



# Developing the Connected Building

*Farukh Aslam: January 21*



# Sinclair Autograph Hotel

*The Connected Building*

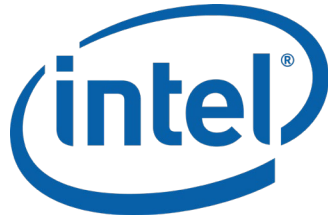


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# Digital Building Key Components

Digital Electricity, Battery Storage, PoE Power, Sensing



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# Digital Electricity

- Sending *large amounts* of electricity over 18/2 cables in *packets*.
- Class 2 power that is *safe* to handle, eliminating the need for an electrician to install.
- Intelligent load shedding capabilities to distribute power based on priority in the event of a power outage.
- Allows for the removal of traditional A/C power



# PoE Power Advances

- **PoE or Power over Ethernet** utilizes an ethernet cable to send both power and network communication.
- Cisco switches can now send up to **90W** of power across a CAT 5 or 6 cable
- By powering devices this way, you're **eliminating the AC/DC power conversion**, and establishing devices on a network.
- Devices we're powering in the building include lighting, window shades and curtains, mini bars, smart mirrors, and door locks



# Centralized Energy Storage System (ESS)

- For the first time in the world, a diesel generator used for **emergency power backup** will be replaced with a **Lithium Ion Battery Pack**
- Diesel generators are loud, unsafe, and require frequent maintenance
- Energy Storage Systems are already being used in Korea to shave peak loads, integrate with renewable energy solutions, and back up power for different applications.



# UPS Lithium Ion Battery Elevator Back - up

- Advancement in Lithium ion Batteries creates compact , sustainable , and easily maintained backup power supply
- Innovation that creates unique guest experience

