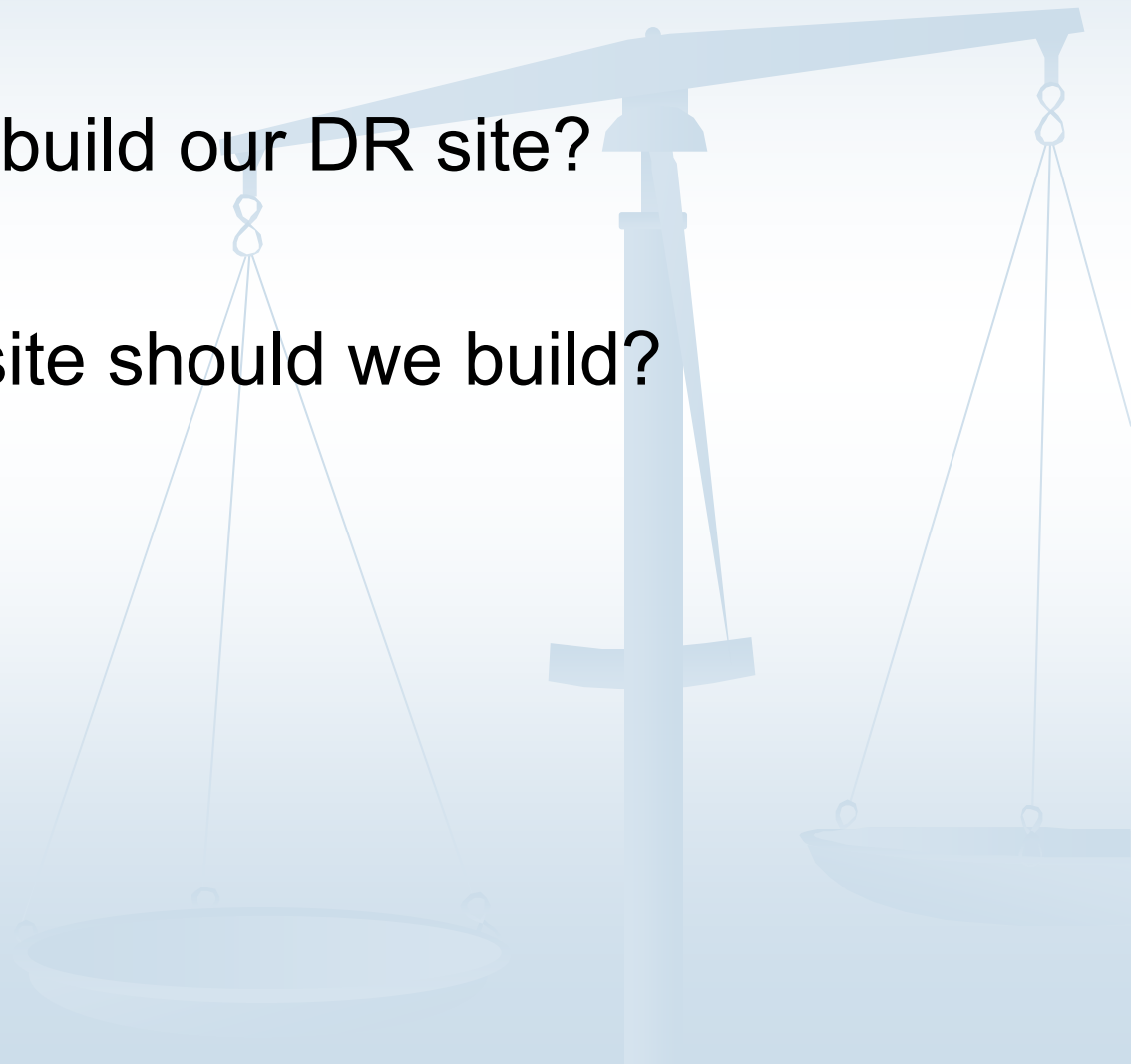
Tolerance for Pain



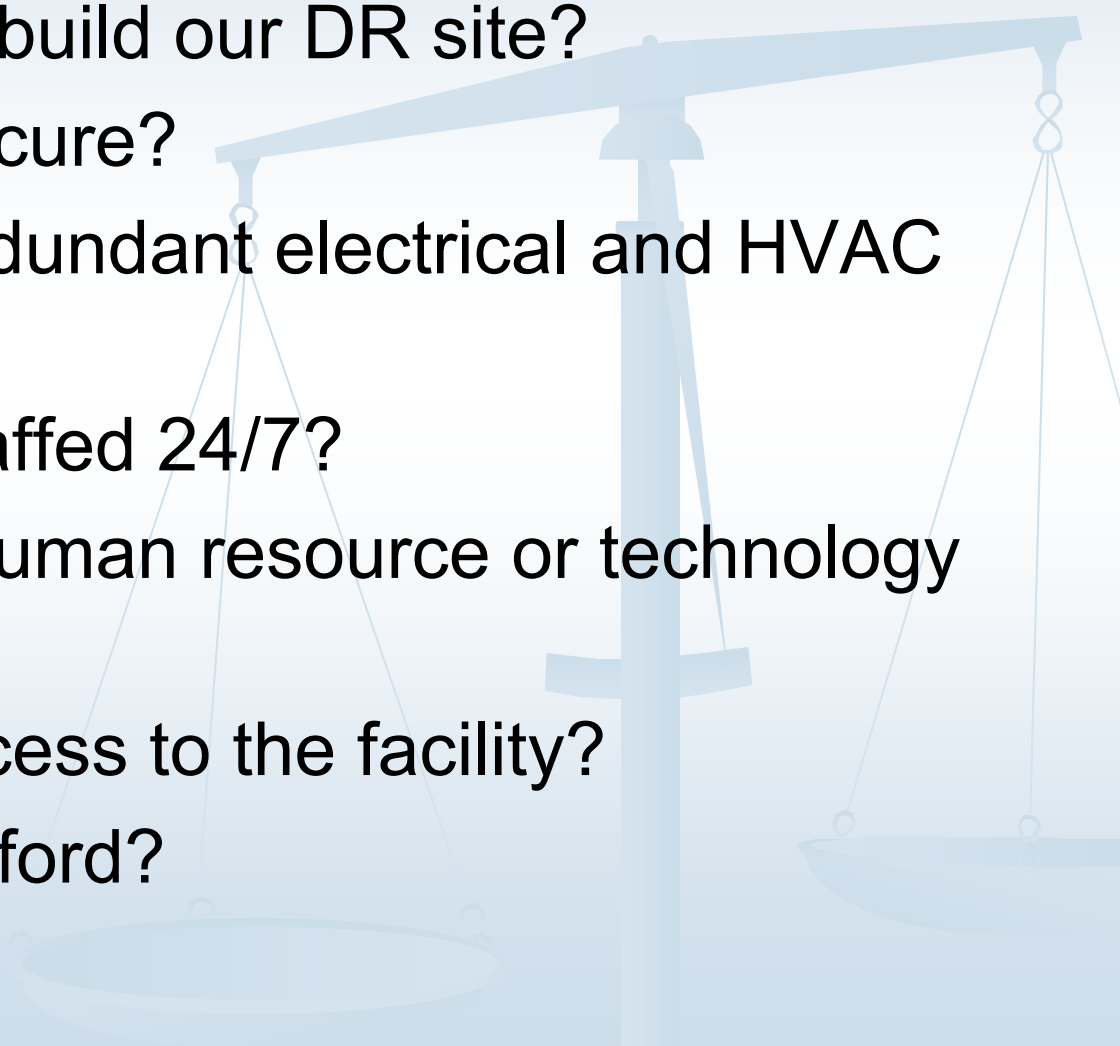
- How long can you go without access to your critical business functions?
- Scale:
 - 0-4 hours
 - 4-8 hours
 - 8-12 hours
 - Over 12 hours

Next Steps?

- Where should we build our DR site?
- What type of DR site should we build?



