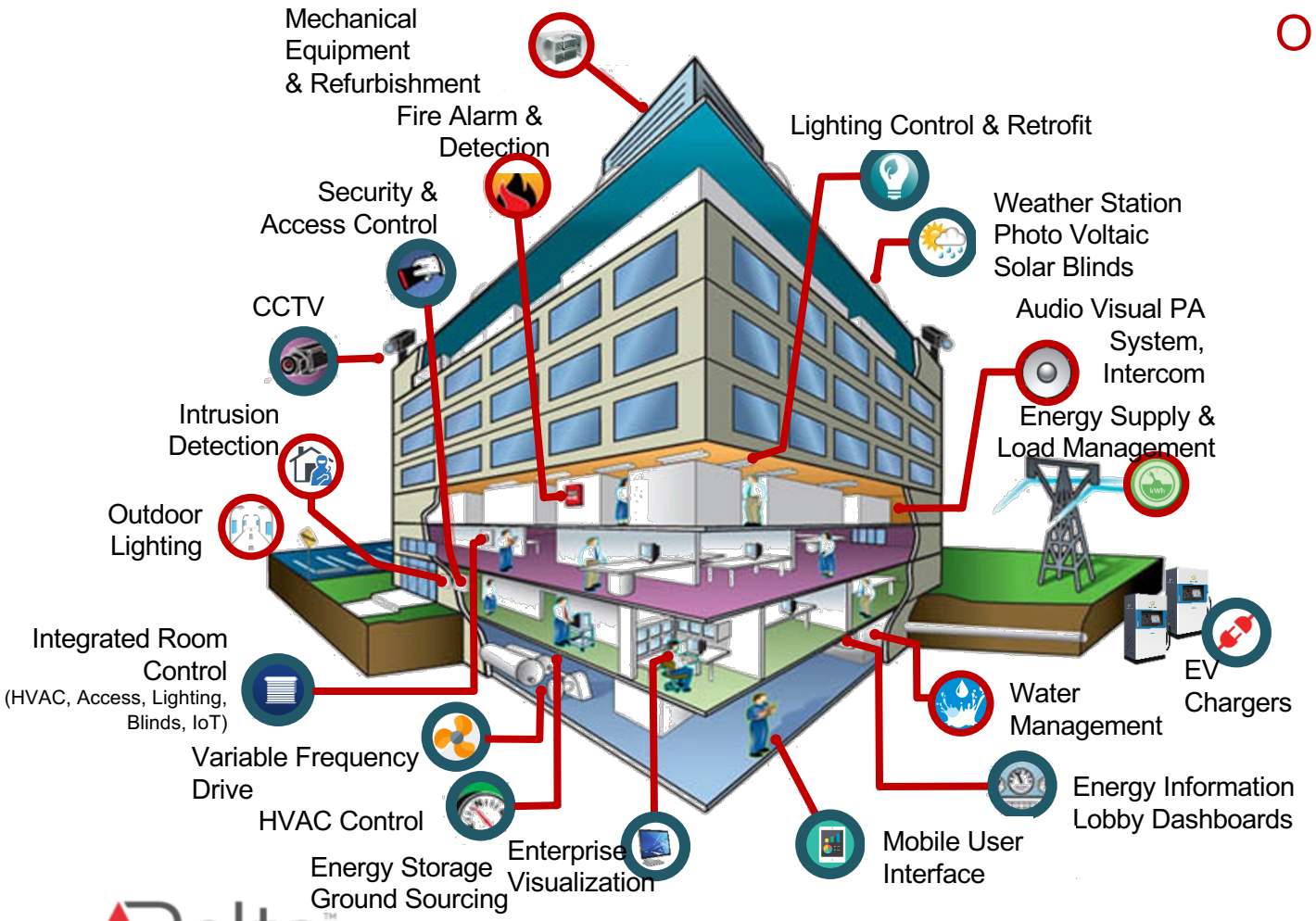
Intelligent Room Controller O_3

Delta™ CONTROLS

About Delta Controls

Delta Controls is one of the leading manufacturers of building automation controllers, with more than 300 service providers in over 80 countries. For more than three decades, Delta Controls has offered dependable and user-friendly control solutions for buildings in the commercial, healthcare, education, leisure markets, and more.