Tesla 100 KWh  
Battery Pack



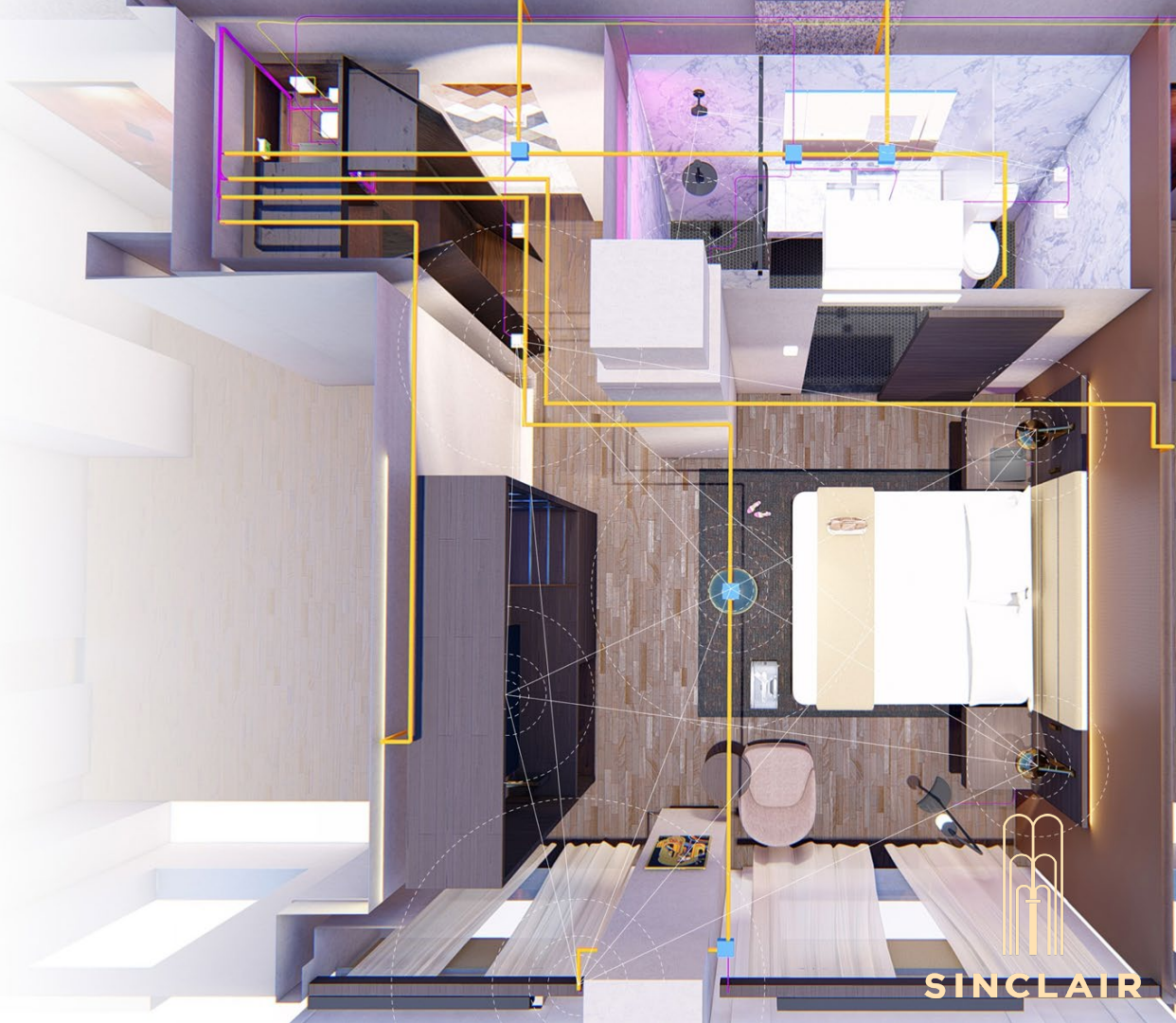
FF9 1 130 KWh  
Battery Pack





# Ivani Bluetooth Mesh Technology

- Bluetooth Mesh technologies provide a way for a multitude of devices to communicate with each other to manage a space on it's own. Some of their possibilities include:
  - Occupancy Detection
  - People Counting
  - Inventory Beacons
  - Geo- Fencing
- The availability of bluetooth products expands every day, making bluetooth the most flexible and cost effective product on the market



# Possibilities of Bluetooth

- By using a bluetooth mesh we can communicate among different products to create *efficient* and *intelligent* spaces.
- When guests leave a space, the space can immediately turn off the lights, A/C, and close the window shades.
- In an emergency, the same technology can *count the occupants* in a space, informing the fire department exactly how many people are inside a building in real time.





# Kohler DTV+ Digital Shower

- The Kohler Digital Shower will give the guests a *multi - sensory* experience by combining different aspects of water, light, sound, and steam .
- This shower can be controlled by *Voice Activation* or a PoE powered Touchscreen display that will allow you to change the exact water temperature that you desire.

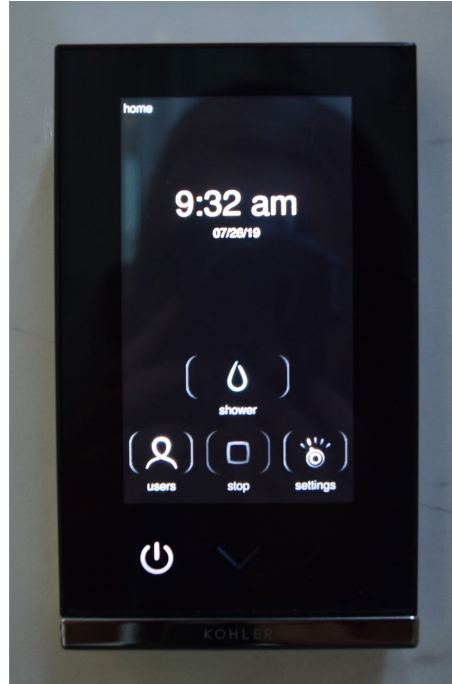
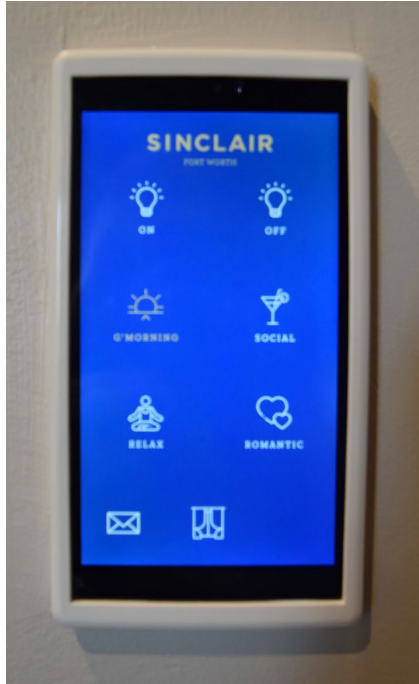


