

# Challenges for University Data Centers

- Universities often have several different types of data centers of varying capacity & function.
- Increased demands on data center space, power and cooling.
- Power and cooling for data centers is often shared and managed by building facilities.
- There is a lack new of buildable space available.
- Summer or Christmas Holiday is often the best window for upgrades and expansion.



# Opportunities for Prefabricated Data Centers

- Repurpose your valuable campus real estate
  - Utilize open space areas, parking lots & mechanical yards.
  - Basements, rooftops & warehouses
- Expand or modernize the current IT capacity including power & cooling.
- UL Certified Equipment vs Occupied Building.
- Mobile, Cloud, Big Data, & Security.
- Disaster Recovery.
- Minimal time to install and startup.



## Case Study – Cal State Fullerton

### Challenge:

- Urgent need for additional capacity/DR site to manage risks
- Limited time for implementation – installation had to be complete before 2<sup>nd</sup> semester

### Solution:

- SmartShelter IT Module – 90kW All-in-One
- 10 racks at 9KW/per rack
- In-Row DX cooling, Symmetra PX UPS, Netshelter Racks, Mod PDU, NetBotz monitoring



## Case Study – Mohawk College

### Challenge:

- Limited space in the existing Data Center
- Cost to expand in current buildings was too high
- Installation had to happen over the summer break to minimize disruption

### Solution:

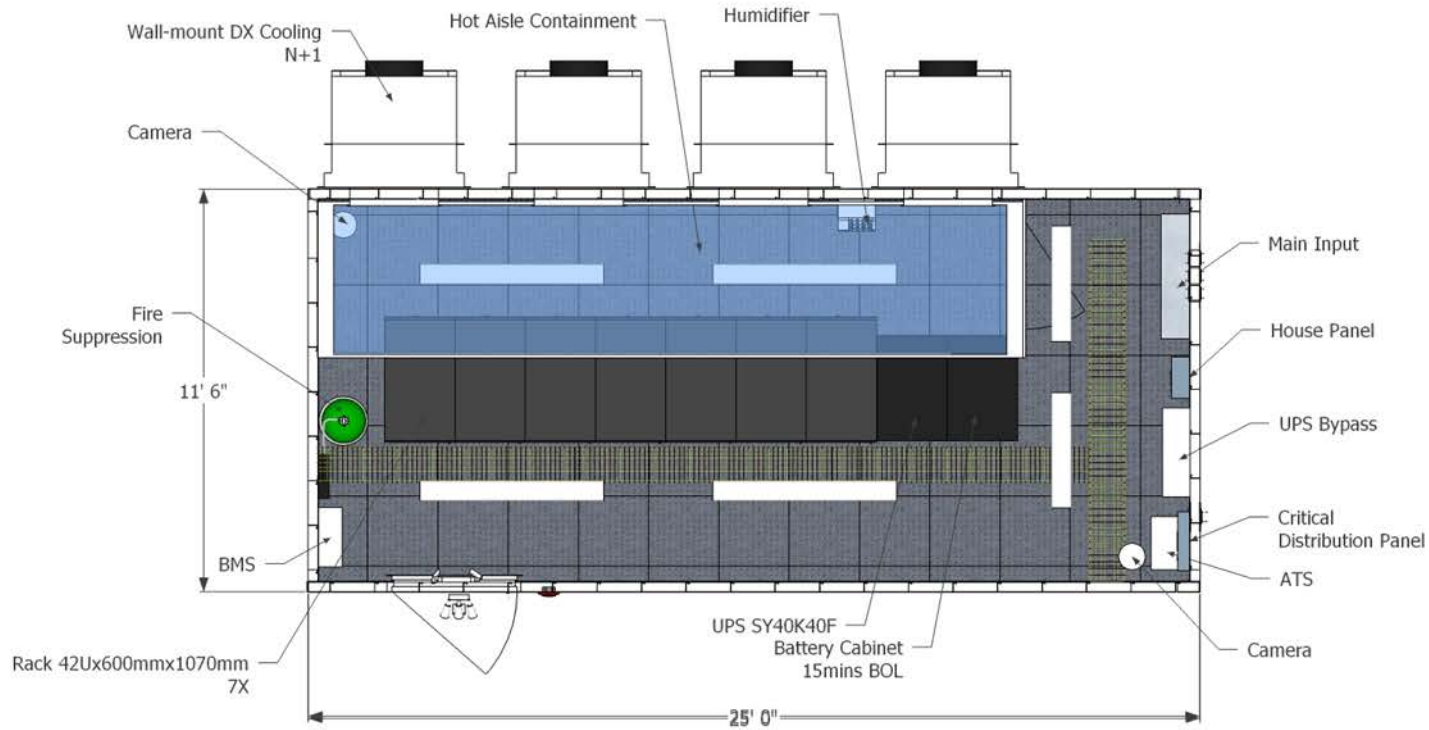
- (2) SmartShelter Modules, 26 racks @ 7kW per rack, Chilled Water Cooling
- (1) 225kW N+1 Power Module in separate ISO container
- (2) 70 Ton Carrier Chillers



# 23 Rack 150kW Data Center



# 7 Rack 40kW Disaster Recovery Center



# Multiple Facility Design Options to Consider