Where?

- Where should we build our DR site?
 - Is the facility secure?
 - Does it have redundant electrical and HVAC systems?
 - Is the facility staffed 24/7?
 - Are there any human resource or technology constraints?
 - Do we have access to the facility?
 - What can we afford?
- 

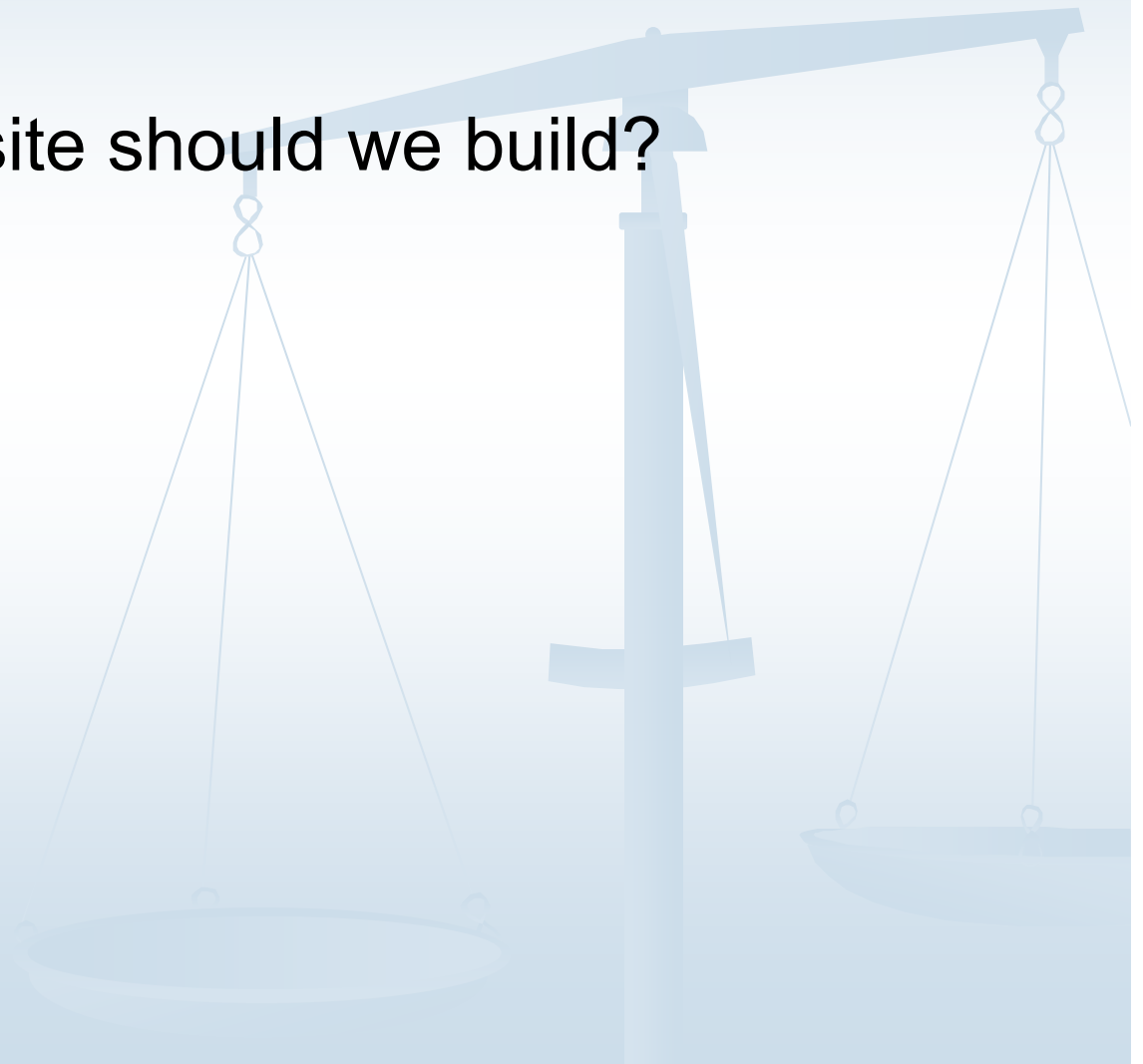
Where?