A “Delta” Building Vision



Our differentiating system strategy:

- Delta Controls Systems (DCI)
- Delta Electronics products
- Add DCI system technology to products
- Transform products into system components
  - Individual products
- Subsequently allow our Partners to upgrade **products** to **system components**

Delta CONTROLS
A Delta Group Company

Delta CONTROLS
A Delta Group Company

Delta CONTROLS
Building Intelligent Futures

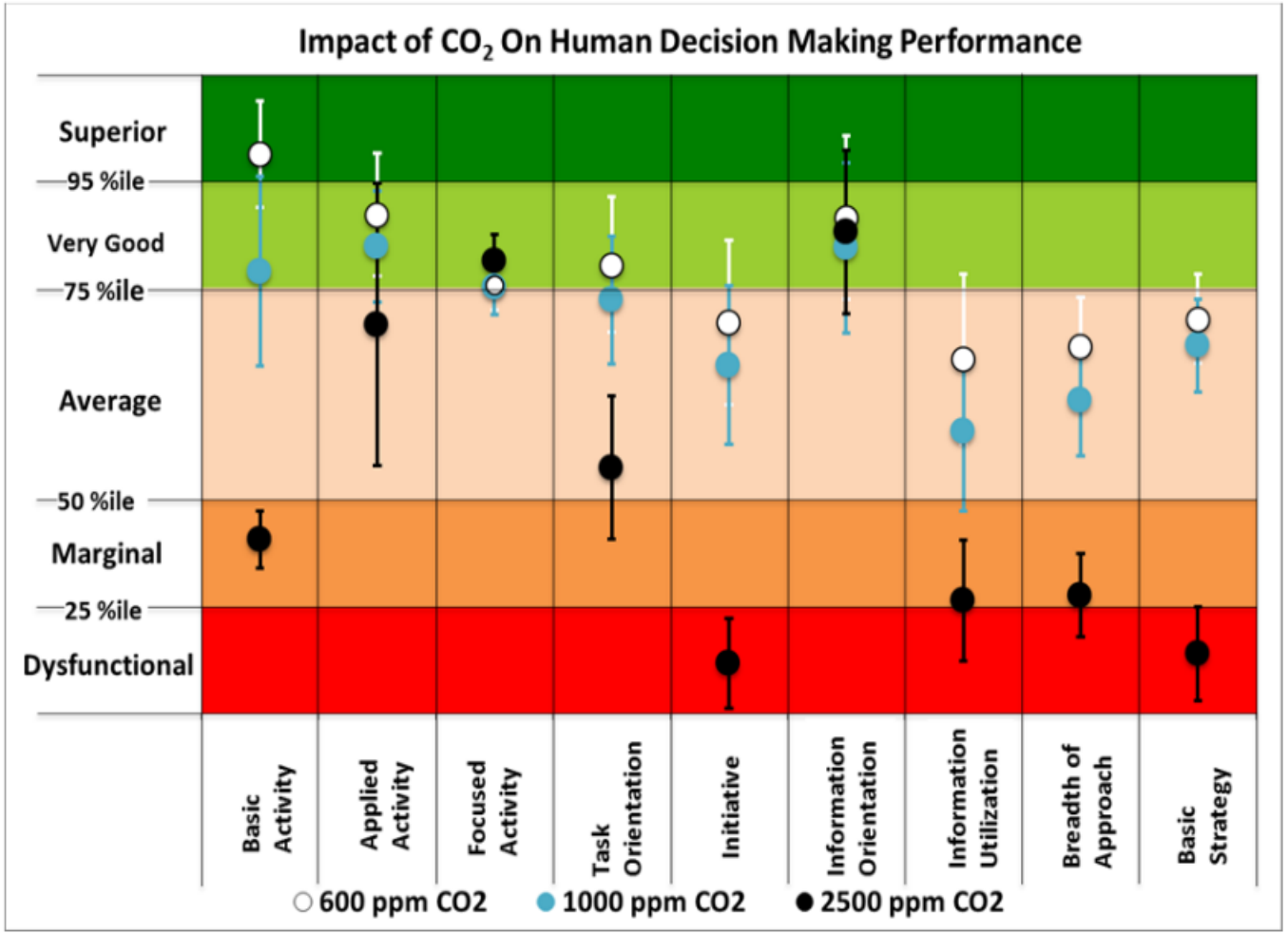
CO2 Impact on Human Decision Making Performance

