



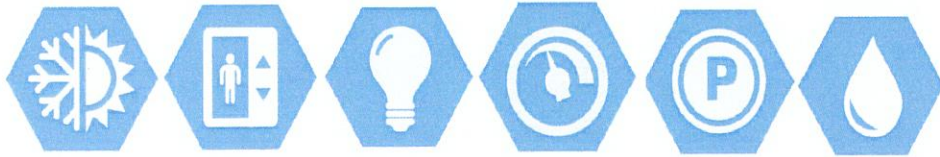
STATE OF ARKANSAS Building Systems Vulnerability

KEY POINTS

1. State of Arkansas Building Systems are Highly Vulnerable
2. The State Does Not Know The Full Details
3. Traditional IT (methods) Cannot Address these Types of Vulnerabilities

BUILDING CONTROLS BASICS

OEMs of nearly all building controls systems require digital infrastructure for full functionality of their systems.

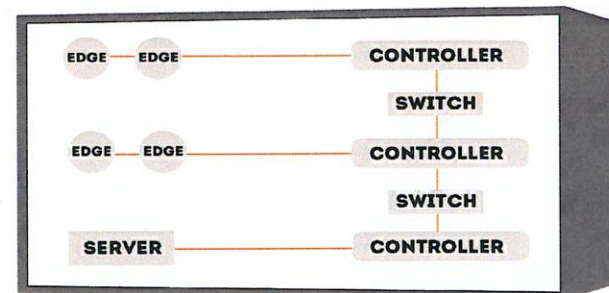


DIGITAL

Since the 1980s nearly **every type of building control system is “digital”** - They run on a computer, use local networks linking floor-level controllers and are Internet-connectable.

SYSTEMS

Building controls systems **manage nearly all aspects of commercial facilities** - HVAC, elevator, lighting, parking and metering as well as others such as daylight harvesting, irrigation, et al.



BUILDING CONTROLS CYBERSECURITY RISKS (!)



**Life Safety
Incidents**



**Equipment
Replacement**



**Productivity
Loss**



**State Network
Infiltration**



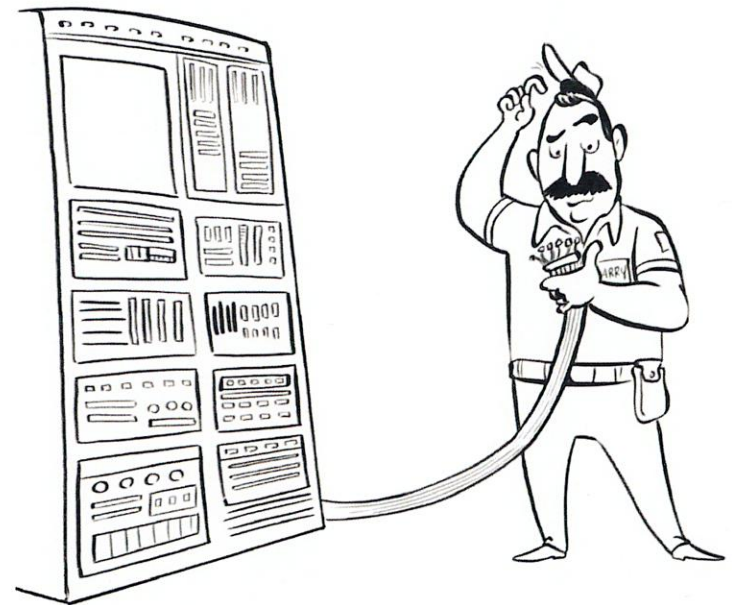
**Legislative
Non-compliance**



**Citizen/Voter
Confidence**

BUILDING CONTROLS CONTRACTOR PROBLEMS

SKILL GAPS
FRAGMENTATION
TURNOVER



NO POLICY REQUIREMENTS



- X Too many of authorized users and permissions
- X Simple, default or old passwords
- X Same log-ins across multiple customers
- X No log trail of access
- X Out of date software
- X Settings overrides
- X No Inventory
- X No backups

IT'S NOT A PROBLEM IT CAN FIX



...because FM is a different **culture** than IT

- The actual technology is different
- Procurement & management are different
- The contractors have different skill sets



NIST SAYS “IT” IS NOT THE RIGHT FIT

National Institute of Standards and Technology (NIST) IR 8228 states:

1. Many IoT devices interact with the physical world in ways conventional IT devices usually do not.
2. Many IoT devices cannot be accessed, managed, or monitored in the same ways conventional IT devices can.
3. The availability, efficiency, and effectiveness of cybersecurity and privacy capabilities are often different for IoT devices than conventional IT devices.

