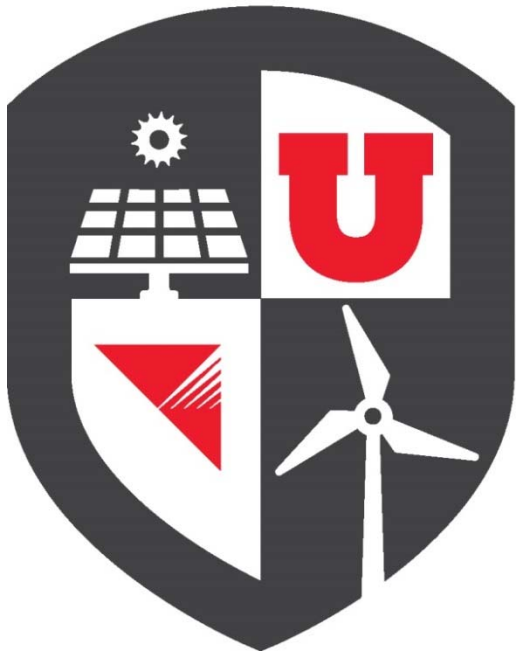


# Peter Grandgeorge

National Security and Resiliency Programs Manager



A graduate of the University of Northern Iowa, Peter manages security-related programs for MidAmerican Energy. Peter has led a multinational cyber security enhancement initiative, developing strategic relationships and business continuity projects driving toward a more resilient organization and community. Peter serves on numerous industry committees at both the state and national level.



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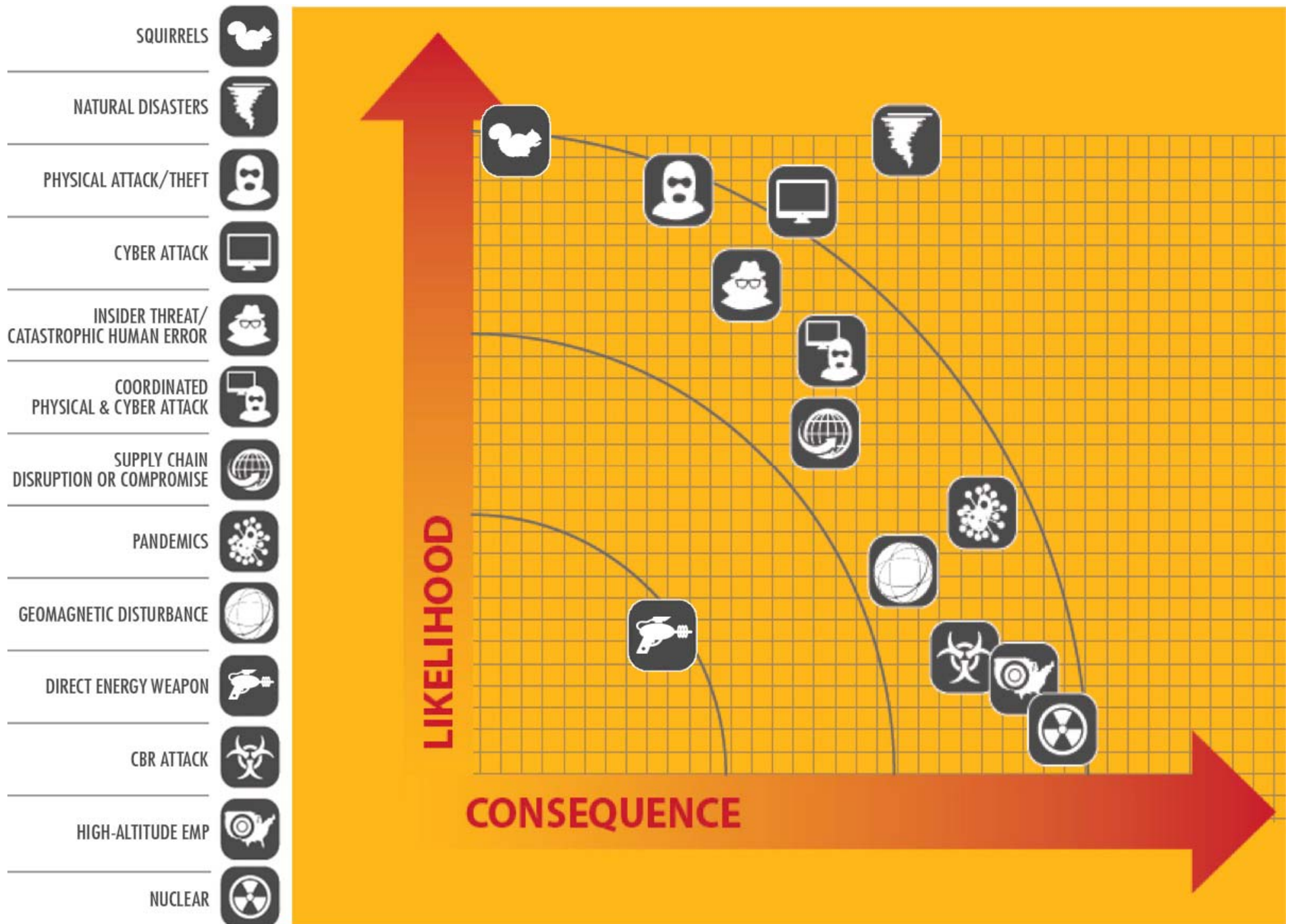
Peter Grandgeorge

