The Increasing Importance of Emergency Management in Industry

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10th Annual E-Plan Users Group Conference

Ritz Carlton Naples Beach Resort

October 2018

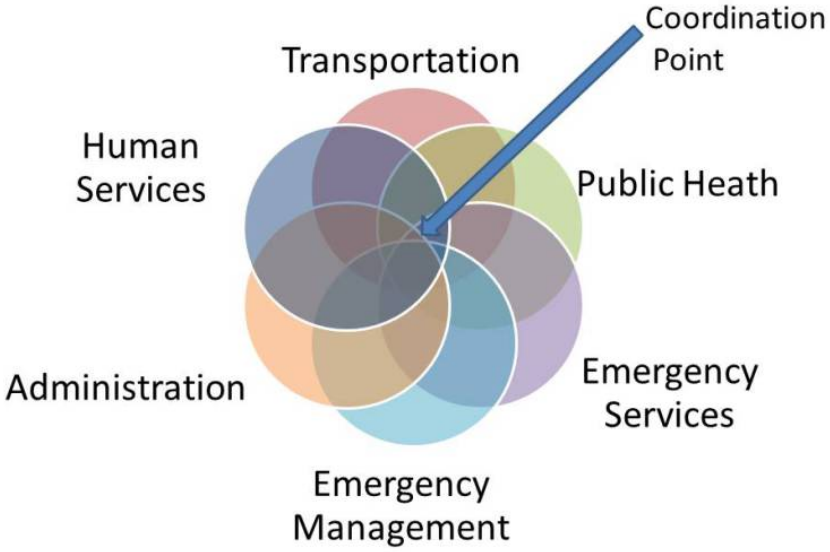
Objectives

- *Define and differentiate the meaning of: Critical Infrastructure, Critical Lifelines & Critical Facilities.*
- *Identify threats of most concern to electric, water, gas, and waste water infrastructures, and potential consequence impacts to each*
- *Identify critical infrastructure and all hazard incident management*





A World of . . . Systems

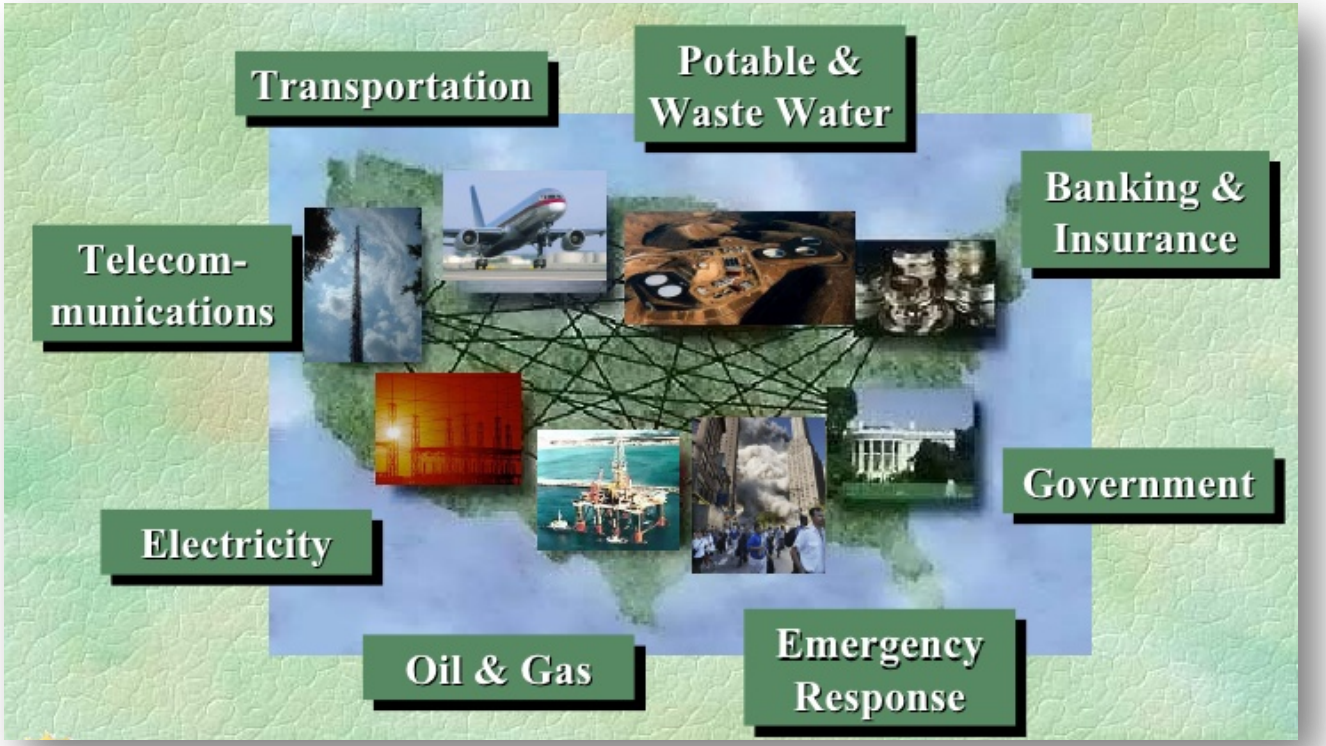








A World of . . . Reliance









Critical Infrastructure, Lifelines, and facilities

**Critical Infrastructure* *are systems and assets, whether physical or virtual, so vital that the incapacity or destruction of such systems and assets would have a debilitating impact on security, economy, public health or safety.*

Adapted from http://www.floridadisaster.org/GIS/critical facilities/index.htm

**Critical Lifelines* *are services of critical systems and facilities that are vital to the function of a community and important to the emergency response to and recovery from disasters.*

Adapted from: http://mceer.buffalo.edu/infoservice/reference_services/lifelines.asp







Critical Infrastructure, Lifelines, and facilities

**Critical Facilities* *are structures from which essential critical lifelines and services and functions for victim survival, continuation of public safety actions, and disaster recovery are performed or provided.*

Adapted from http://www.floridadisaster.org/GIS/criticalfacilities/index.htm





Critical Infrastructure, Lifelines, and facilities

- *Electrical Grid – the interconnected network for generation, transmission of, and distribution of electricity to individual customers.*
- *Drinking Water Systems – Local or regional systems providing source and treated water for human consumption*
- *Natural Gas Systems – the interconnected network for gathering, transmission of, and distribution of natural gas to individual customers*
- *Wastewater Systems – Local or regional systems to process waste water into effluent*