- Datacenters in neighboring states
- 85Under in Springfield, MO
- UA Datacenter in Fayetteville, AR
- Datacenter West in Little Rock



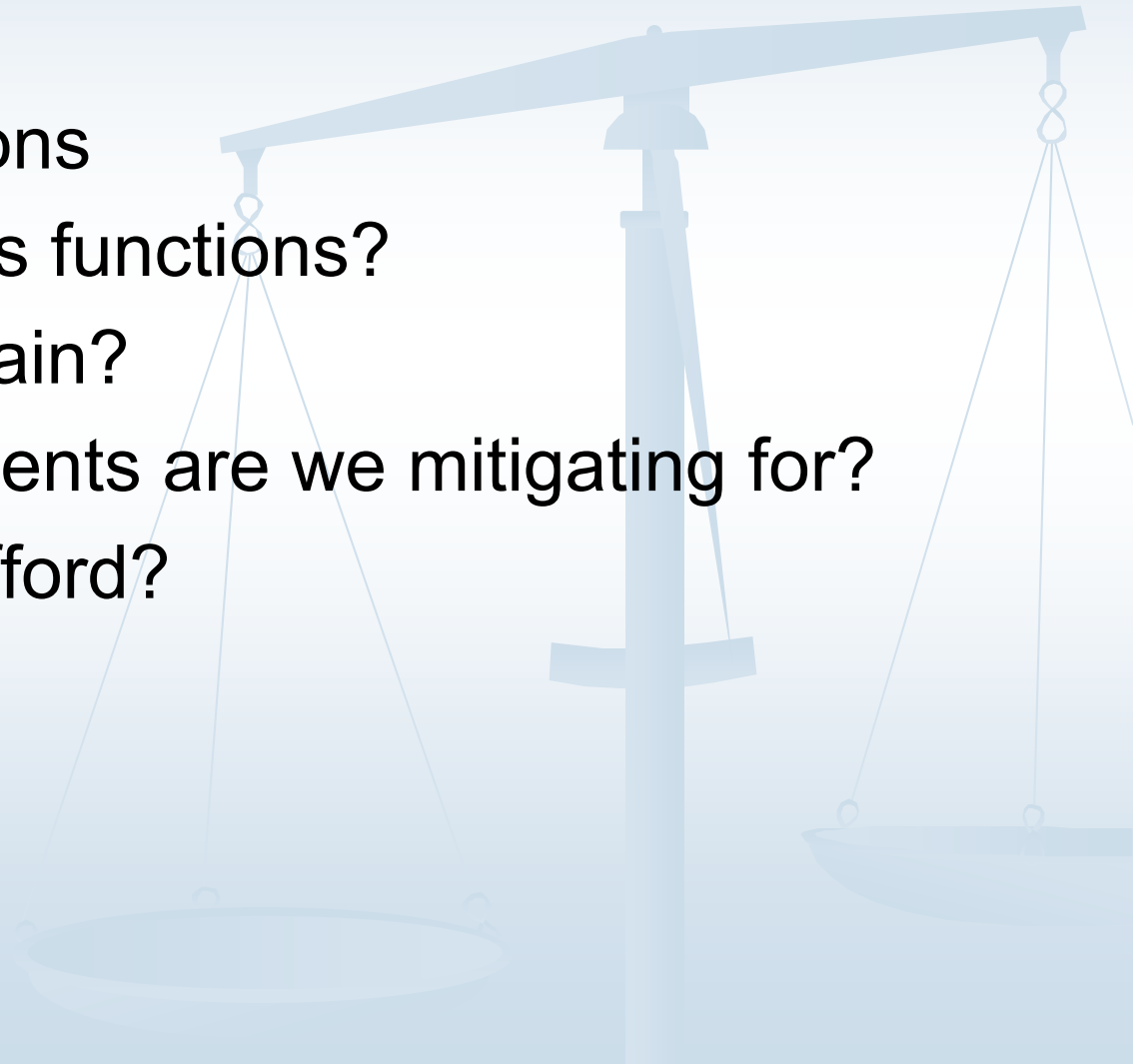
What type of DR site?

