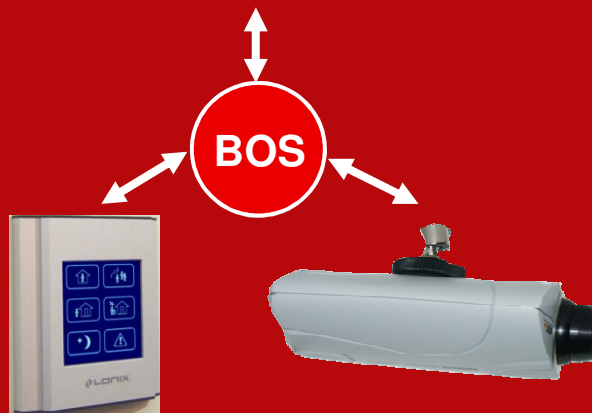




SERVICE CENTER



# Intelligence & Solutions for Green Buildings and Cities

Tuomas Koskenranta, CEO  
COBA Middle East FZCO

# Intelligence & Solutions for Green Buildings

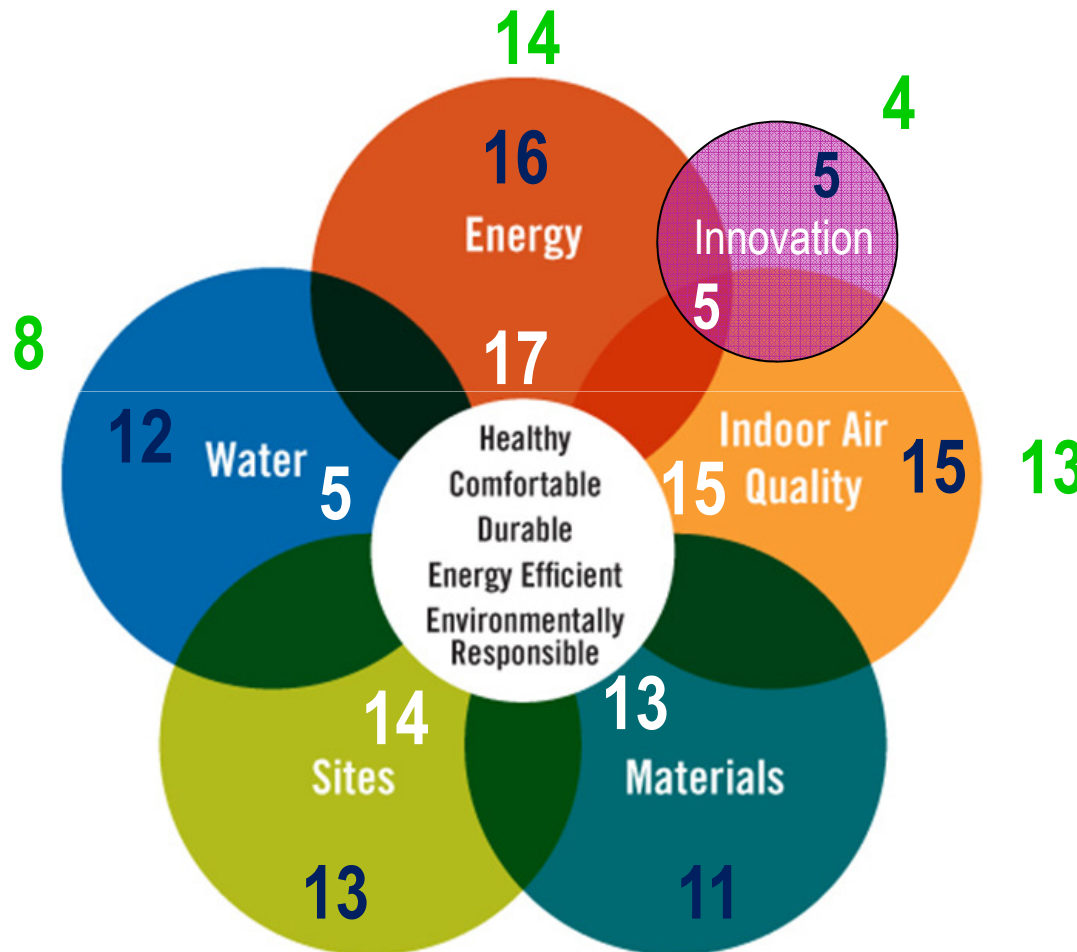


powered by  
**enervent**<sup>®</sup>



- » Intelligent Automation and Security solutions
- » Energy-saving ventilation
- » Smart filters for better indoor air
- » Video monitoring
- » Central battery system
- » Intelligent Green Building design
- » All systems integrated with the common platform