Critical Priorities

#1: Life Safety

#2: Incident Stabilization

#3: Property Conservation / Environmental Protection

#4: Restoration of Commerce

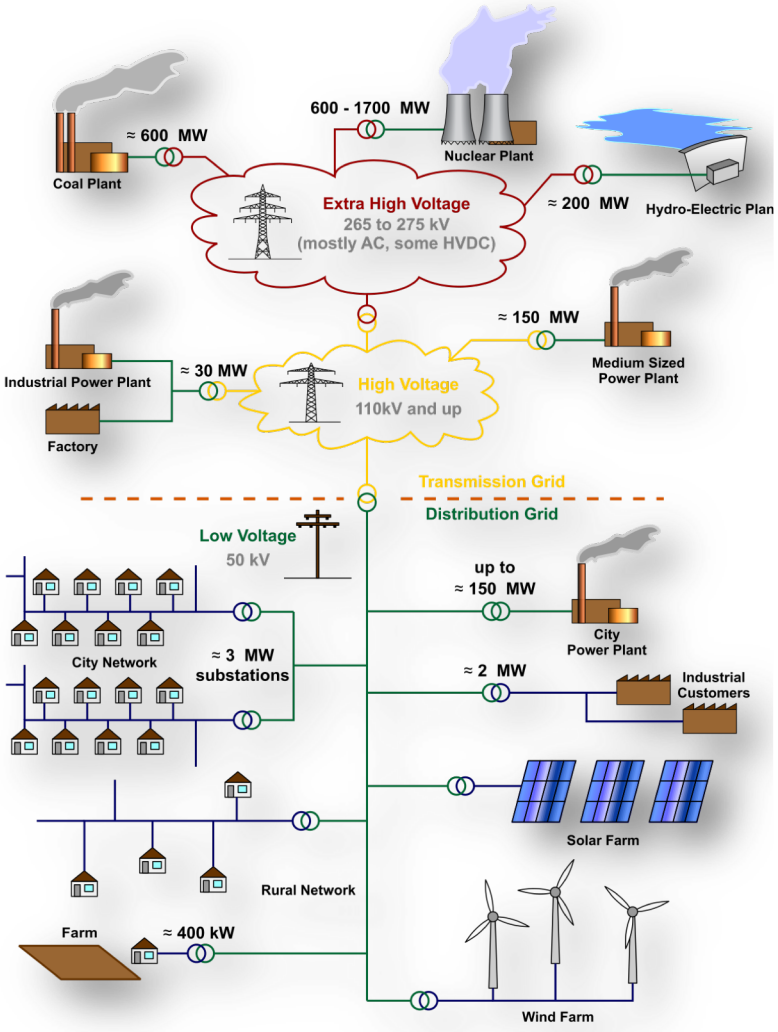
- **System Restart / Service Restoration (Lifelines)**
- **Business Continuity**
- **Brand / Reputation Protection / Wall Street**
- **Regulatory Compliance**
- **Governmental Oversight**

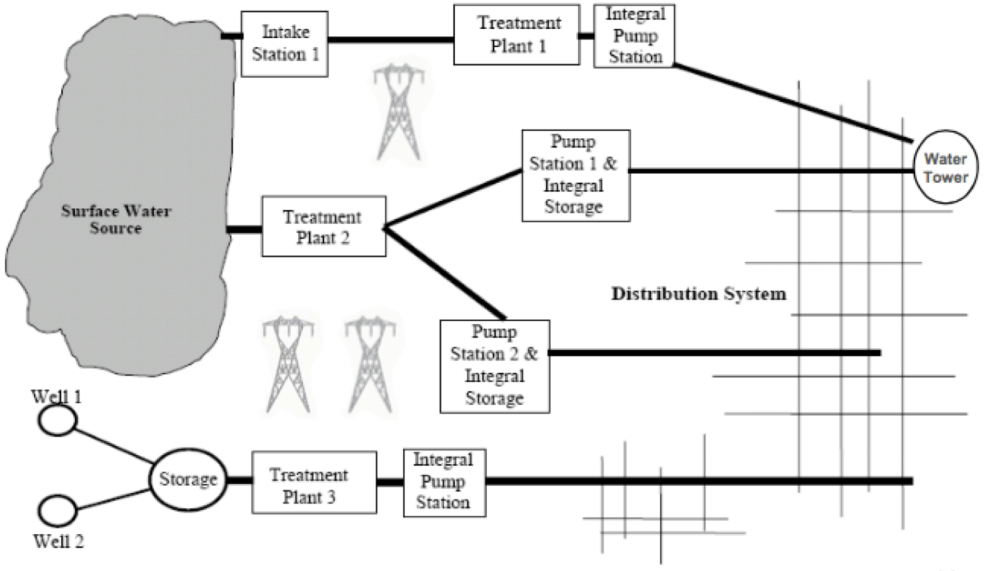


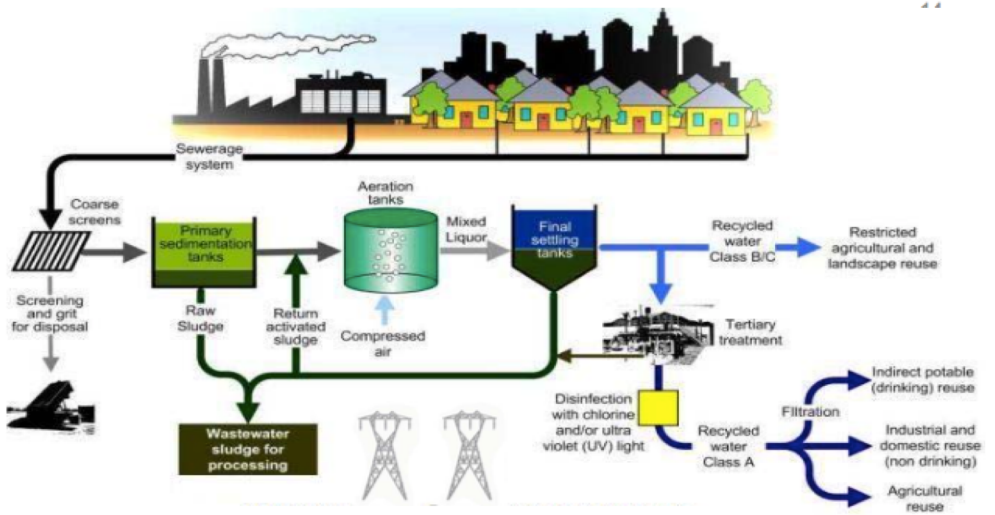




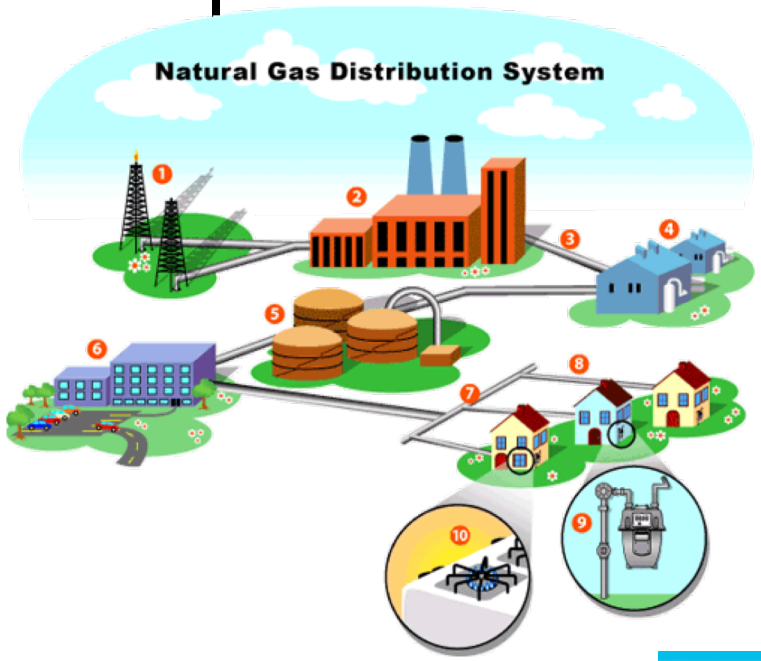
Systems Under Threat. . .