- What type of DR site should we build?
 - Hot site
 - Warm site
 - Cold site
 - Colocation site



What type?

- Other considerations
 - Critical business functions?
 - Tolerance for pain?
 - What kind of events are we mitigating for?
 - What can we afford?

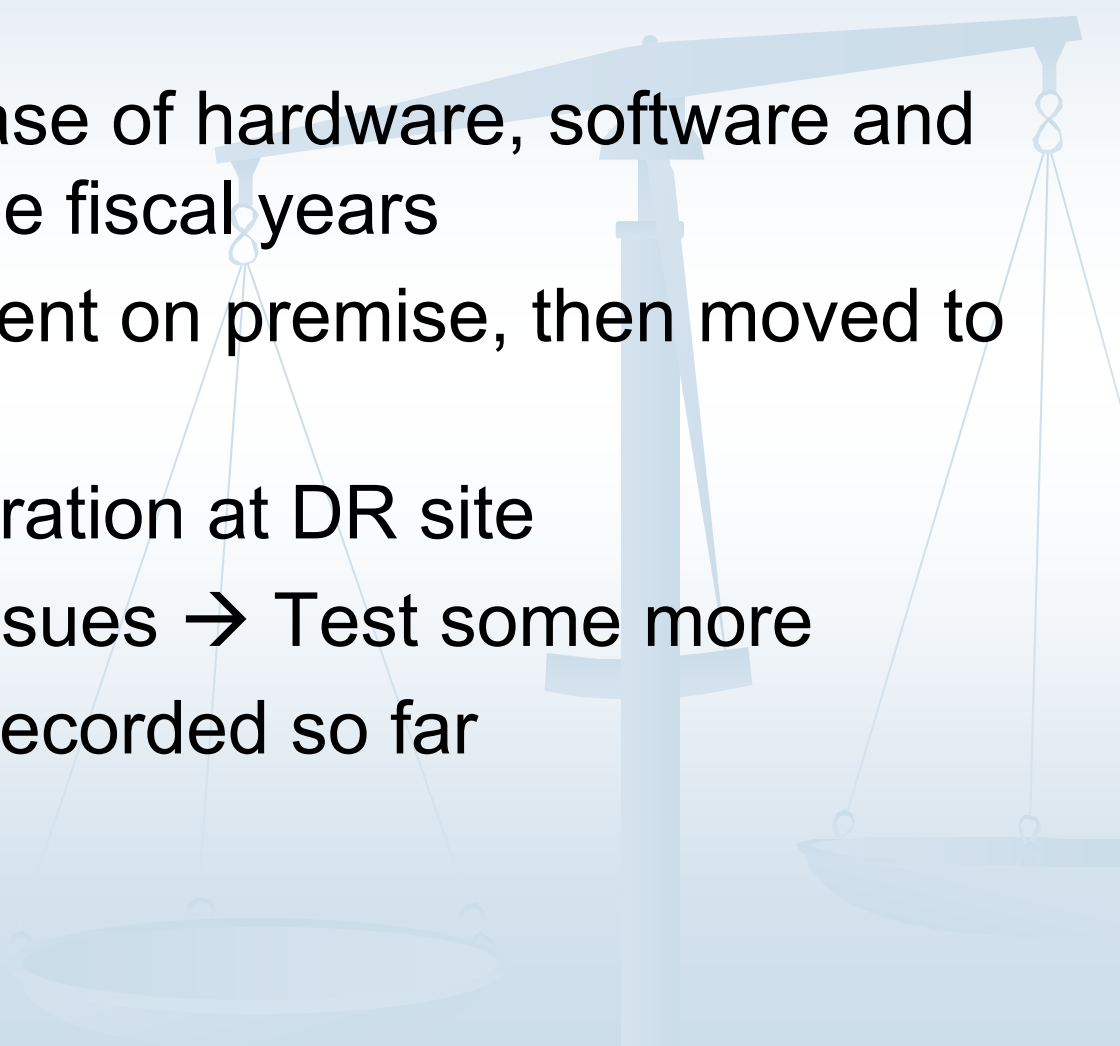


Decisions

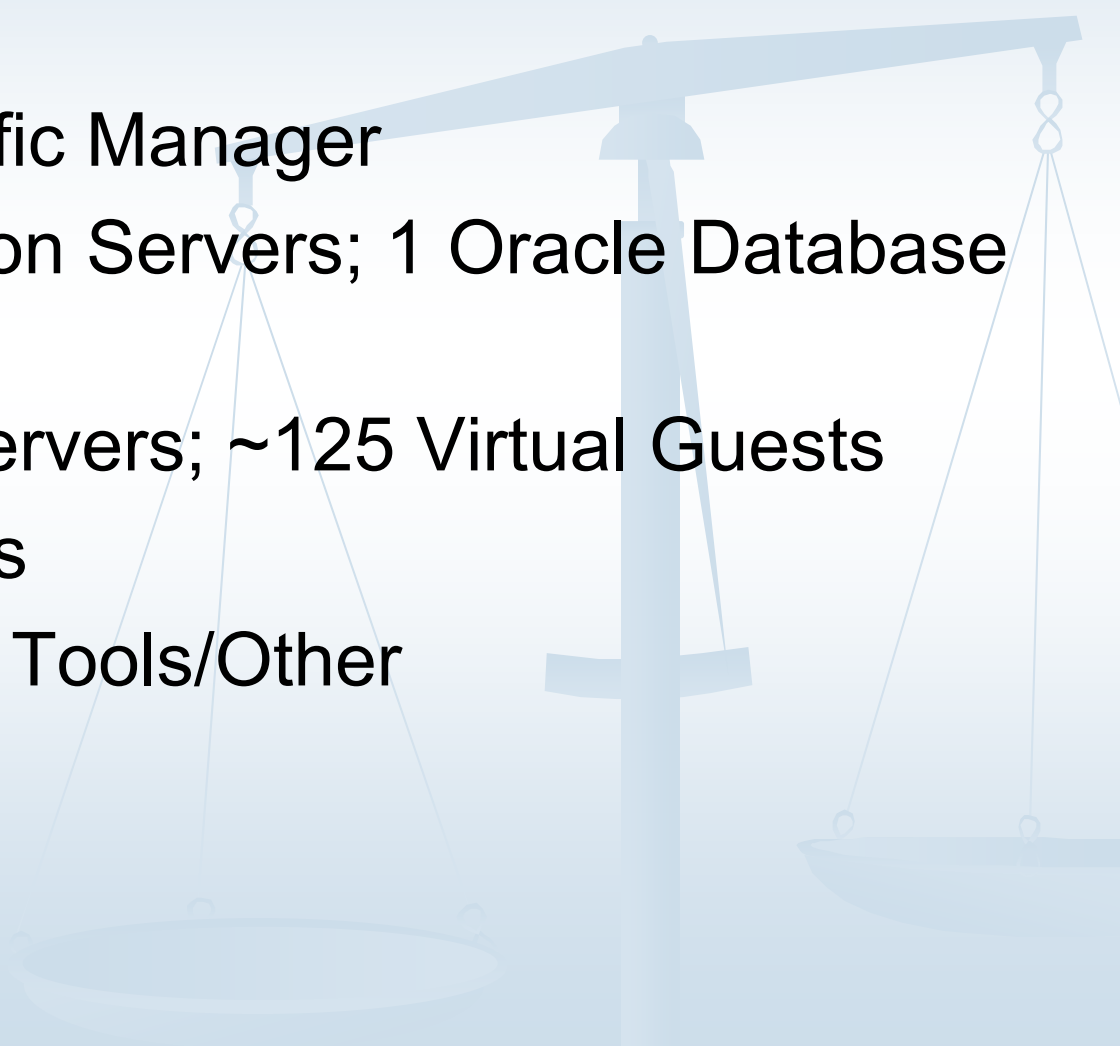


- Datacenter West in Little Rock
 - Convenient location to build our DR site
- Hot site
 - Low pain tolerance
- Limit our DR footprint to 1 rack
 - Affordable