Ernest Orlando Lawrence Berkeley National Laboratory

- Controlled enviroment where subjects are tested on effects of different levels of CO2
- Strategic Management Simulation designed to assess complex cognitive Funtion

High Levels of CO2 may diminish decision making performance

- 600 to 1000 ppm of CO2 there is moderate effect in decision making performance
- 2500 ppm there are significant reductions in complex decesion requirements
- TX and CA CO2 find concentrations above 1000 ppm in schools



Delta CONTROLS
Building Intelligent Futures

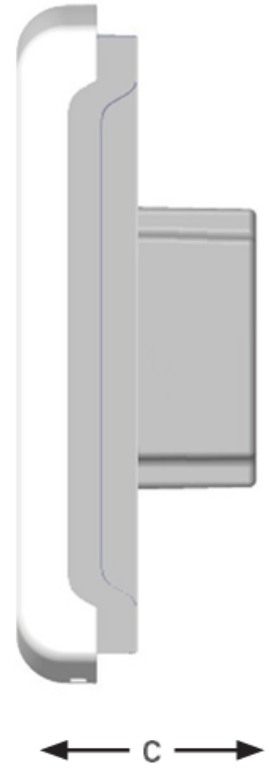
Backplate Options

Configuration

- Wifi
- enOcean
- Tempeature
- Motion
- Humidity
- CO2
- Lighting
- Shade
- Fan

A = 5.3 in. (13.3 cm)
B = 3.6 in. (9.3 cm)

Surface CO2
(SC)



Surface Mount
(SM)

C = 1.7 in. (4.3 cm)
D = 0.9 in. (2.3 cm)

Delta CONTROLS
Building Intelligent Futures

O_3

Infrared Temp.

Humidity

Temp.

