Security Systems For Communication Facilities

Presenters:
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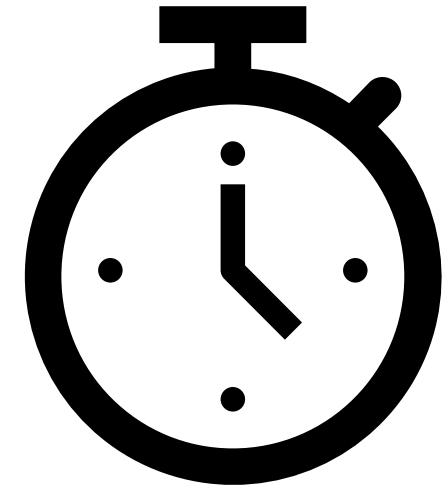
Johnson Controls

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This Presentation Will Cover…

Who We Are…

Trends & Challenges for Communication Facilities

Possible Solutions

Things to Consider…

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Who We Are...

Johnson Controls (JCI)

- Protecting People, Facilities, and Assets since 1874.

- JCI offers the world's largest portfolio of building technology, software as well as service solutions with some of the most trusted names in the industry (Fire, HVAC, & Security).

JCI Security Products

- JCI Security Products is a division within Johnson Controls.

- JCI Security Products is a manufacturer, and industry-solutions provider, of end-to-end access control, video surveillance, and intrusion systems.

- *Some of our Security Brands*: Software House, Kantech, American Dynamics, Exacq, DSC, Illustra Cameras and now... SES!

Security Enhancement Systems (SES)

- Next generation *remote site* security platform from Johnson Controls.

- Offers keyless access control and data analytics to efficiently protect specialized high-value, critical infrastructure.

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Trends & Challenges for Communications Facilities

- Increases in Theft & Vandalism (Cyber & Physical)

- Site Access Control & Security

- Compliance

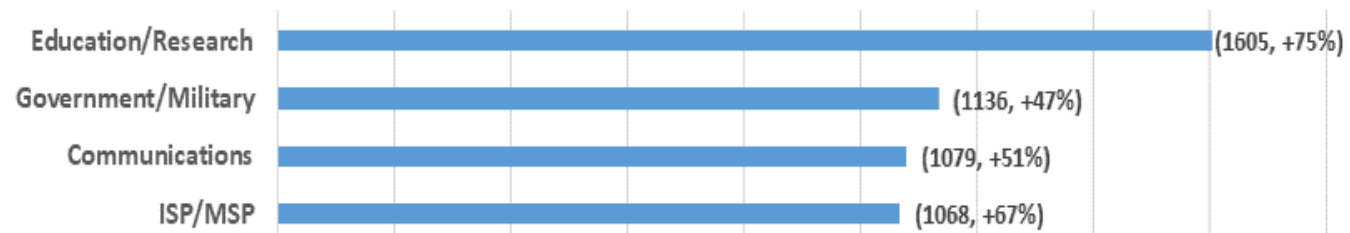- Siloed-Security Functions (Organizationally & Technologically)

Increases in Theft & Vandalism (Cyber & Physical)


- Based on data from DOE, *physical attacks on the grid rose 77% in 2022* [1]. We also see the *average weekly cyber-attacks increasing by 51% in the Communications Industry* [2].

- Three men in Indiana broke into seven electrical substations and stole up to approximately *200 pounds of copper and ground wire.* The thefts resulted in damage to the substations and loss of power for customers [3].

- "Data shows that during the longer consecutive hours of power cuts *last year* [rolling blackouts], vandalism and battery or generator theft at base stations spiked, [the Company] said, resulting in tower companies recording a *250% increase in the loss of generators."*[4]

Average Weekly Attacks per Organization by Industry (2021)

Industry	
Education/Research	(1605, +75%)
Government/Military	(1136, +47%)
Communications	(1079, +51%)
ISP/MSP	(1068, +67%)

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Site Access Control & Security

- **Challenge:** Organizations own/manage assets that have varying security needs (size, location, manned/unmanned, critical infrastructure).

    - **Examples:** Remote Cell Site, Manned Data Centers, Smart Pole, Office Building ("Brick & Mortar"), Warehouses, etc.

    - *Largest gap* is within the remote site access control space.