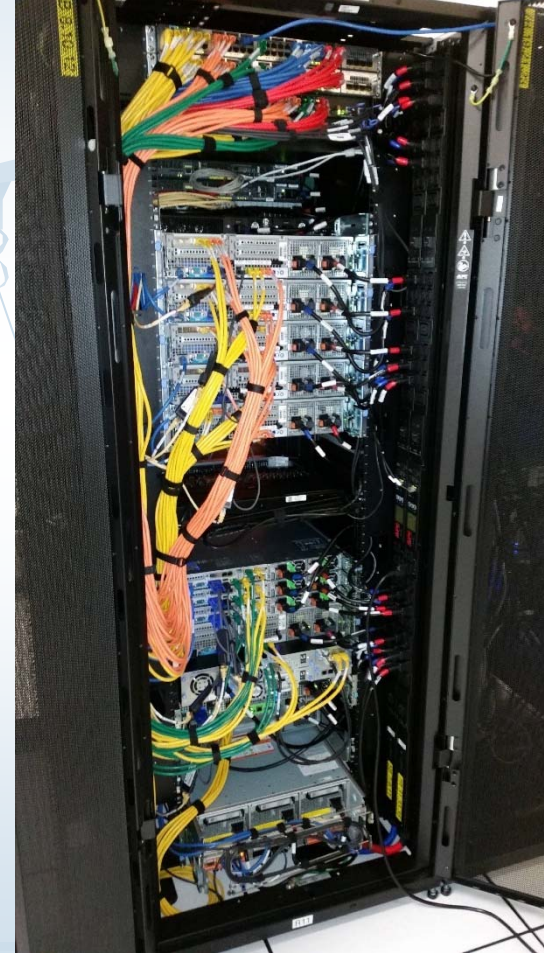
Implementing the Solution

- Spread the purchase of hardware, software and licensing over three fiscal years
 - Built the environment on premise, then moved to DR site
 - Setup and configuration at DR site
 - Test → Resolve issues → Test some more
 - Over 5000 hours recorded so far
- 

DR Site Hardware

- 2 Firewalls, 1 Traffic Manager
 - 2 Oracle Application Servers; 1 Oracle Database Server
 - 5 VMware Host Servers; ~125 Virtual Guests
 - 3 Storage Systems
 - Switches/Network Tools/Other
- 