National Security and Resiliency Programs Manager  
MidAmerican Energy Company



# Cyber Security Overview

- Security of energy delivery infrastructure is a key aspect of our customer service
- Threat picture
- Partnerships with stakeholders
- Managing assets
- What does the future hold?
- Customer interaction and crisis changes



Source: The Chertoff Group via the **Electricity Subsector Coordinating Council**



# Intelligence Partnerships

- **State Partners**
  - State Fusion Centers provide localized threat information
  - InfraGard
  - Safeguard Iowa
- **Federal Partners**
  - FBI
  - Other enforcement agencies
- **International Partners**
  - Information Sharing and Analysis Centers



# Protection Steps

- Mandatory, audited cybersecurity standards (since 2008)
- Employee phishing tests
- Penetration tests and audits
- Detecting the incident
- Secret sauce





# Response to an attack

## 10,000-foot view

- Internal cyber response teams execute plans
- Seek assistance externally if needed
  - Assistance from utility partners
  - Cyber experts on stand-by
  - Government cyber resource teams
  - Mutual aid resources the newest option
    - Industry CEO exercise identified need
    - Task force meeting
    - MidAmerican Energy leads first global exercise



# How MidAmerican is Prepared

- Anticipating threats
- Thinking through scenarios
- Training our people and building out plans for likely and unlikely scenarios
- Testing our plans against scenarios
- Identifying gaps
- Continuing a cycle