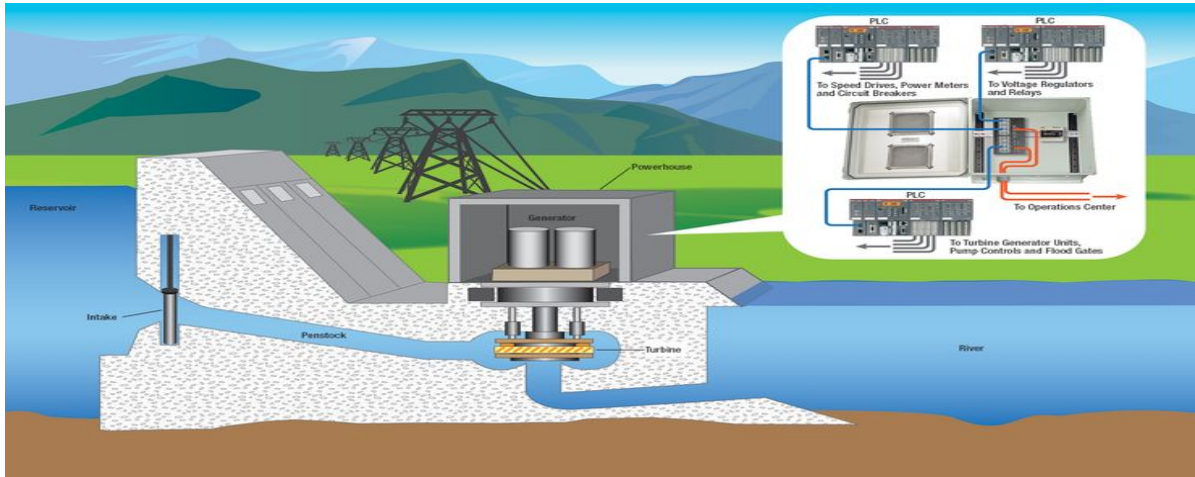




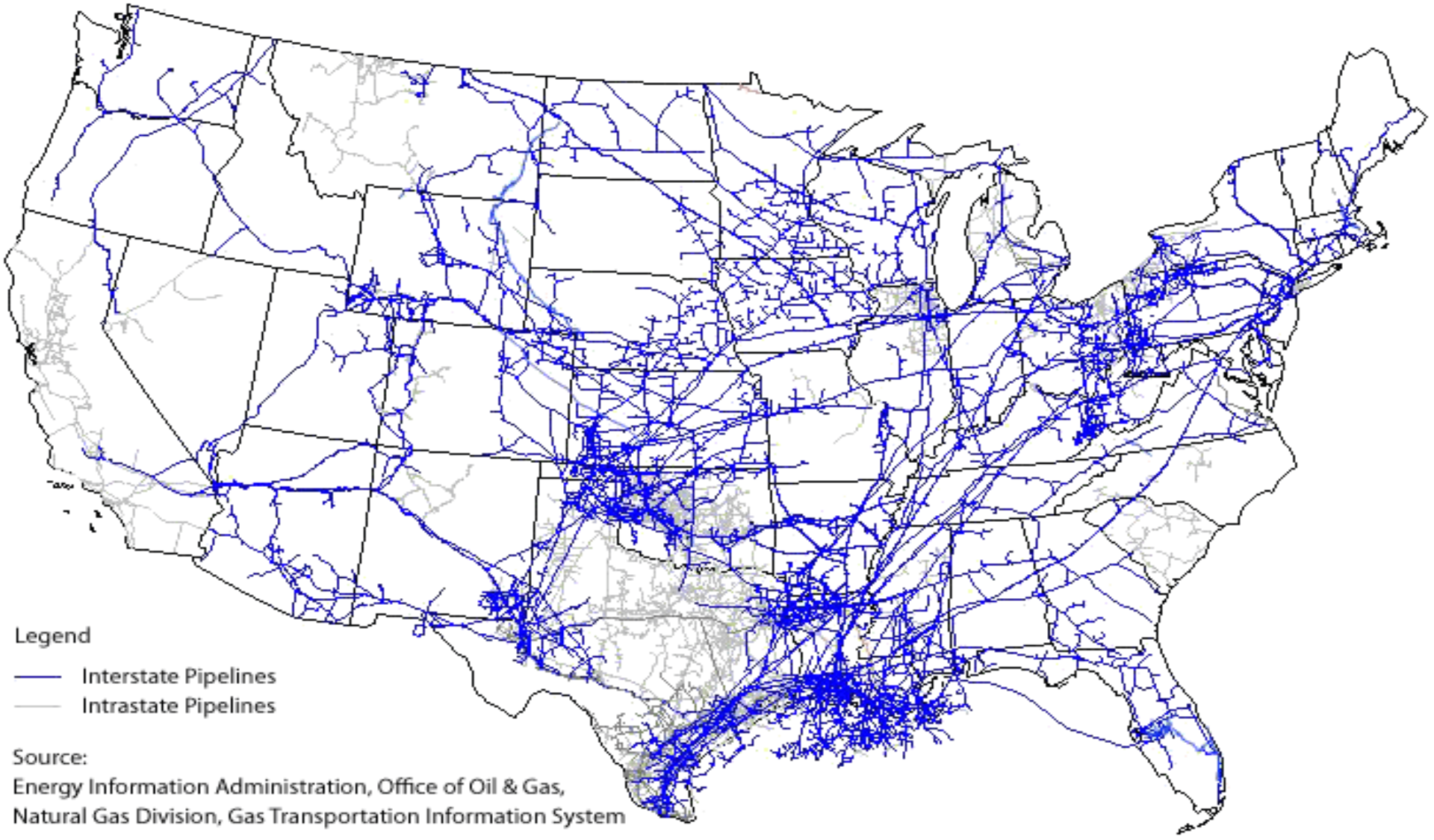
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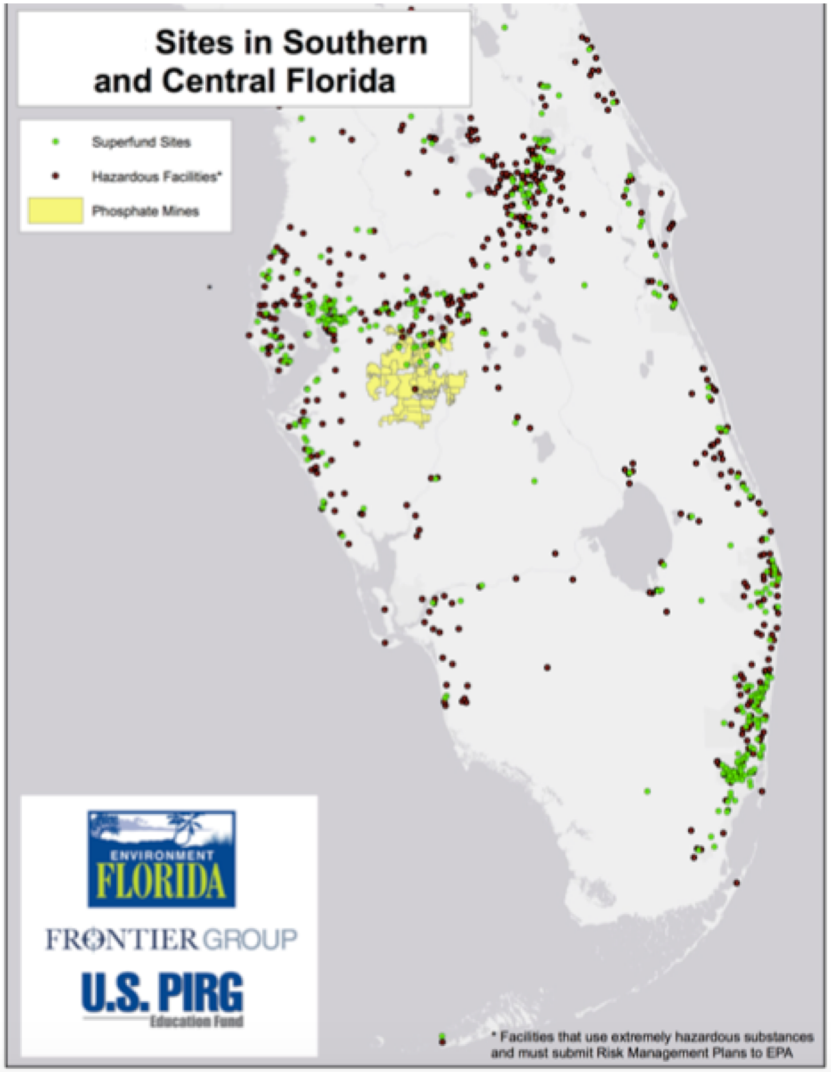
- Natural Gas Systems
- Dam Systems
- Critical Facilities
- Hazardous Facilities