DR Site Hardware



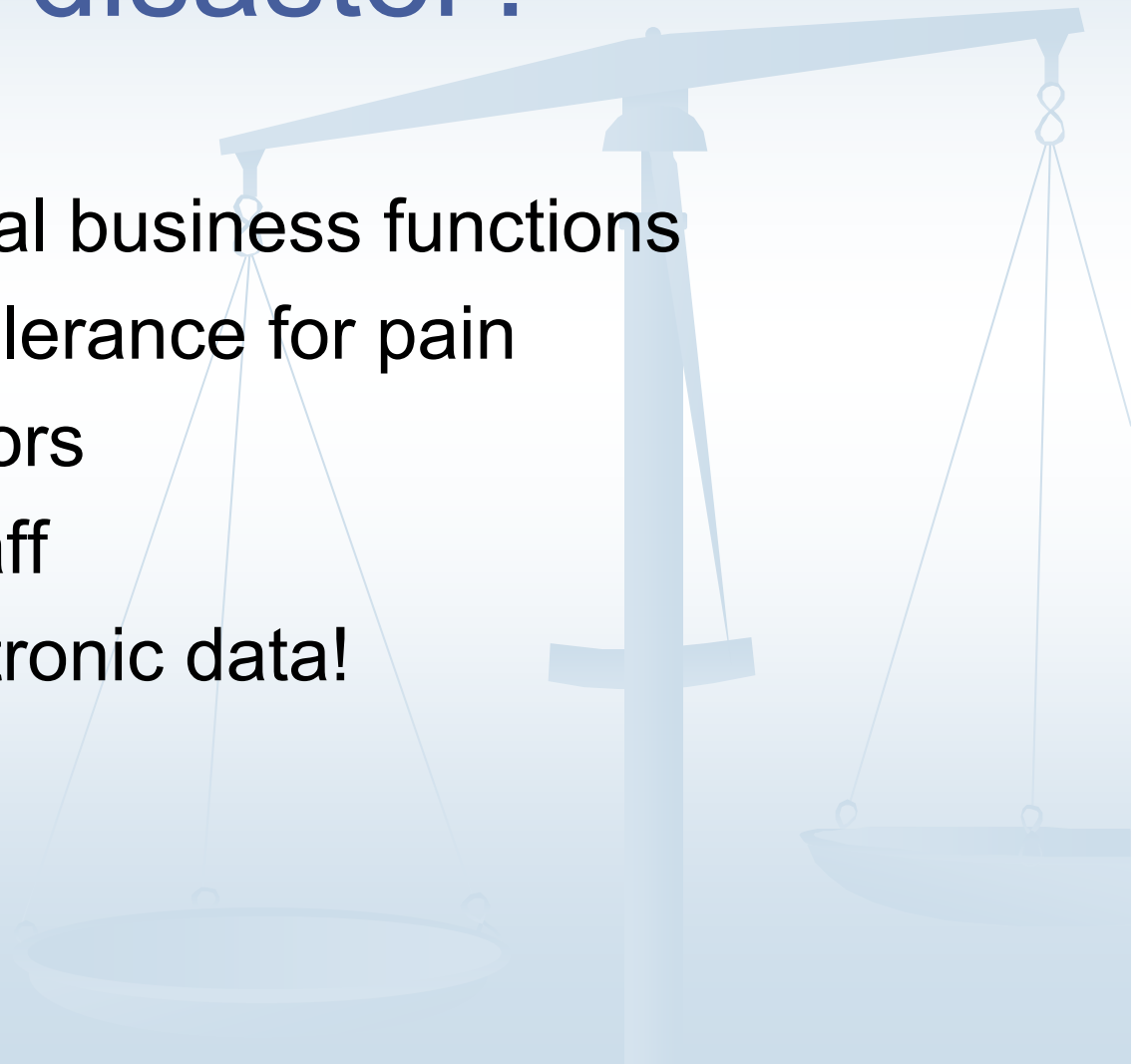
What about the future?

- Testing and refining our processes
- Add new applications and services
- Second DR site