- **Management of physical keys and combinations is logistically complex, costly to maintain, and less secure:**

    - Cost of E-Keys & programming concerns

    - Employees/vendors leave the company with keys in hand and/or knowledge of lock codes

    - Downtime due to wrong keys & combinations

    - Costly vendor escorts
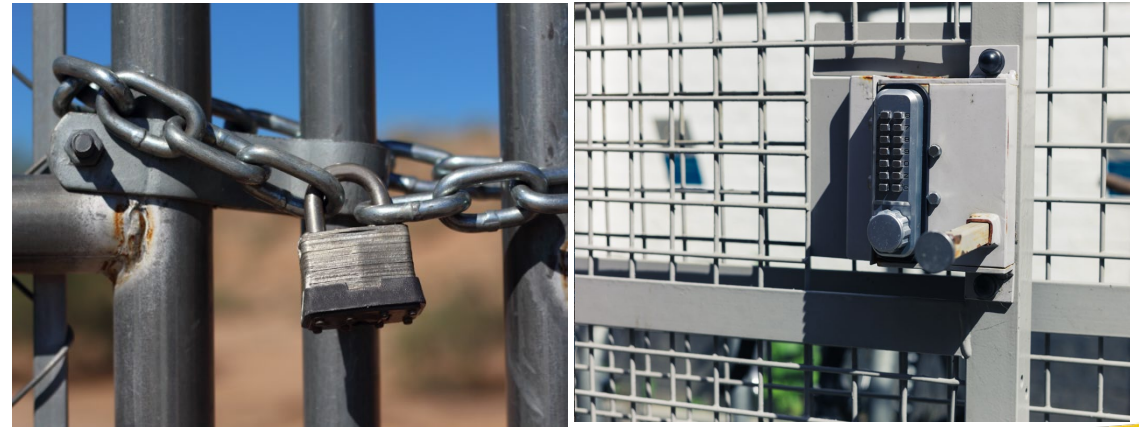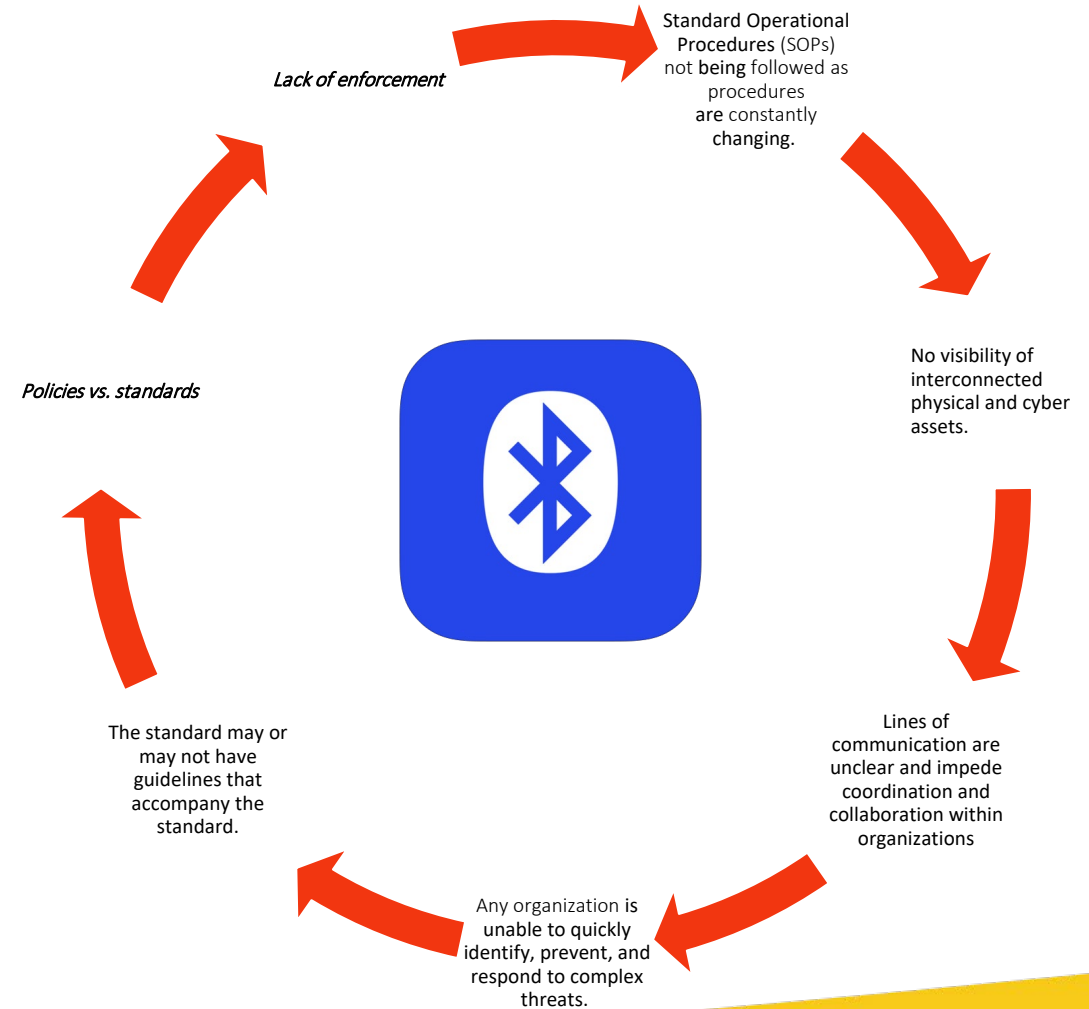
Compliance