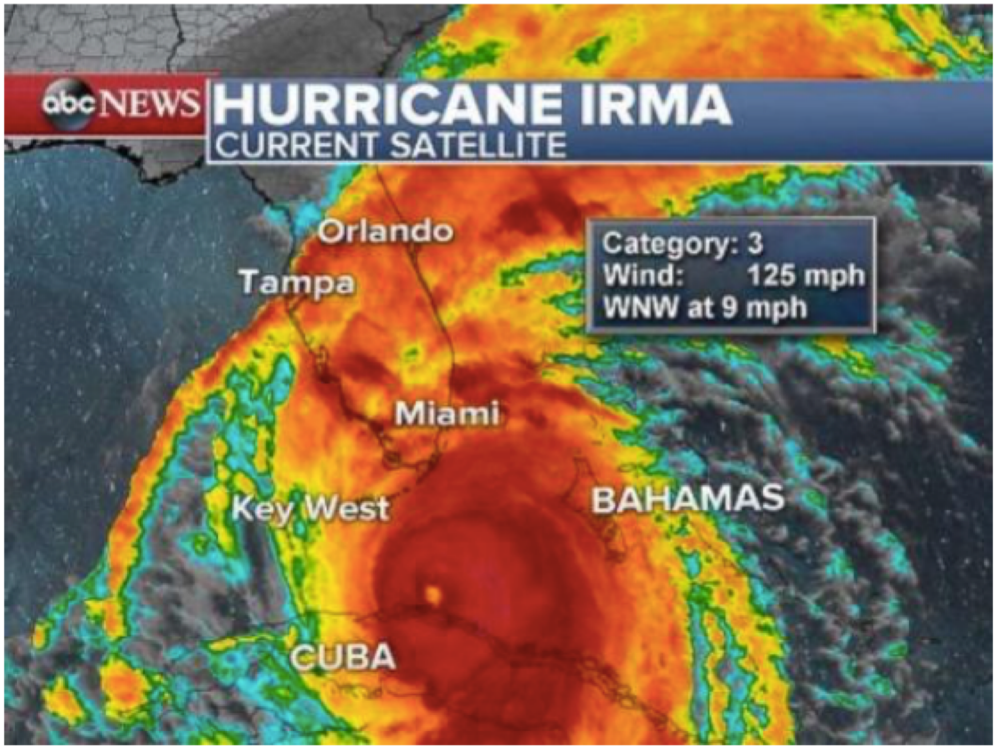


Systems Under Threat. . .



Systems Under Threat. . .

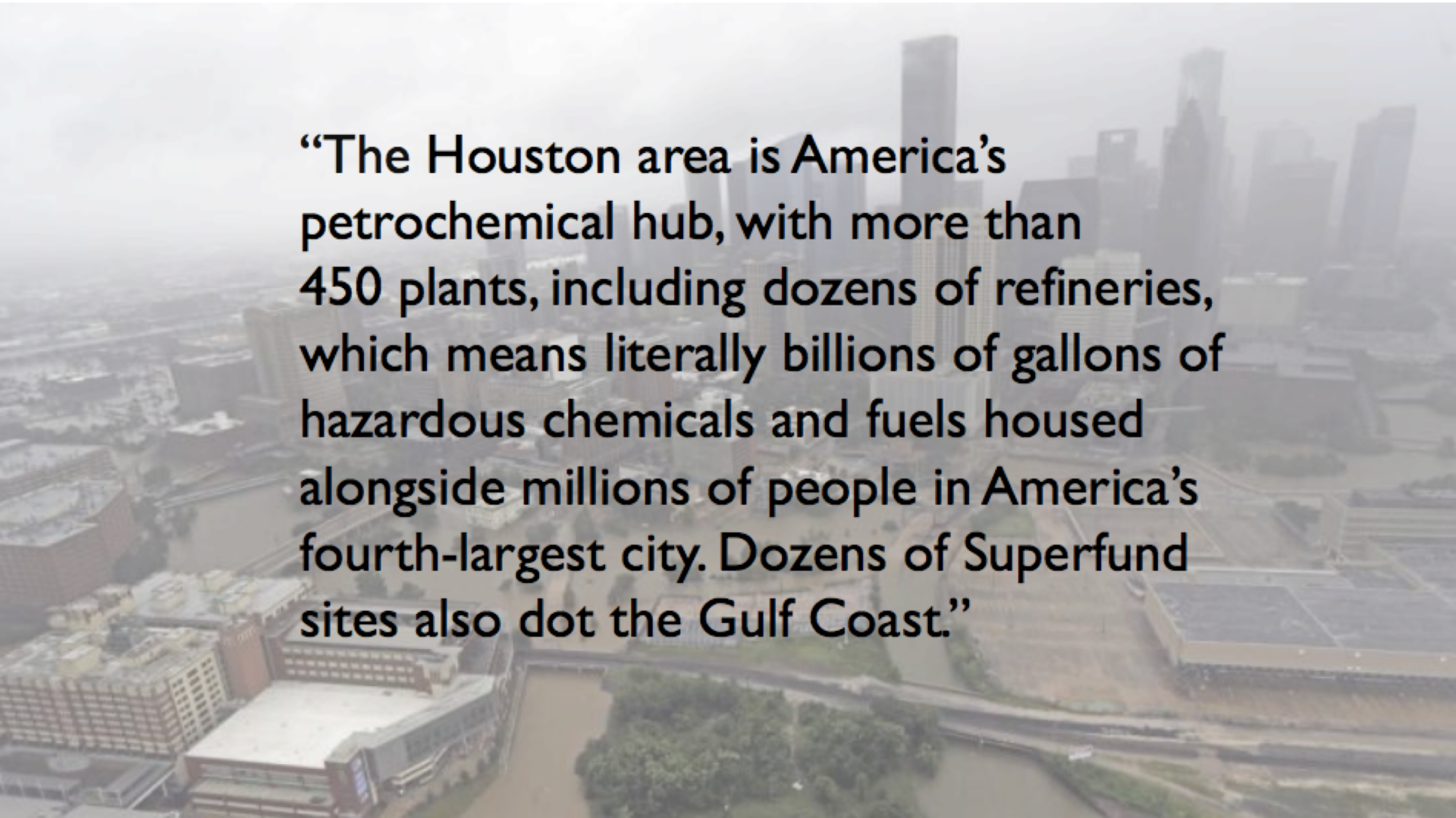




Systems Under Threat. . .



Systems Under Threat. . .



"The Houston area is America's petrochemical hub, with more than 450 plants, including dozens of refineries, which means literally billions of gallons of hazardous chemicals and fuels housed alongside millions of people in America's fourth-largest city. Dozens of Superfund sites also dot the Gulf Coast."

Harvey Swept Hazardous Mercury Ashore. The Mystery: Its Source.