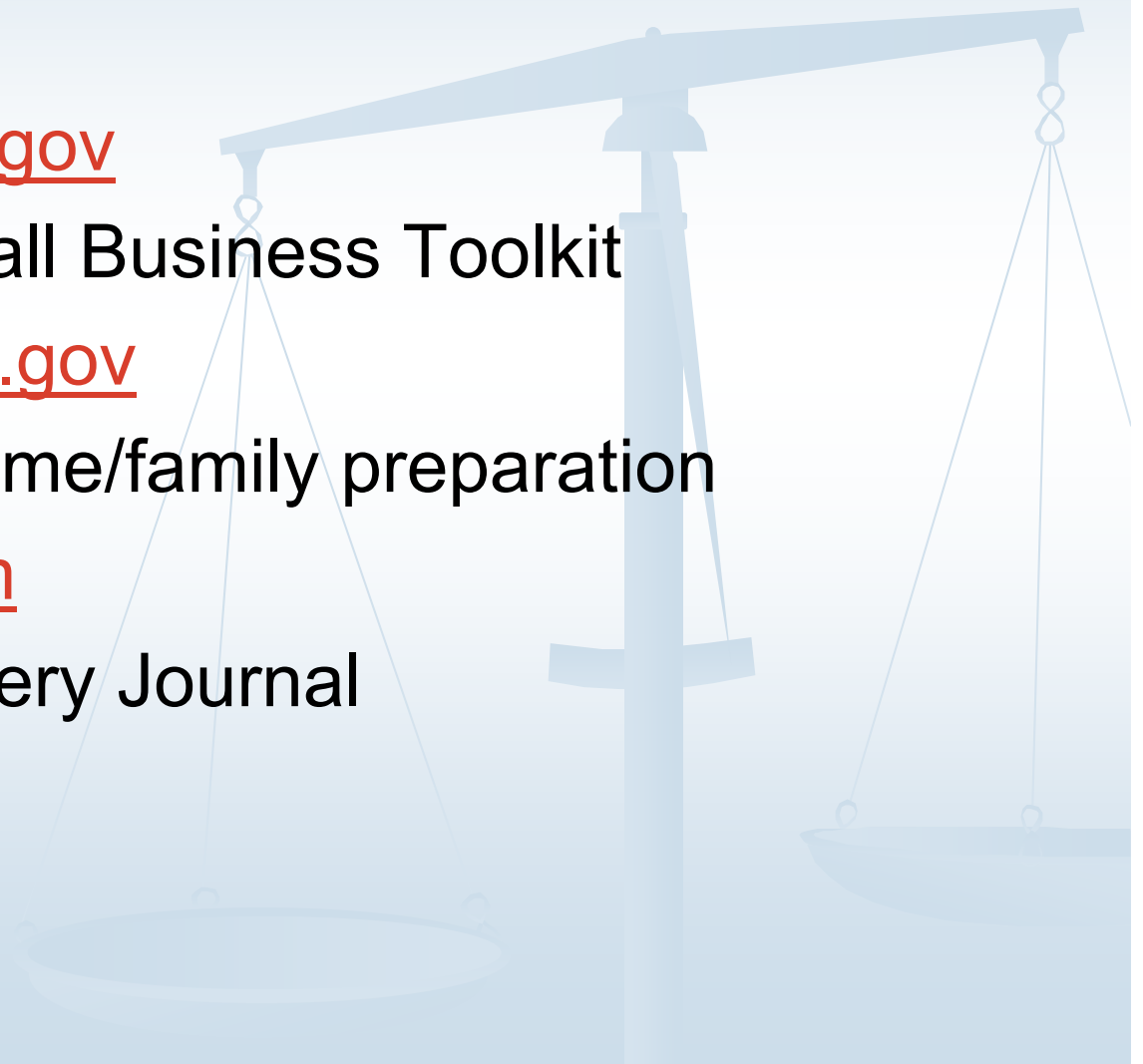
What can you do to get ready for disaster?

- Assess your critical business functions
- Determine your tolerance for pain
- Talk to your vendors
- Talk to your IT staff
- Backup your electronic data!
- Test and train



Disaster Recovery Resources

- <https://www.fema.gov>
 - Search for: Small Business Toolkit
- <https://www.ready.gov>
 - Excellent for home/family preparation
- <http://www.drj.com>
 - Disaster Recovery Journal