- There are lots of policies and standards to comply with when considering implementing new technology:

    - ATIS, NEBS, UL, CISA, FCC, NEC, & NFPA, FirstNet

    - These policies and standards change as new threats/challenges are identified.
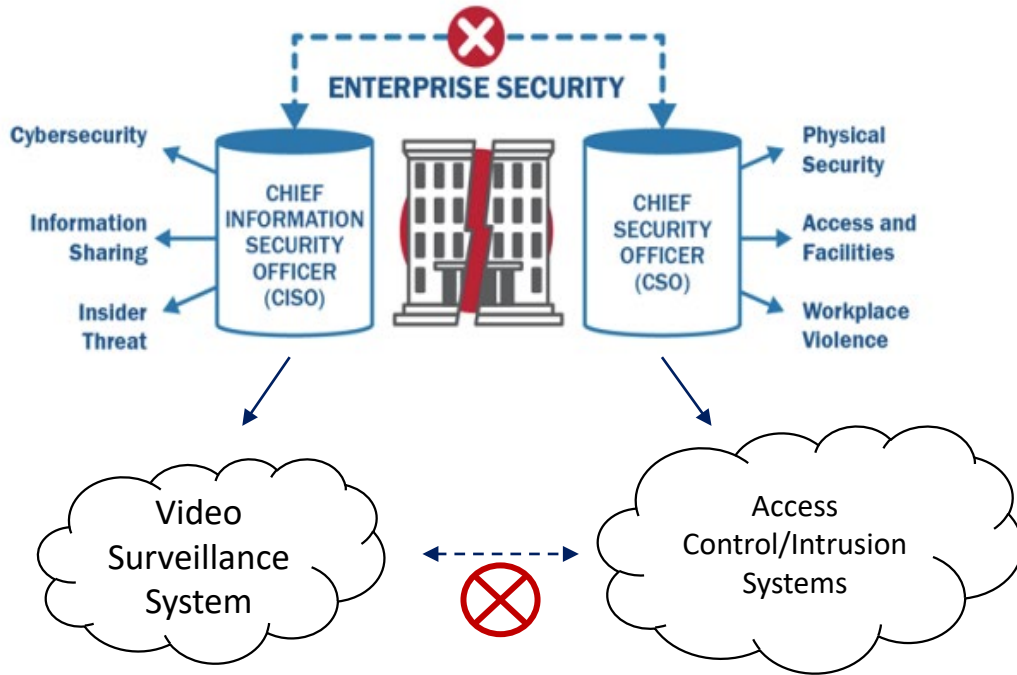
Example:

Traditional Remote Site Access Control (Call, Key, Logbook)
vs.
Bluetooth (BLE – 256-bit encryption), or Smartphone technology

Lack of enforcement

Standard Operational Procedures (SOPs) not **being** followed as procedures **are** constantly changing.

No visibility of interconnected physical and cyber assets.

Policies vs. standards

Lines of communication are unclear and impede coordination and collaboration within organizations

The standard may or may not have guidelines that accompany the standard.

Any organization is unable to quickly identify, prevent, and respond to complex threats.