By JACK HEALY and SHEILA KAPLAN SEPT. 6, 2017



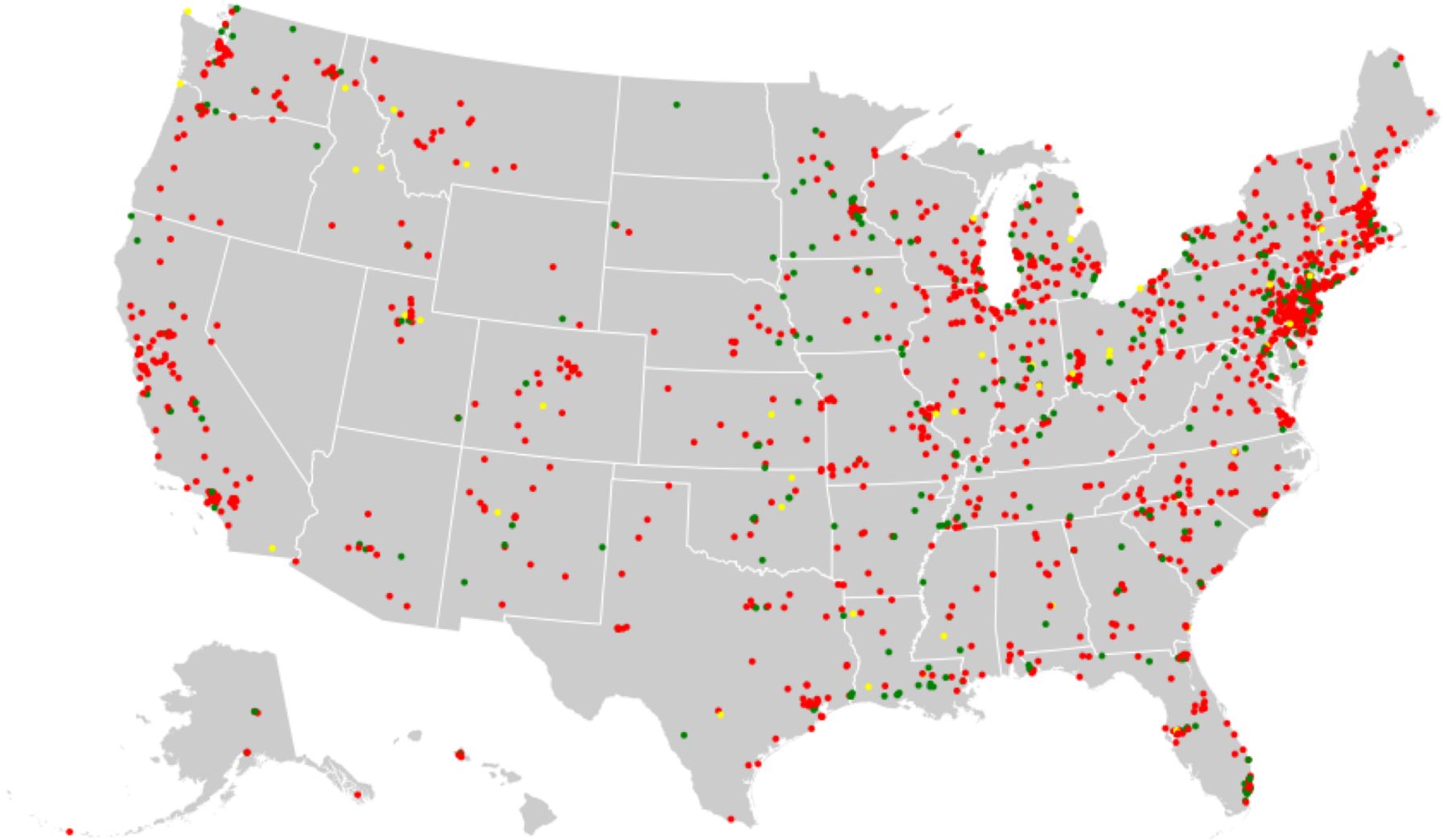


On his prope
mercury, was

"Nobody should pick this up."

"We need our agencies to act immediately on this finding . . . . We have no idea where these floodwaters could have carried these contaminants from and I fear that more residents could come in contact with it unknowingly."

Systems Under Threat. . .



All-Hazards Threats

- Geologic
- Meteorological / Wildfires
- Geomagnetic storm
- Biological
- Accidents / Neglect
- Physical Attacks
  - Domestic
  - Foreign
- Cyber Attacks
  - Domestic
  - Foreign

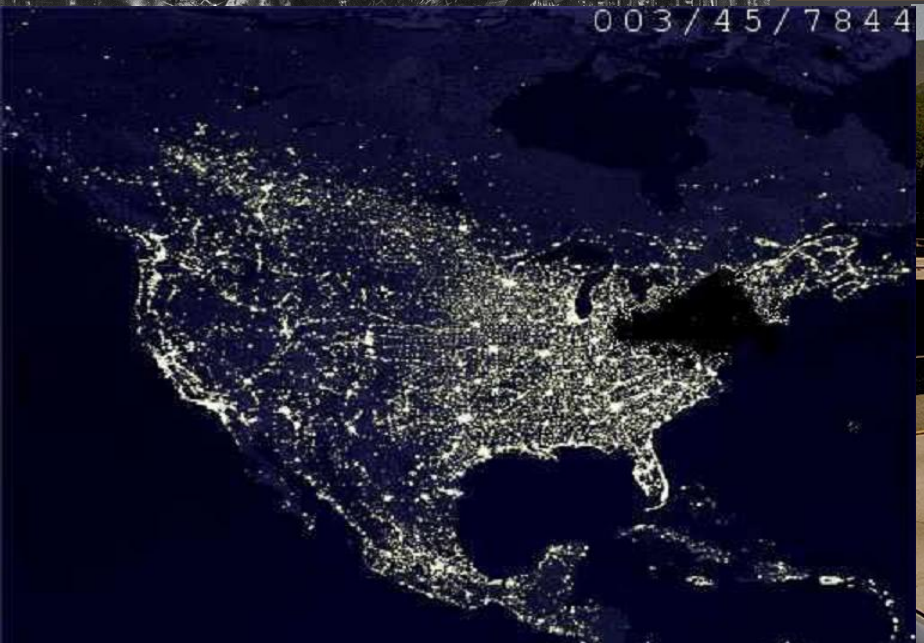


Systems Under Threat. . .











Reoccurring Issues for Critical Infrastructure Incidents and Events

- **Too many people reporting to one supervisor**
- **Different emergency organizational structures within (from normal day-to-day) and between organizations**
- **Lack of reliable incident information**
- **Inadequate and incompatible communications**
- **Lack of structure for coordinated planning among in- house groups**
- **Unclear lines of authority**
- **Terminology differences among in-house groups and outside agencies**
- **Unclear or unspecified incident objectives**





Bridging the Gap

- **Life Safety**
- **Damage Assessment**
- **Restart**
- **Critical Facilities Restoration**
- **Bulk Customer Restoration**
- **Remaining Customers**
- **Estimated Time of Restoration (ETR)**
- **Communications / Messaging**
- **Regulatory / Political**
- **Wall Street**



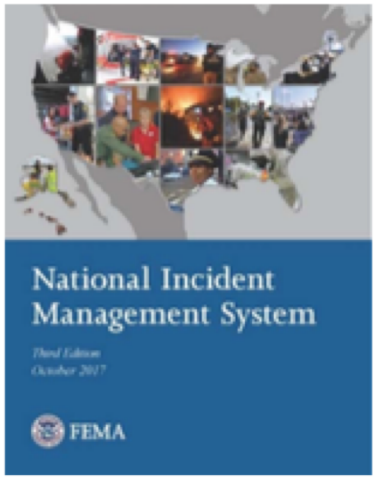








Bridging the Gap



Resource Management

Command and Management

Communications and Information Management

- **Utility-specific Incident Management Teams**
- **Multi-operating companies Coordination Systems**
- **Communications & Public Information**







Bridging the Gap

Project Management:

- Initiating
- Planning
- Executing
- Monitoring and Controlling
- Closing

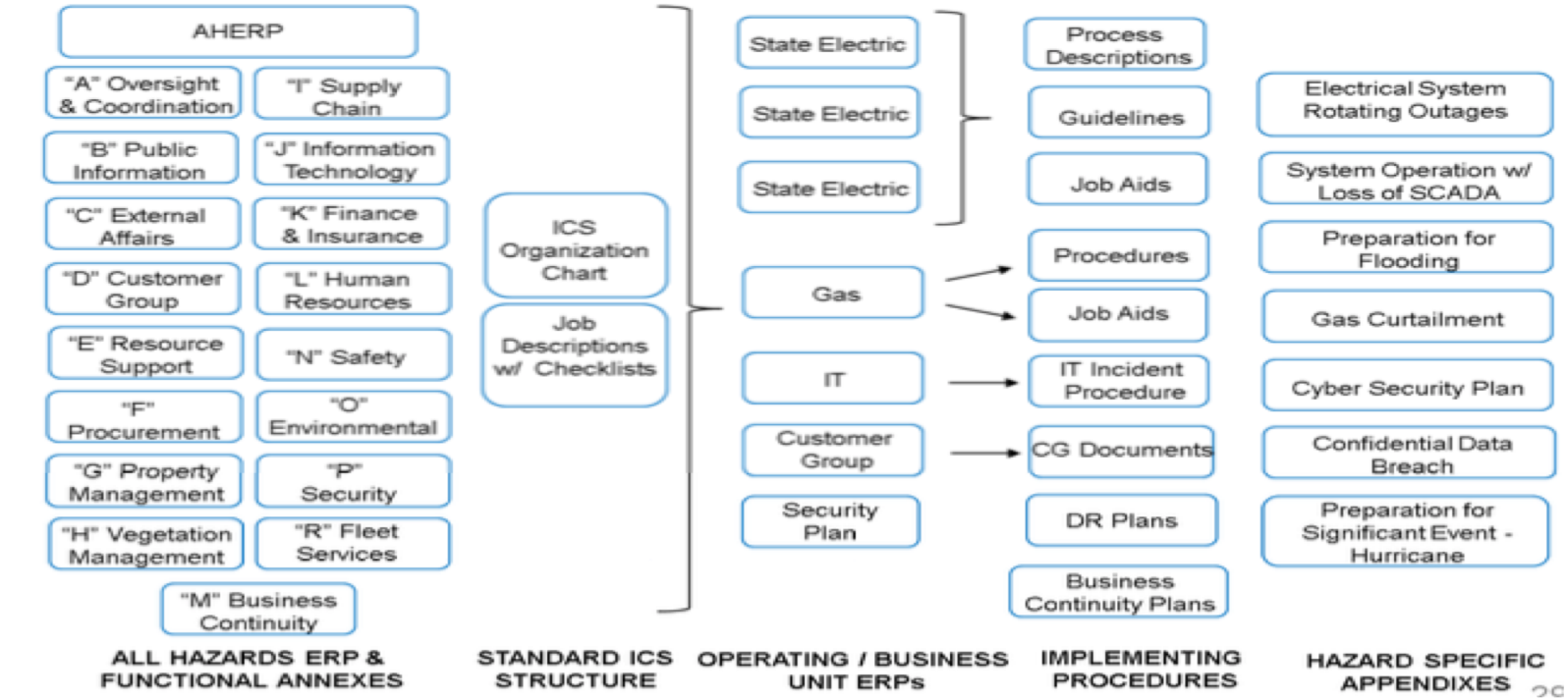
Incident Management:

- Size-up & Initial Actions
- Incident Action Planning
- Execute, Evaluate, & Revise Plan
- Situational Awareness
- Demobilization and Closeout