Occupancy

Audio Signature

IR Blaster

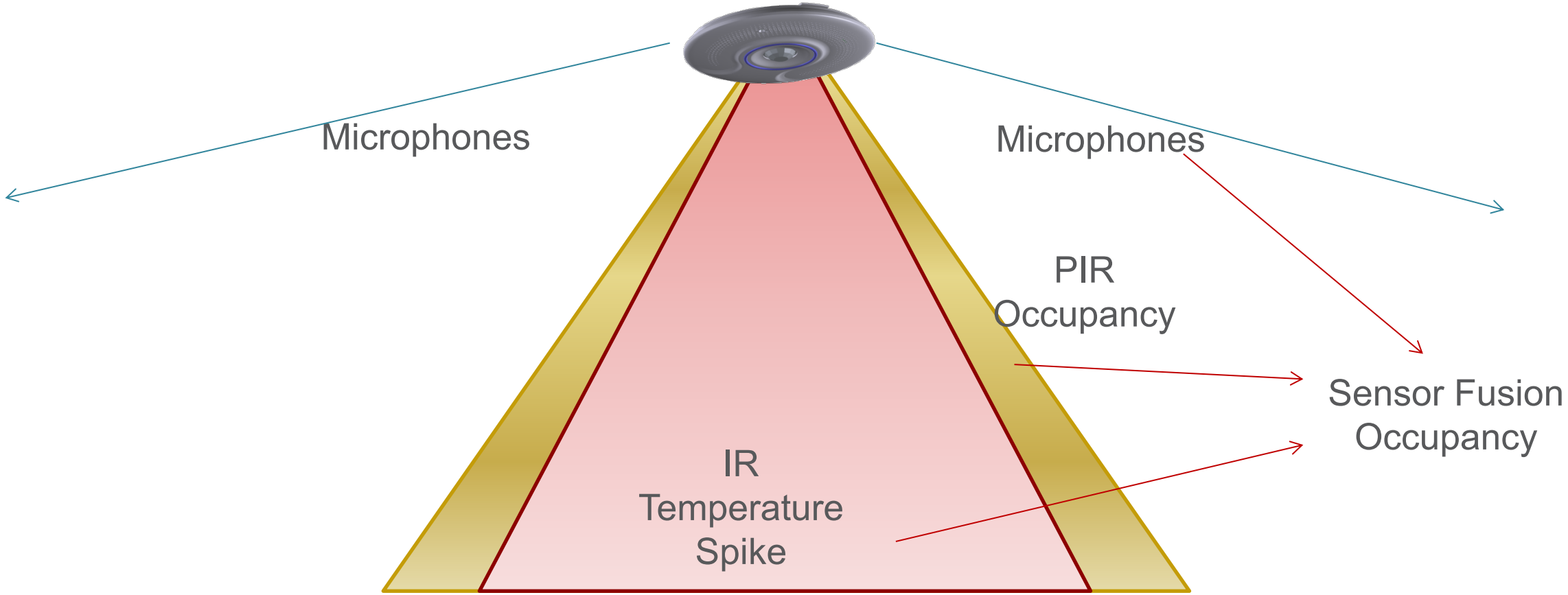
Light Color

Light Intensity

Delta CONTROLS

Building Intelligent Futures

Sensor Fusion Occupancy



Audio Signature

Infrared Temp.