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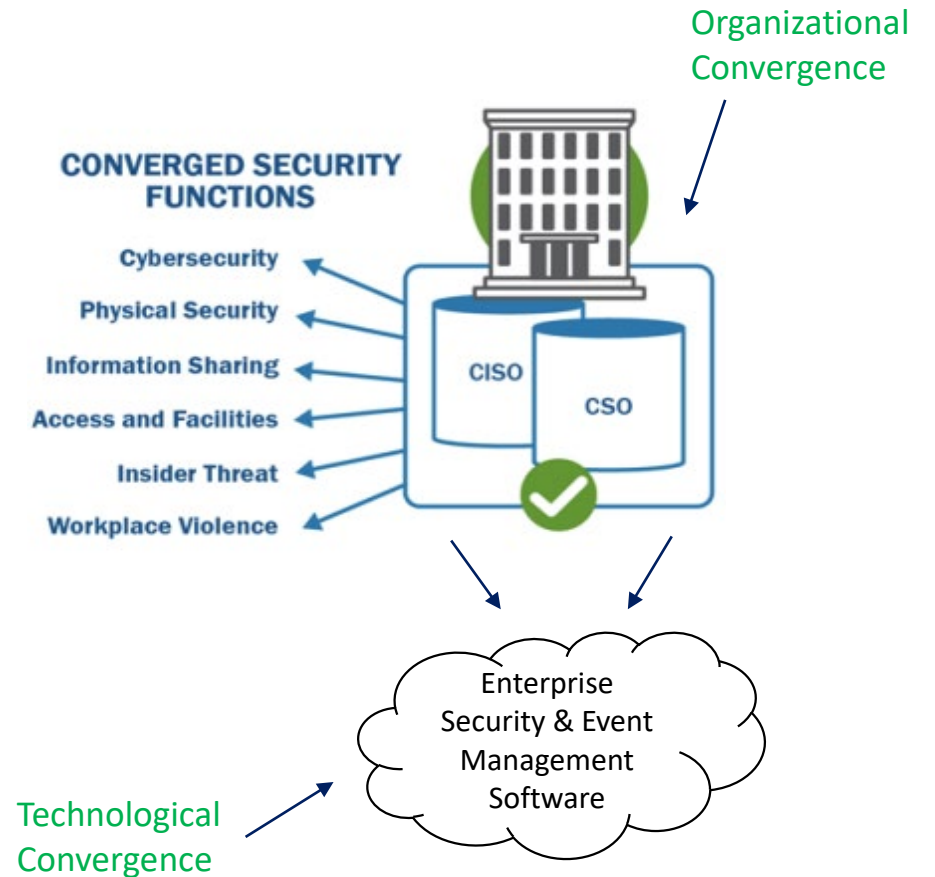
Siloed Security Functions