Industry in All-Hazards Planning

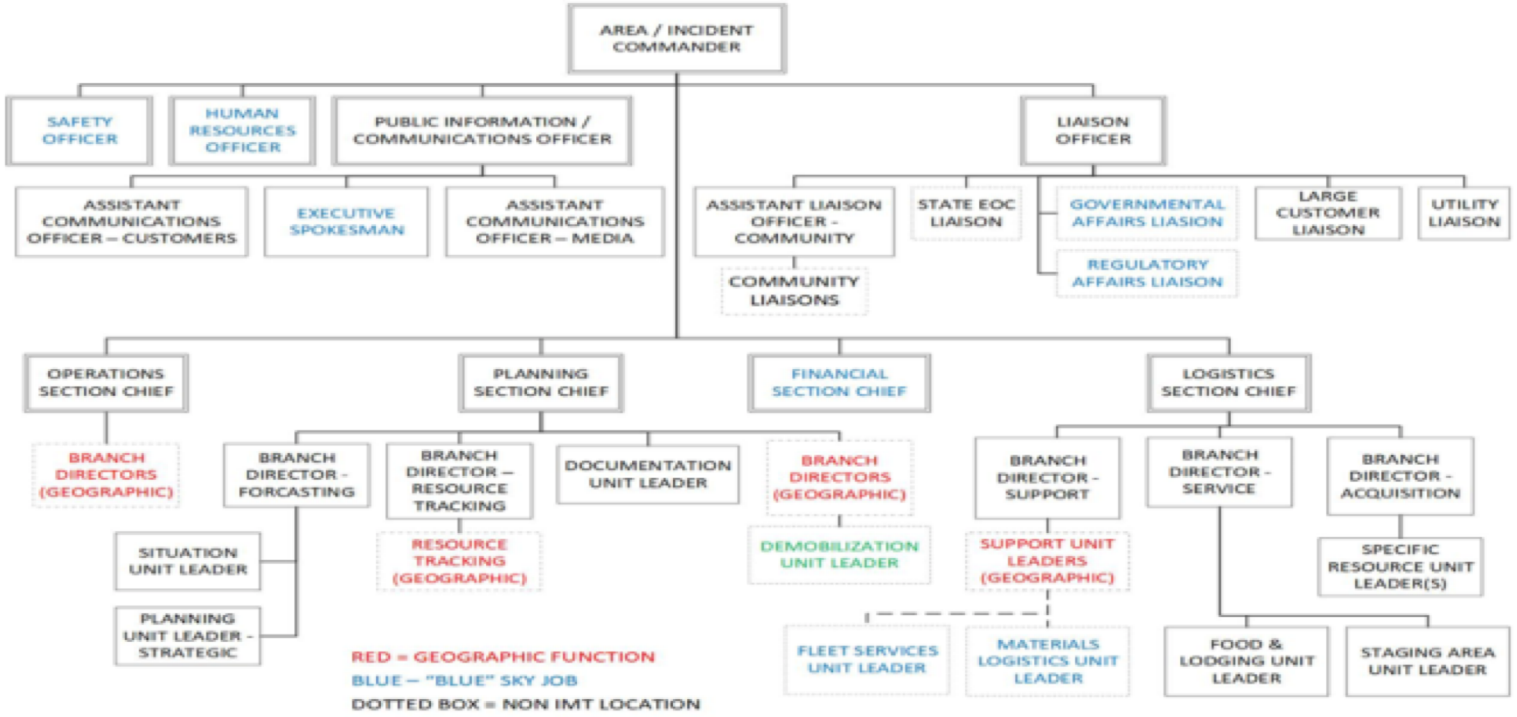








Standardization - NQS and Critical Infrastructure IMT

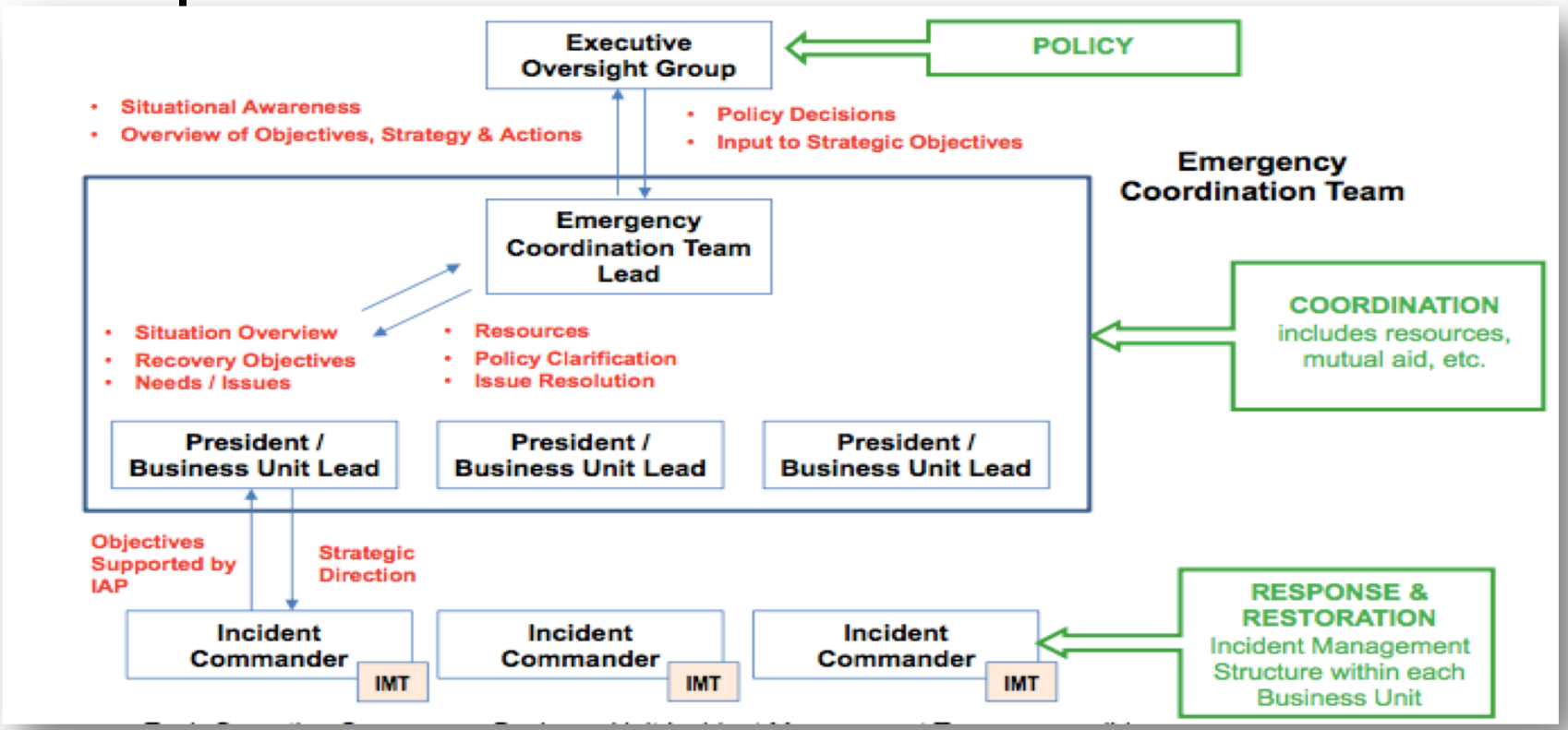








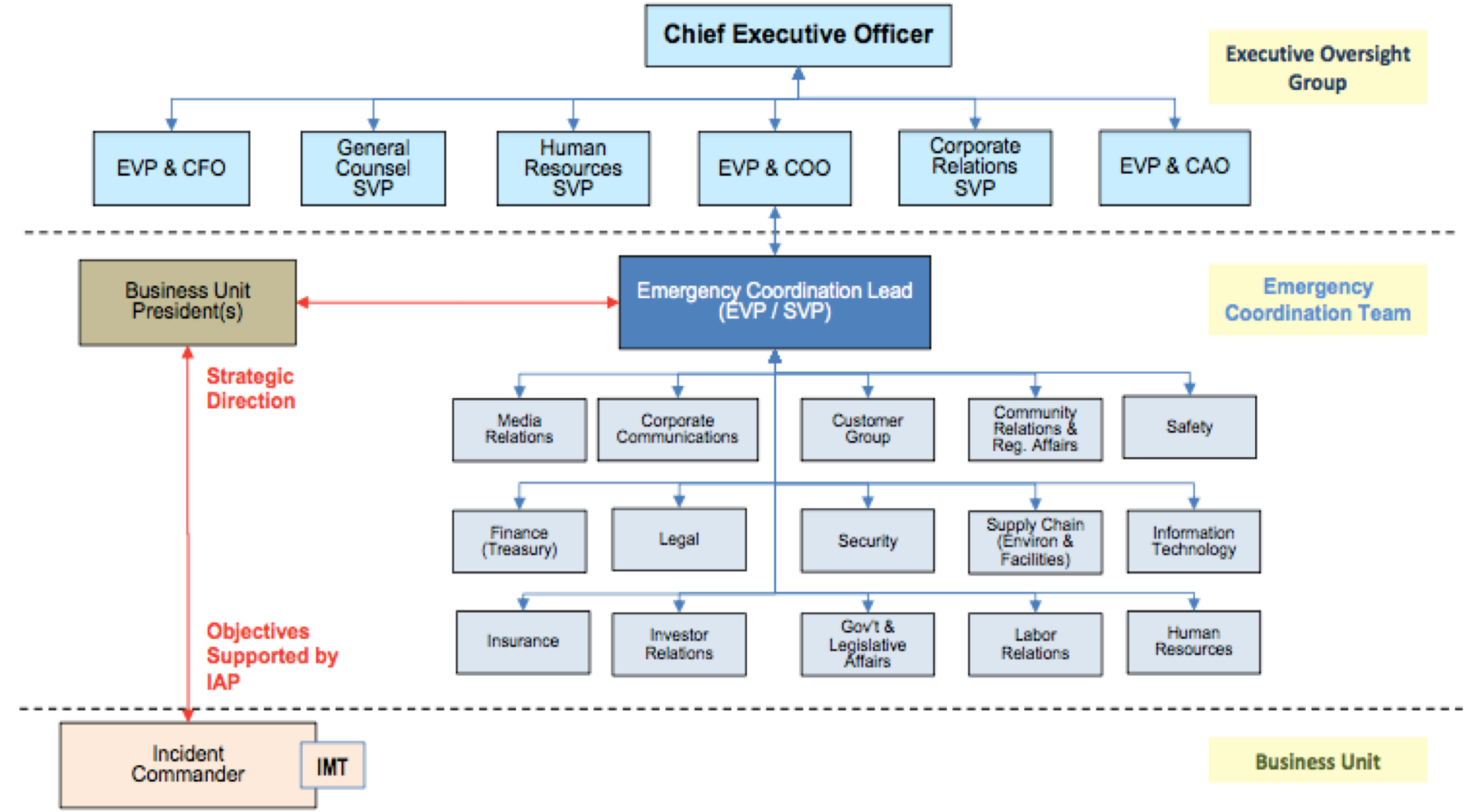
Systems Under Threat. . .










