

From Asset Management to Asset Protection



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Assessment of assets

Required assets for
expected level of service

Assess life-cycle costs

Determine long-term
funding needs

Asset Management



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Physical security

Identify physical vulnerabilities

Identify human vulnerabilities

Develop plans/procedures to address vulnerabilities

Budget accordingly



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Map critical
components

Map/project hazard
impacts

Develop/train to event
SOPs

Budget accordingly

Natural Hazard: Short-term



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Map critical
components

Map/project hazard
impacts

Incorporate into
planning and design

Budget accordingly

Natural Hazard: Long-term



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Cyber security

Identify IT vulnerabilities

Identify human vulnerabilities

Develop plans/procedures to address vulnerabilities

Budget accordingly



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Assuring Business Operations through ...

- Traditional (long-term) asset management
- Resiliency to natural hazard (short- and long-term)
- Physical security
- Cyber security
- Supply-stream insecurities
- Protection from social unrest
- Staff shortages
- And ... ?



Identify IT vulnerabilities

Identify human vulnerabilities

Develop plans/procedures to address vulnerabilities

Budget accordingly

Cyber security

- Cyber security is not IT security.
- You don't buy resilience. You reduce risk.
- You can't assure full protection. You must also plan for response and recovery.



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Identify

Detect

Protect

Respond

Recover

Cyber security

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Cyber security

- Cyber security is not IT security.
- You don't buy resilience. You reduce risk.
- You can't assure full protection. You must also plan for response and recovery.
- Who will develop and approve a cost-benefit analysis for permissible interruptions in business operations?



Assuring Business Operations through ...

- Traditional (long-term) asset management
- Resiliency to natural hazard (short- and long-term)
- Physical security
- Cyber security
- Supply-stream insecurities
- Social unrest
- Staff shortages
- And ... ?



Assuring Business Operations through ...

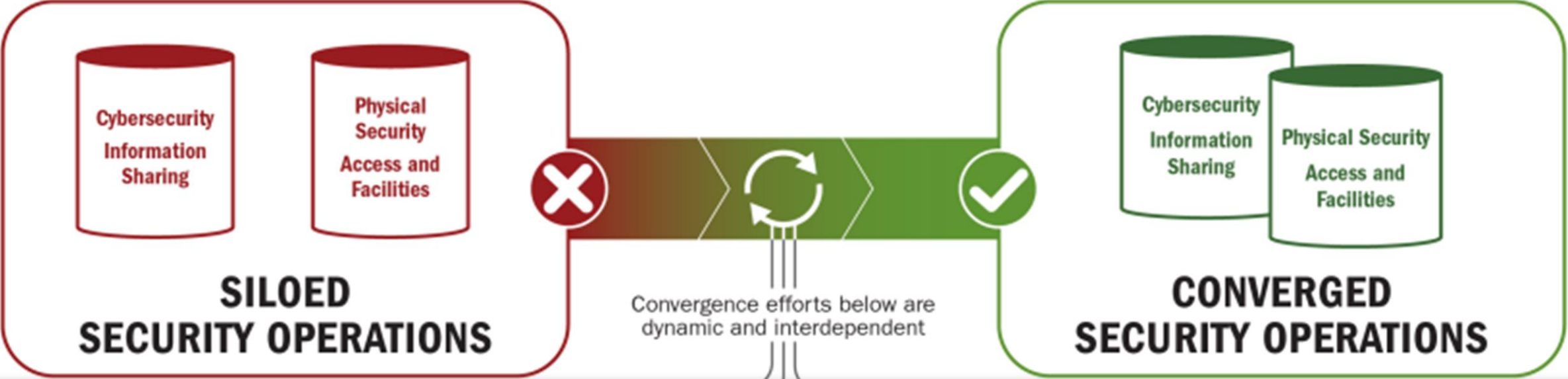
- Risk Reduction
- Change Management
- Converging Resilience Efforts



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A FRAMEWORK FOR ALIGNING SECURITY FUNCTIONS



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Regulatory Concerns

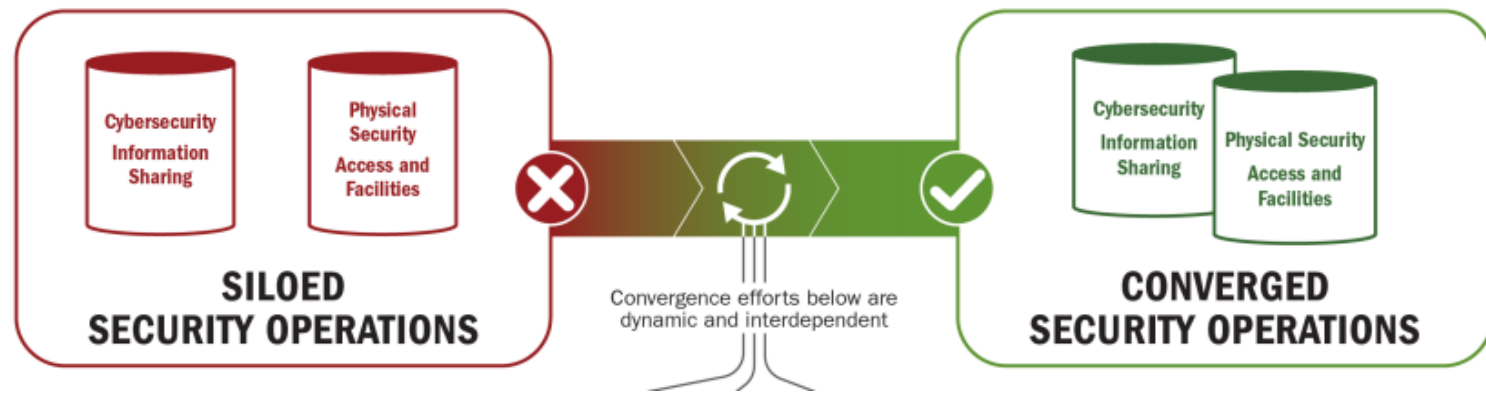
- Individual (management) capacity to address various risks
- Financial capacity
- Cultural awareness: from siloed to converged



Regulatory Role

- Expectations
 - O&M regulations
 - O&M expectations
 - NPDES permit requirements
- Training & Support
 - Financial (grants/SRF, etc.)
 - Comprehensive, across-the-board training

**Risk Reduction
Change Management
Converging Resilience Efforts**



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Thank you.

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