- **Organizationally & Technologically:**
  - Security functions operate independently, with limited collaboration on enterprise-wide risks.
  - Lines of communication are unclear and impede coordination and collaboration ("who is responsible for what?").
  - Organization is unable to quickly identify, prevent, and respond to complex threats
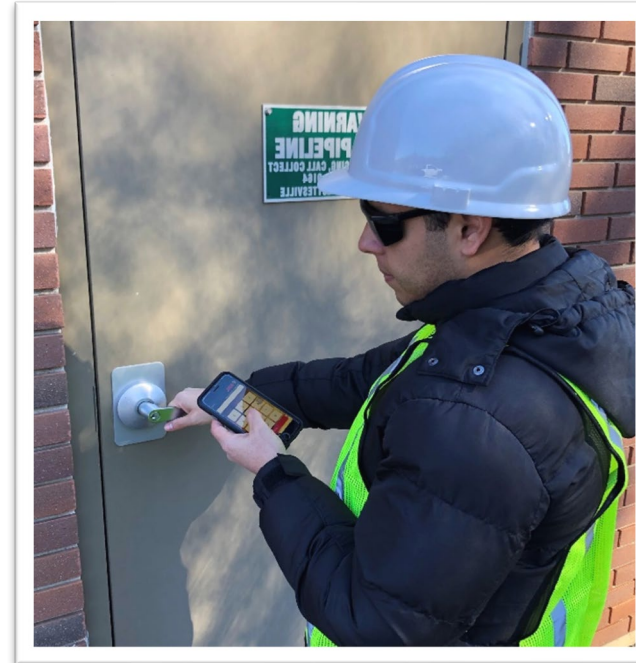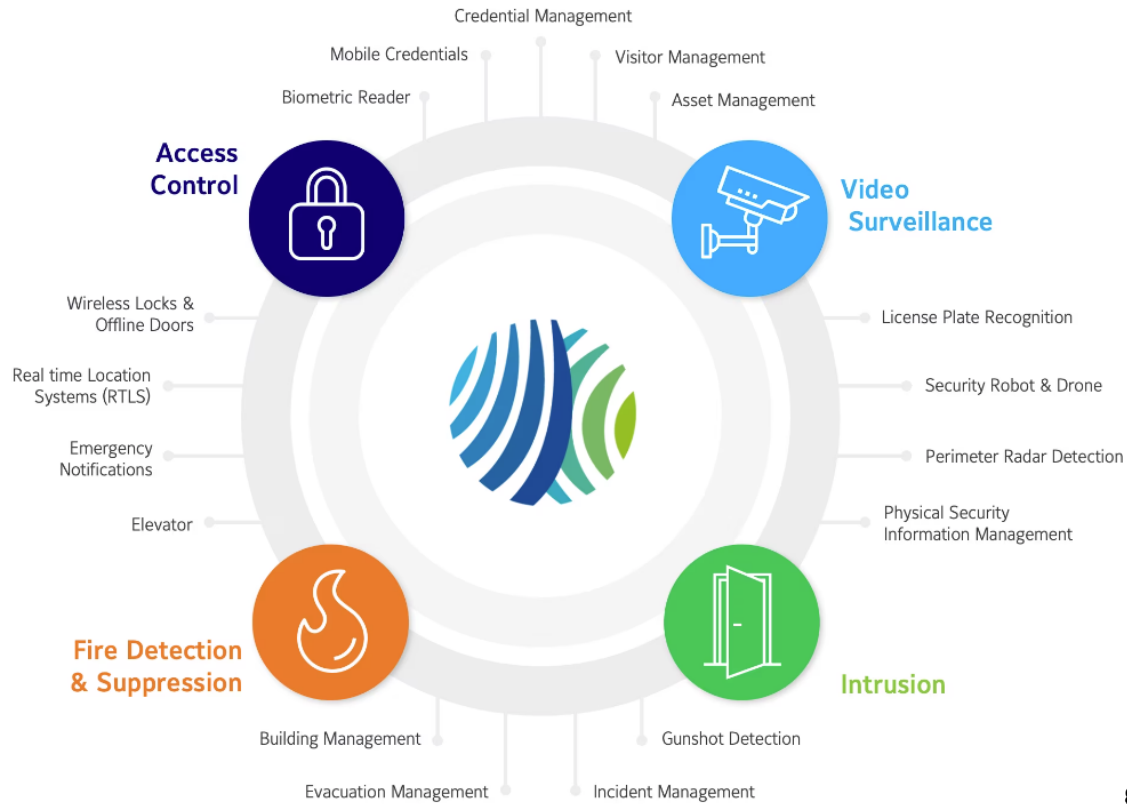 - Performing investigations, audits, reports is highly inefficient.

Solution: Convergence

- According to CISA, "***Convergence*** is formal collaboration between previously disjointed security functions."

- **Some Benefits of Convergence:**

  - Secure Enterprise ✔️

  - Efficiency ↑

  - Versatility

  - Strategic Alignment

- ***Key Takeaway:*** Organizations with converged cybersecurity and physical security ***functions and technology*** are *more resilient and better prepared to* ***identify, prevent, mitigate, and respond to threats.***

Organizational Convergence

CONVERGED SECURITY FUNCTIONS

Cybersecurity
Physical Security
Information Sharing
Access and Facilities
Insider Threat
Workplace Violence

CISO   CSO

Enterprise Security & Event Management Software

Technological Convergence

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Solution: Embracing New Technology & Integrations

Convergence (Technologically)

Enterprise Security & Event Management Software

Remote Site: Bluetooth (BLE), or Smartphone technology (256-bit military grade BLE encryption) for personnel accesses into unmanned enclosures

Remote Site: Radar Detection, Camera Edge Analytics/AI, Drones

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Things to Consider...

- Performing a security assessment

- Understanding what security technologies are available today vs. tomorrow

- Establishing a *converged, enterprise-wide* security strategy

Resources:

[CISA - Cyber Security and Physical Security Convergence](#)

[CISA - Critical Infrastructure Assessments](#)

[DHS/FEMA's Homeland Security National Training Program (Free Training)](#)

[JCI Security Products](#)

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Thank You!

To learn more, please reach out to us!

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