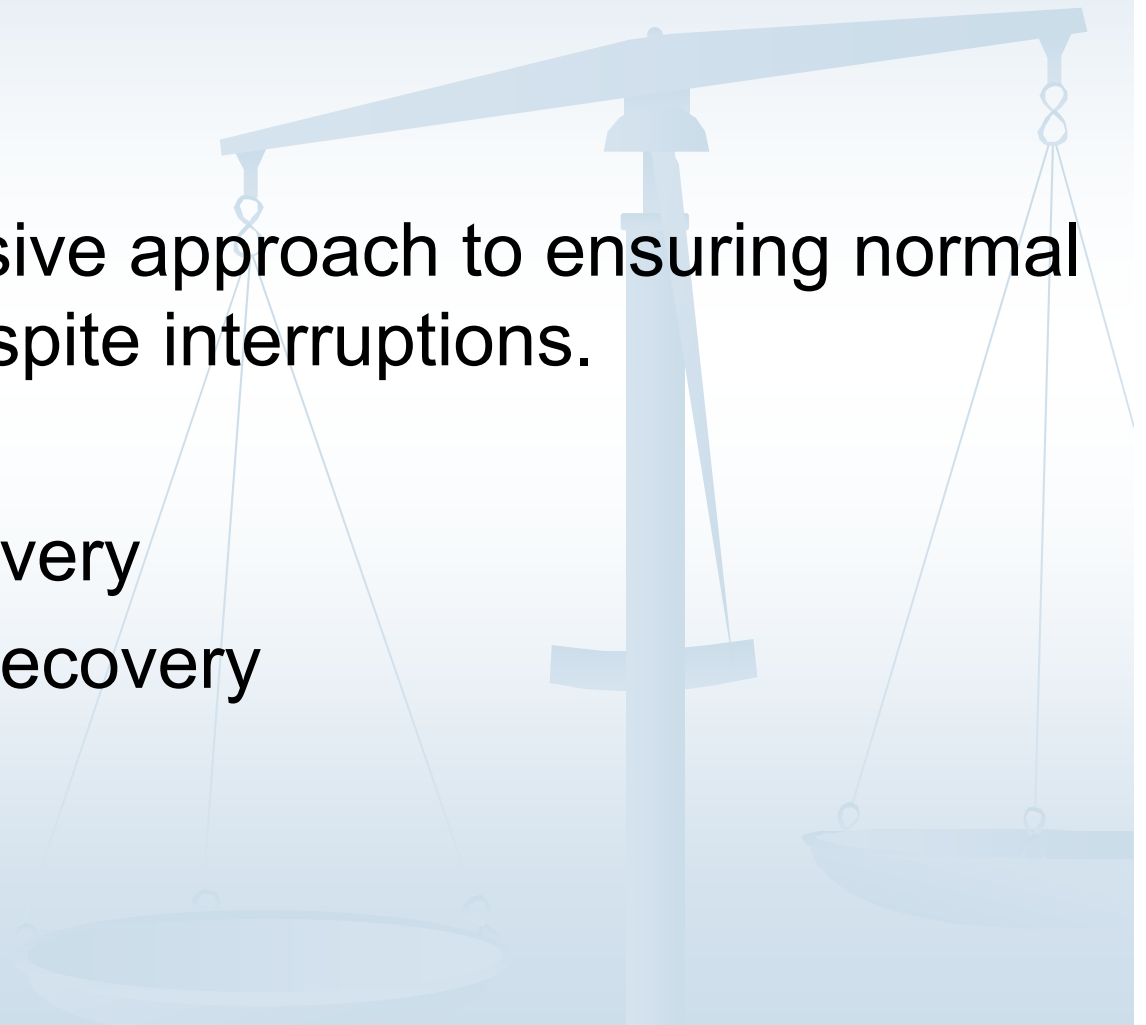


Legislative Audit's View on DR & COOP for Arkansas Courts

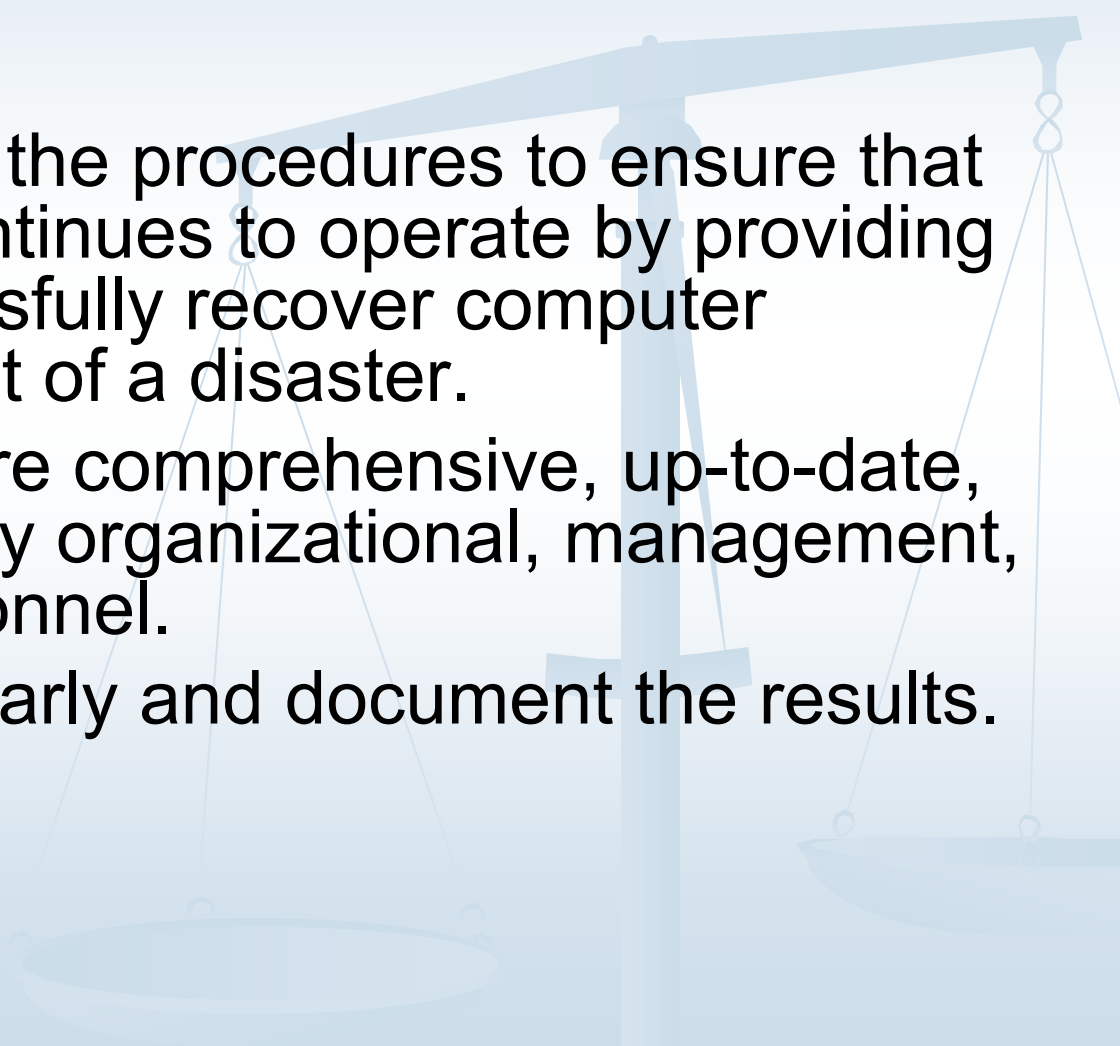
David Coles

Business Continuity Controls (COOP)

- What is COOP?
 - ❖ A comprehensive approach to ensuring normal operations despite interruptions.
- Components
 - ❖ Disaster Recovery
 - ❖ Backup and Recovery



Still not sure about what Disaster Recovery is?

- A documentation of the procedures to ensure that the organization continues to operate by providing the ability to successfully recover computer services in the event of a disaster.
 - Ensure that plans are comprehensive, up-to-date, and approved by key organizational, management, and executive personnel.
 - Test the plans regularly and document the results.
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