# Typical LEED points achieved by utilizing our **Green & Intelligent Solution**

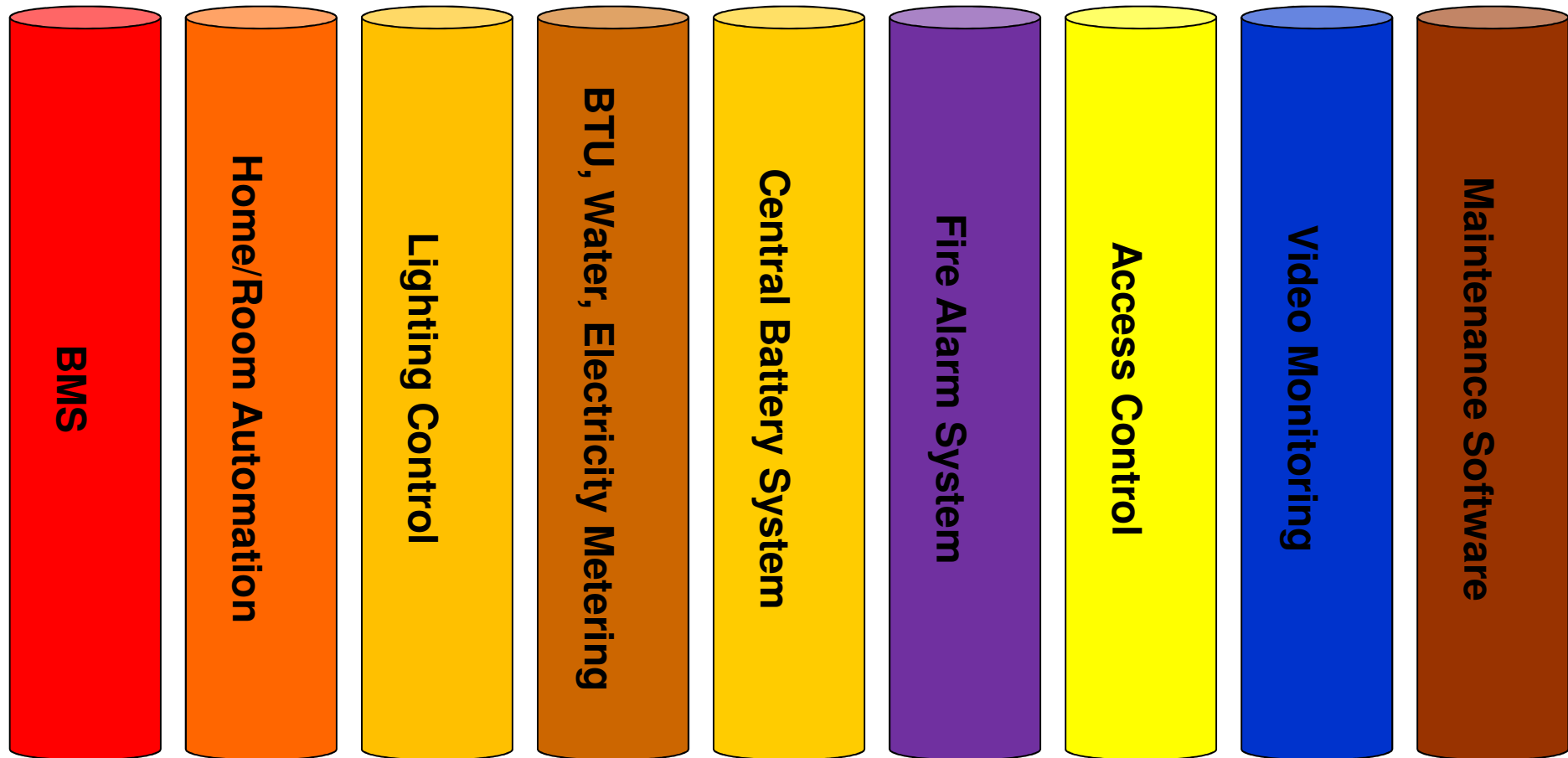


LEED	US	EGBC*	Effect
Energy	17	16	14
Water	5	12	8
IEQ	15	15	13
Innovation	5	5	4
Sites	14	13	-
Materials	13	11	-
<b>TOTAL</b>	<b>69</b>	<b>72</b>	<b>39</b>