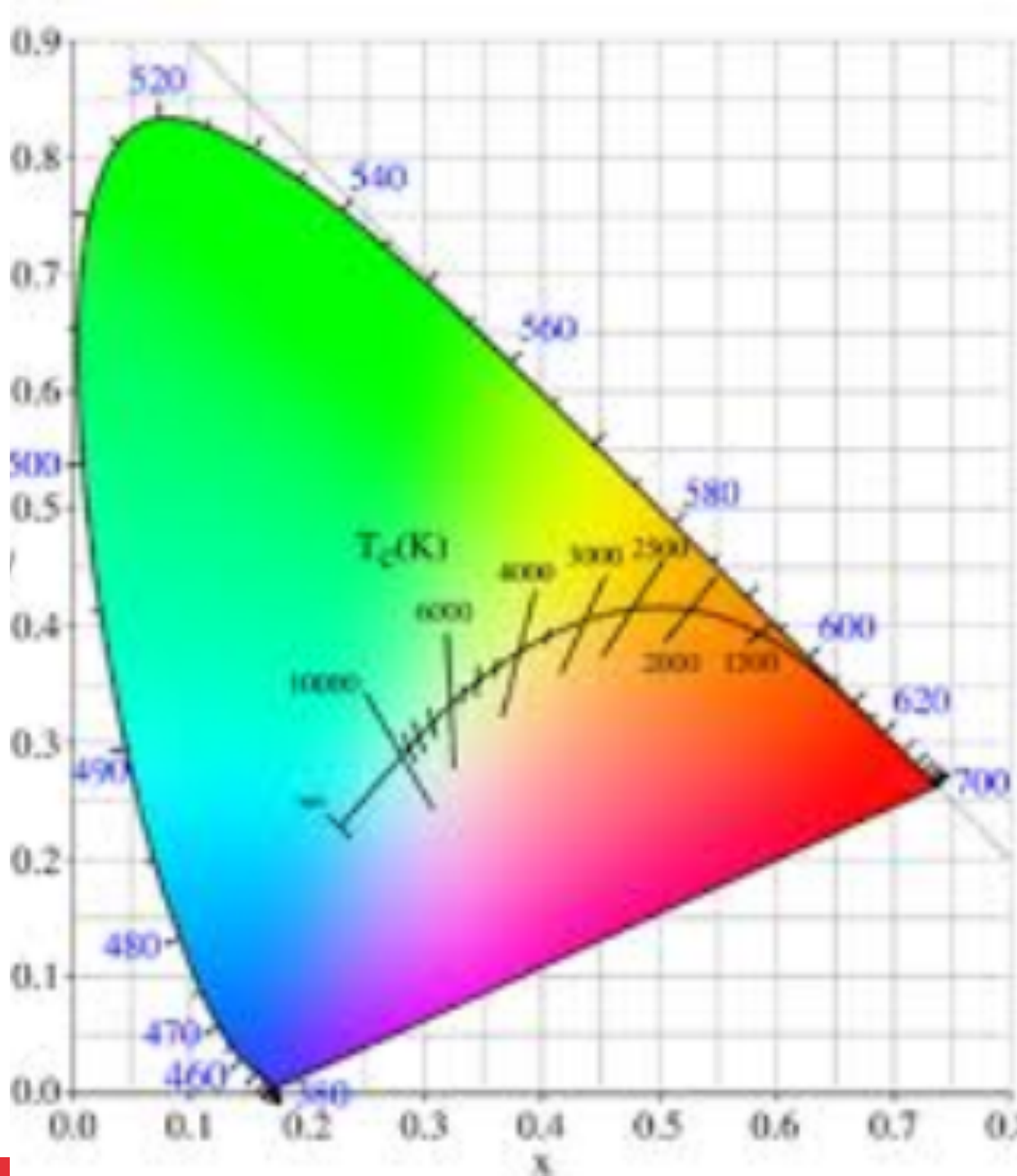
Occupancy

Delta CONTROLS

Building Intelligent Futures

Features: Light Sensor

- Senses brightness for daylight harvesting applications
- Senses Light Color RGB or Temperature in Degrees Kelvin
- Color for Circadian Rhythm control and sensing
- Color for animal care in university labs

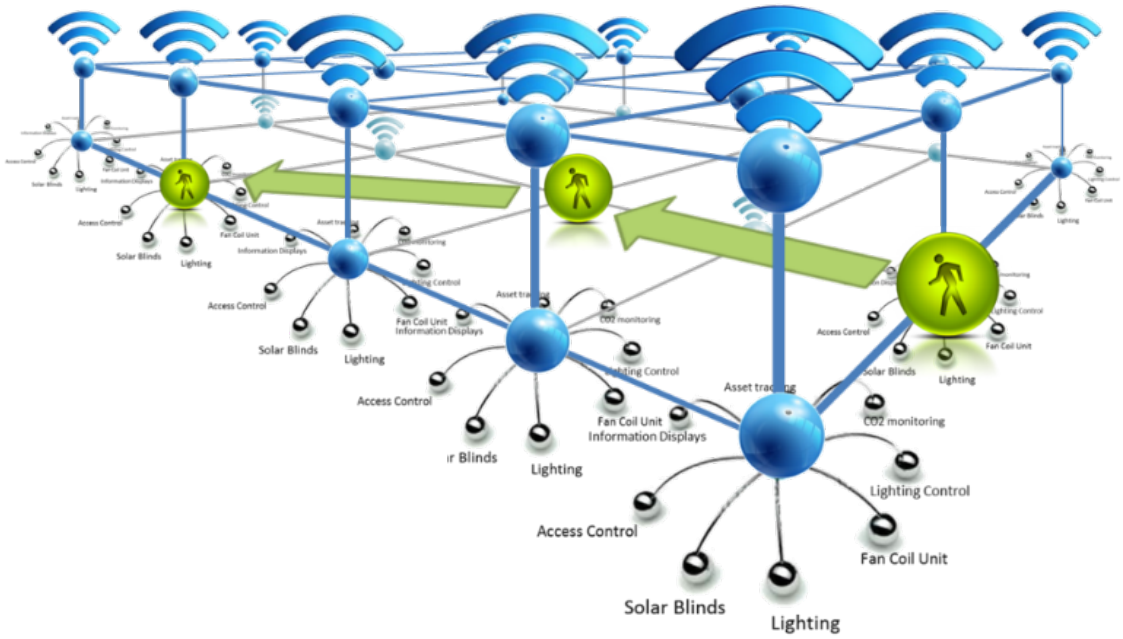


MEETING ROOM
Activity Meeting Mode
Set Point 21°C
CO_2 Level 1300ppm
Top Lighting 60%
Shades Auto
Music Level 40 dB
Sound Level 65dB
People 9
TV Mode 1