For some IoT devices, additional types of risks, including safety, reliability, and resiliency, need to be managed simultaneously with cybersecurity and privacy risks because of the effects addressing one type of risk can have on others.

KEY POINTS

1. **State of Arkansas Building Systems are Highly Vulnerable:**

- a. Loss of building use & government services
- b. Life - Safety
- c. Data security

2. **The State Does Not Know The Full Details:**

- a. *What* systems you have in every building
- b. How they are *set up* and configured
- c. How they are *connected*.

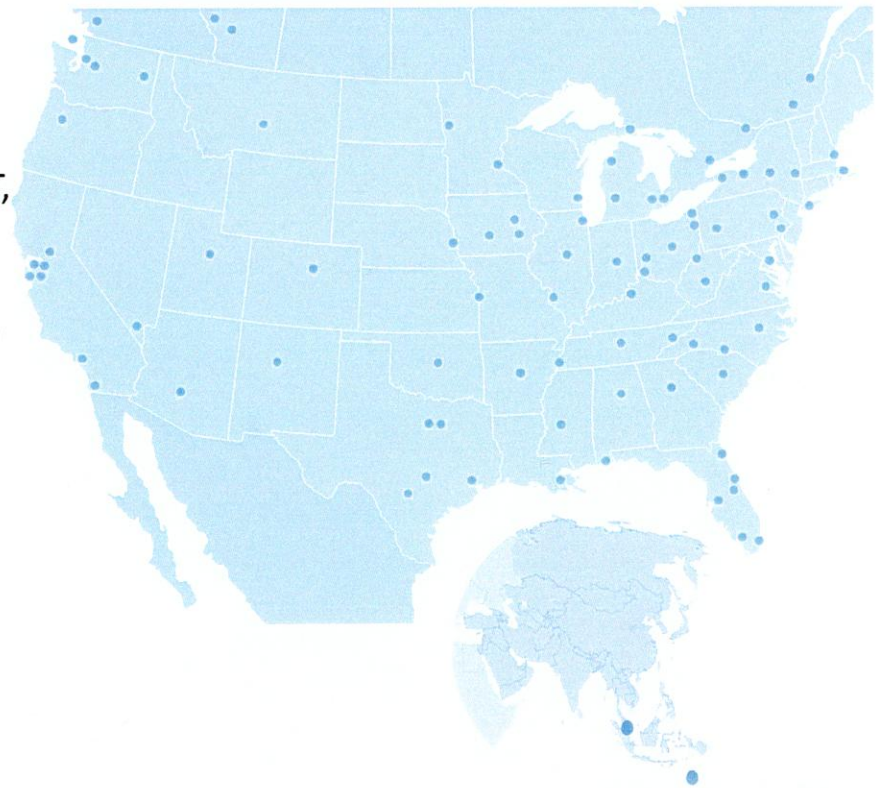
3. **Traditional IT (methods) Cannot Address this Type of Vulnerability**

- a. US Government and Military Cybersecurity Framework (NIST) for non-IT systems
- b. Different culture
- c. Different technology type

APPENDIX

ABOUT INTELLIGENT BUILDINGS

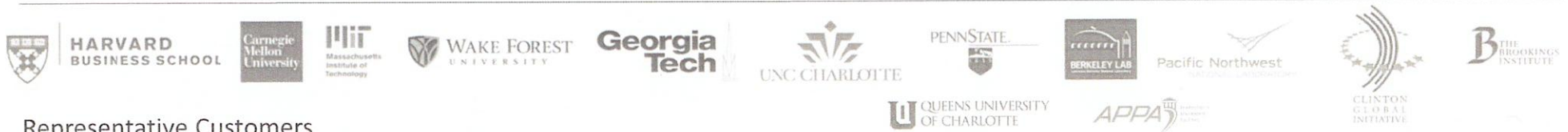
- The **only company** exclusively focused on Smart Building management consulting and services.
- 15 years of **gold standard customers** in F500/Corporate, REIT, Government/Military, Healthcare and Campus.
- Worked in **85 cities** in North America, Singapore and Australia (Europe and India pending).
- Consulting on **\$4B+** in new construction and customers with over **4 billion square feet**.
- Developed first-of-its-kind OT cybersecurity **VRM tool**.



Customer by Category



Thought leadership



Representative Customers





THANK YOU