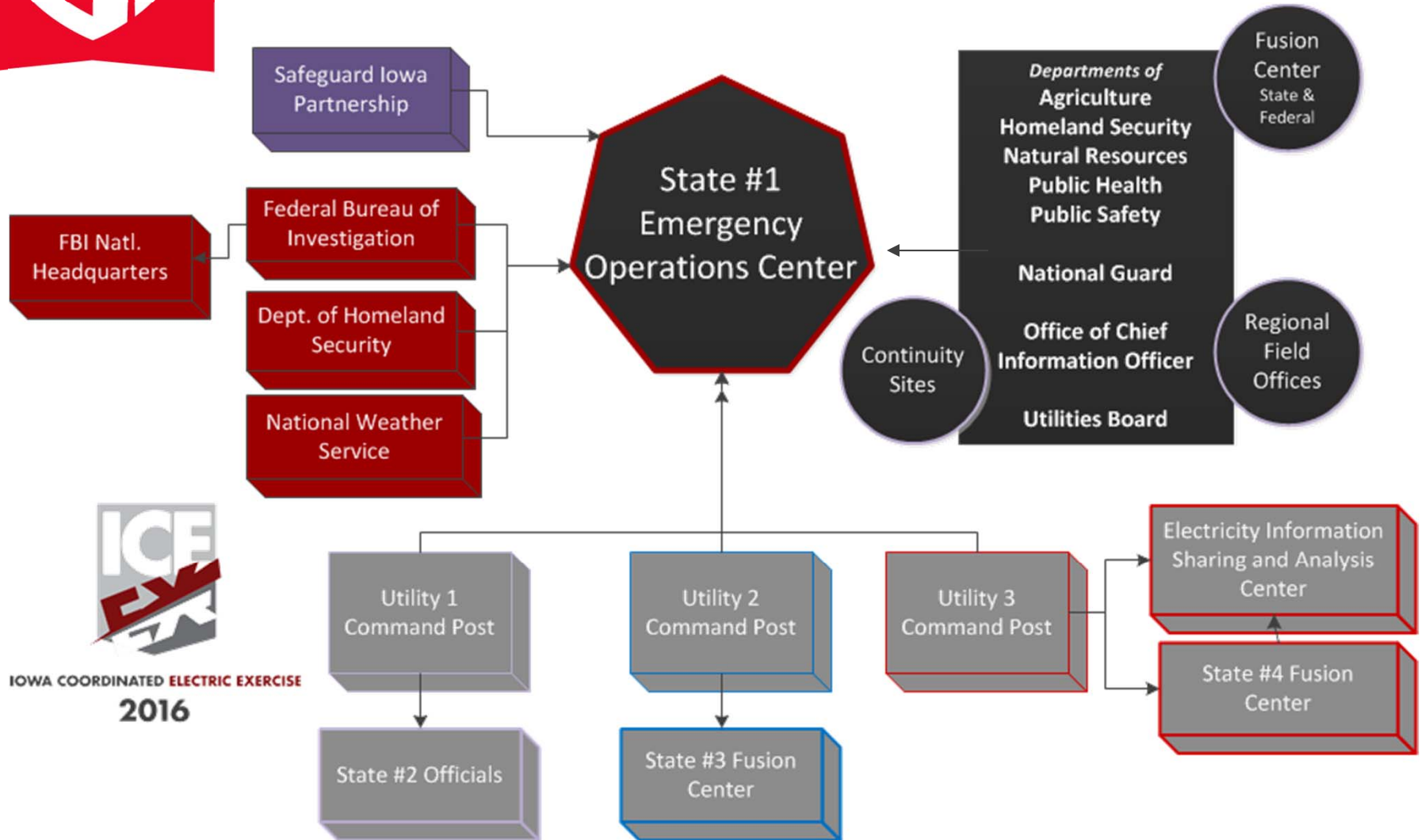


# How MidAmerican is Prepared

- Assume the worst
- Dedicated resources
- Investing in defense
- Respond and restore strategies
- Proactively engaged



# Iowa Coordinated Electrical Exercise September 2016



IOWA COORDINATED ELECTRIC EXERCISE  
2016



# The Future for Security

- Cyber threats will diversify
  - Increasing asymmetrical threats such as freelancers
  - Cyber arms race does not favor defenders
- Hybrid security threats will be the most impactful
  - Highest return on investment; high risk to aggressor
  - Most physical security vulnerabilities remain physically distributed while cyberthreats centralize
- Cannot assume we are secure because we are compliant; we must plan for contested environments



## Customer Impacts

“Everybody has a plan  
until they get punched  
in the face.”

– Mike Tyson



# Customer Interaction During a Crisis

- May be less not more communication
- Ability to provide information may be restricted
- Officials other than MidAmerican may be calling the shots
- Competing priorities
- Constantly changing and moving environment
- Patience and steadiness is critical



# Escalator Analogy

1. Crisis preparedness is never complete nor achieved
2. We may sprint to the top, but must maintain steady progress over time
3. Stopping or a significant lessening of effort will swiftly return us to the bottom





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