# Assa- Abloy Door Locks

Key features:

- Mobile Access Compatibility
- **Wireless** online compatibility
- RFID reader with improved reading distance
- Allow for access into room during absence
- Works with most door materials
- **Minimalistic design** allowed by electronics being placed inside the door





Digital Control Panels



Sinclair Guest Room



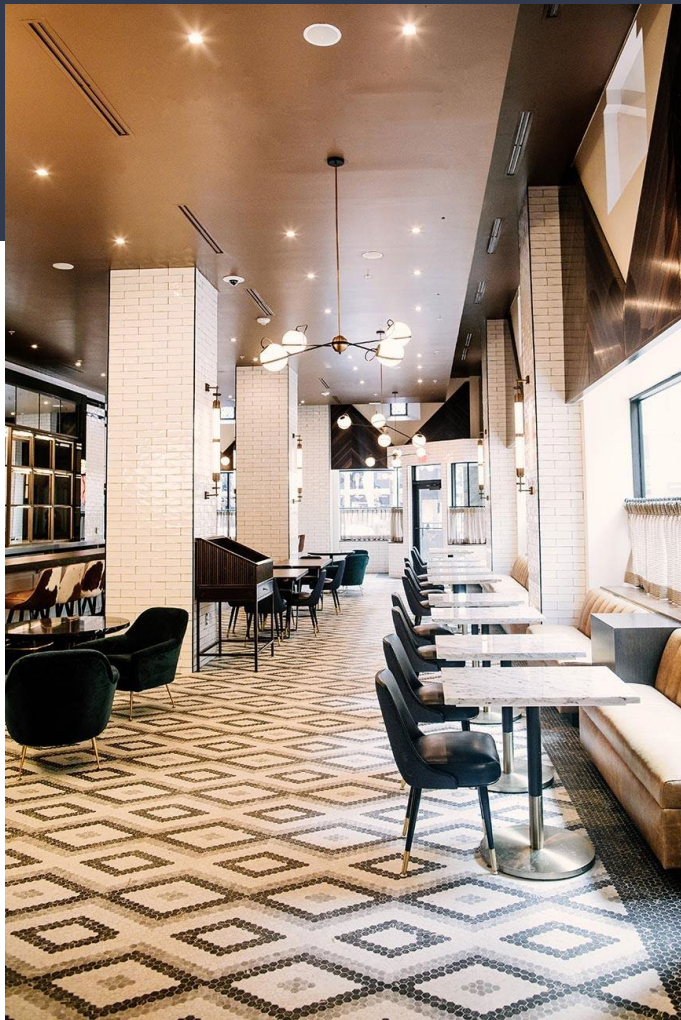


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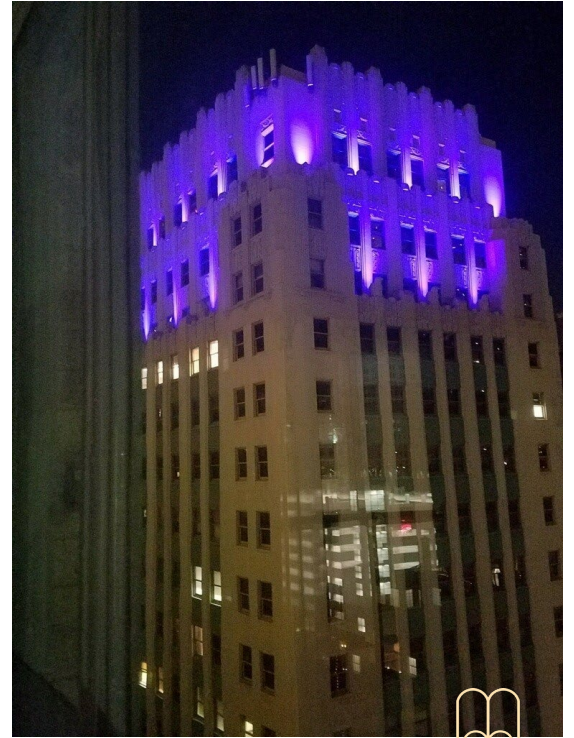




Wicked Butcher Restaurant







Exterior Lighting





**Welcome to Sinclair**

*The Hotel of the Future*