Chief Executive Officer
Executive Oversight Group
EVP & CFO
General Counsel SVP
Human Resources SVP
EVP & COO
Corporate Relations SVP
EVP & CAO
Business Unit President(s)
Emergency Coordination Lead (EVP / SVP)
Emergency Coordination Team
Strategic Direction
Media Relations
Corporate Communications
Customer Group
Community Relations & Reg. Affairs
Safety
Finance (Treasury)
Legal
Security
Supply Chain (Environ & Facilities)
Information Technology
Insurance
Investor Relations
Gov't & Legislative Affairs
Labor Relations
Human Resources
Objectives Supported by IAP
Incident Commander
IMT
Business Unit







Industry Incident Action Planning



Most Efficient Work Breakdown (based on Resources Available)

- Priorities (Life Safety)
- Customer Impact
- Geographic Area
- Work Stream or Resource Groups







Industry Planning Results

Incident Briefing

- Incident situation (map, significant events)
- Incident objectives
- Summary of current actions
- Status of resources assigned or ordered

➢ Situation Reports
➢ Other Briefings

COMMUNICATIONS FLOW

+

TIMELY ACCURATE INFORMATION

=

EFFECTIVE DECISION-MAKING

OPERATIONAL PLANNING

Incident Action Plan
Operational Period

- Incident Commander
- Communications
- Liaisons

COMMUNICATIONS SECTION

- Public Information
- Employee Information
- Customer Information

Corporate Communications

Community Relations

Customer Group



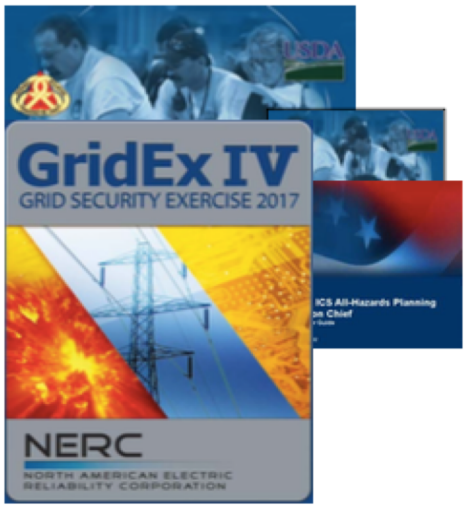




The Final Bridge to Unity of Effort – Training and Exercise

Incident Command System
Training for Electrical Utilities





- E-Learning Module - Anyone with emergency event role (Customized)
- Classroom – Supervisors*& Above (Customized)
- Command & General Staff (Customized)
- Position Specific (Customized)
- Exercise – Exercise - Exercise

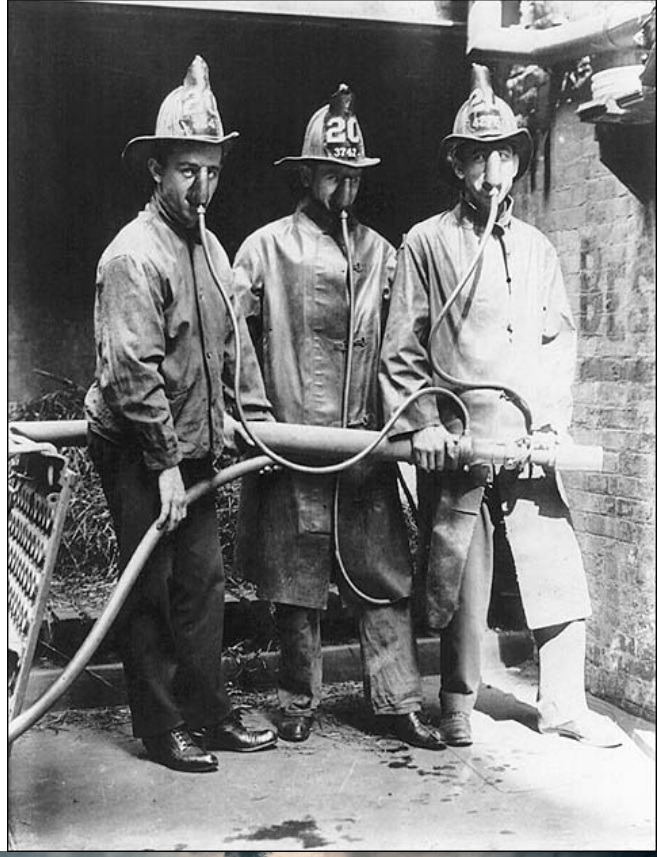






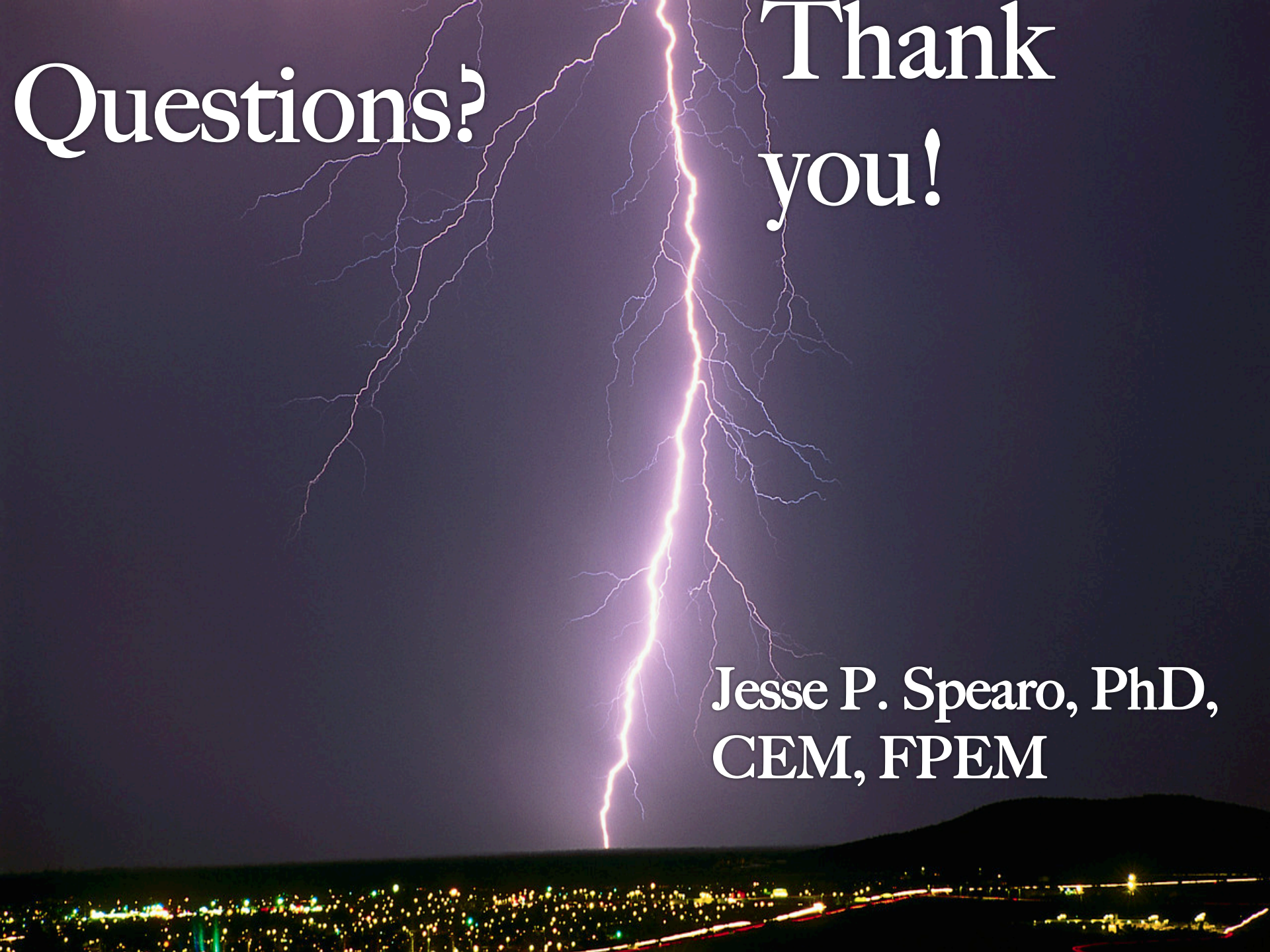
Conclusion

Analyzing Past and Present Practice:
+Time
+Technology
+Experiences
+Expectations
+Relationships
= Future Success








Questions?
Thank you!
Jesse P. Spearo, PhD, CEM, FPEM