User Centric Solution

User‘s preferences are carried with the user rather than the room

- The Building serves the Occupant
- The User does not need a specific space



Personal Settings: Green without effort

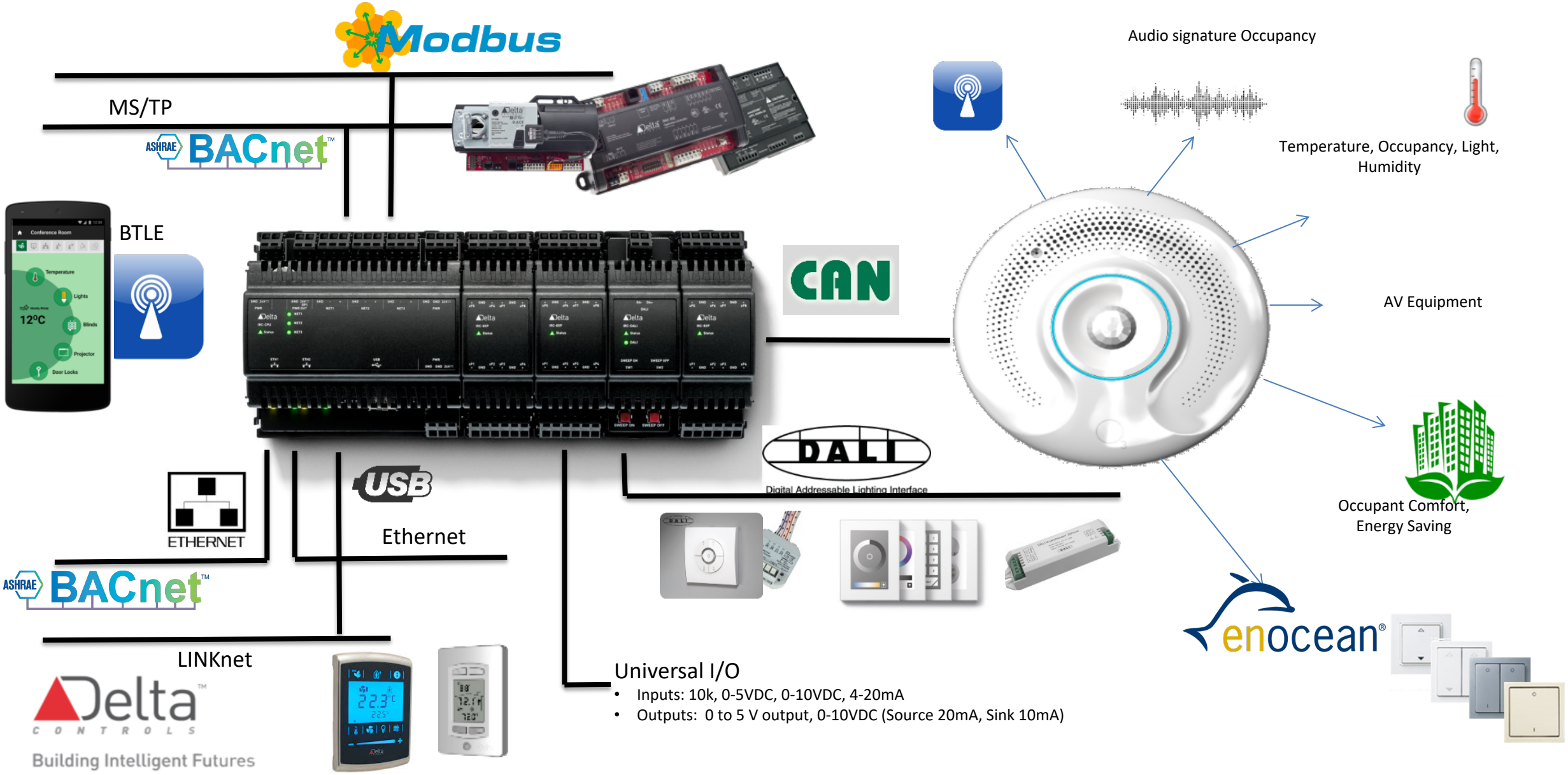
- The system is invisible, but virtually visible to the occupant
- Mobile App Dashboard
- Integration – Building-wide, System-wide
- Control strategies follow actual occupancy rather than just schedule
- Occupants are able to configure their own perfect settings

Delta CONTROLS
Building Intelligent Futures

Meeting rooms tomorrow…

- Sensor Fusion
  - Combining many sensors technology to give a better accuracy
  - IR is 15 minutes faster than a wall-stat
  - Save energy on occupancy, and vacancy cycles
- Calibrate to the desired temperature, at the desired location
- IR also has the capability for occupancy sensing.

IRC-DIN + Remote Sensor Hub



Universal I/O

- Inputs: 10k, 0-5VDC, 0-10VDC, 4-20mA
- Outputs: 0 to 5 V output, 0-10VDC (Source 20mA, Sink 10mA)

Thank You

Delta CONTROLS

Building Intelligent Futures

Delta CONTROLS