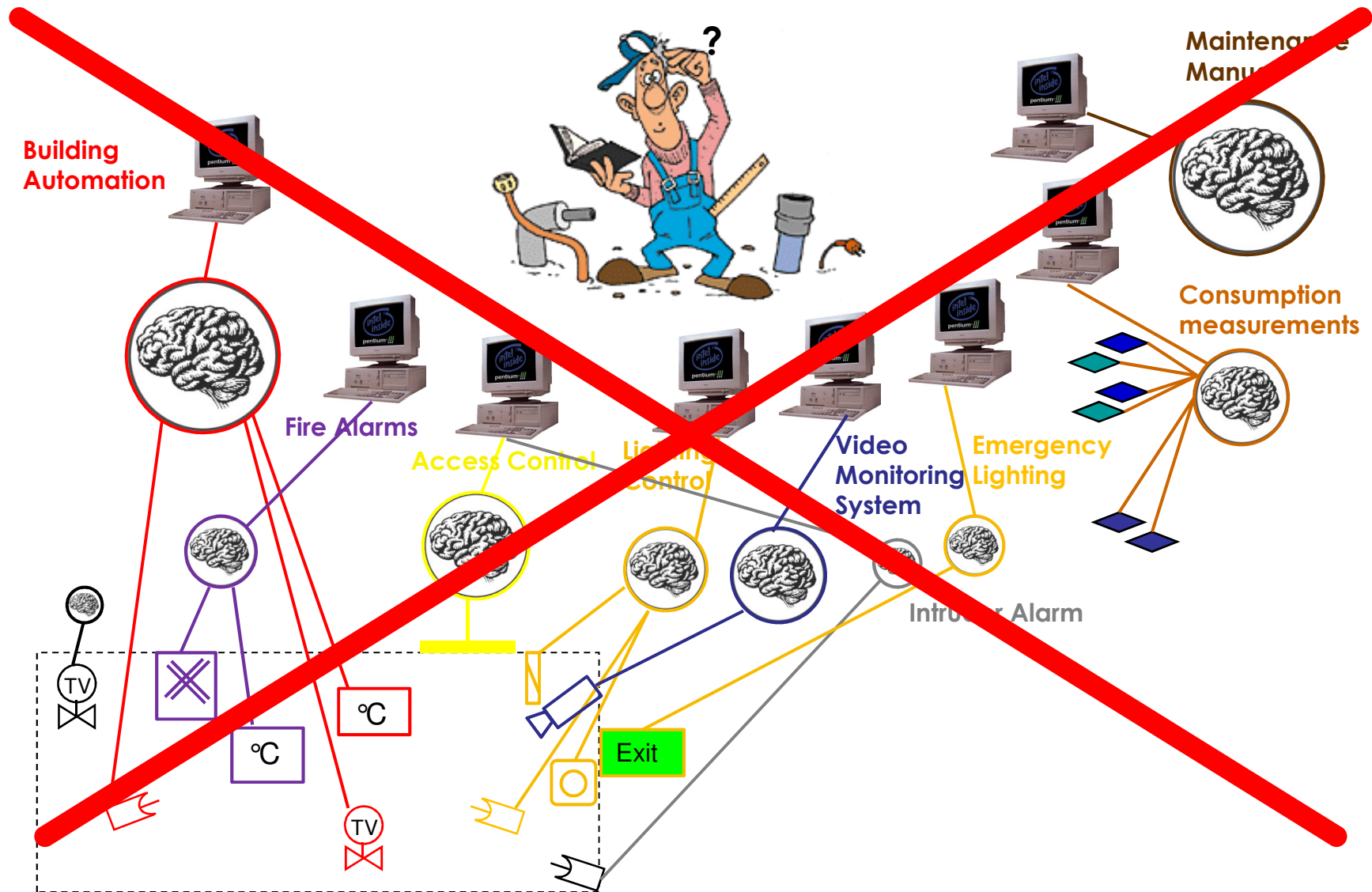
Certified	26-32
Silver	33-38
Gold	39-51
Platinum	52-69

\* Proposed EGBC rating

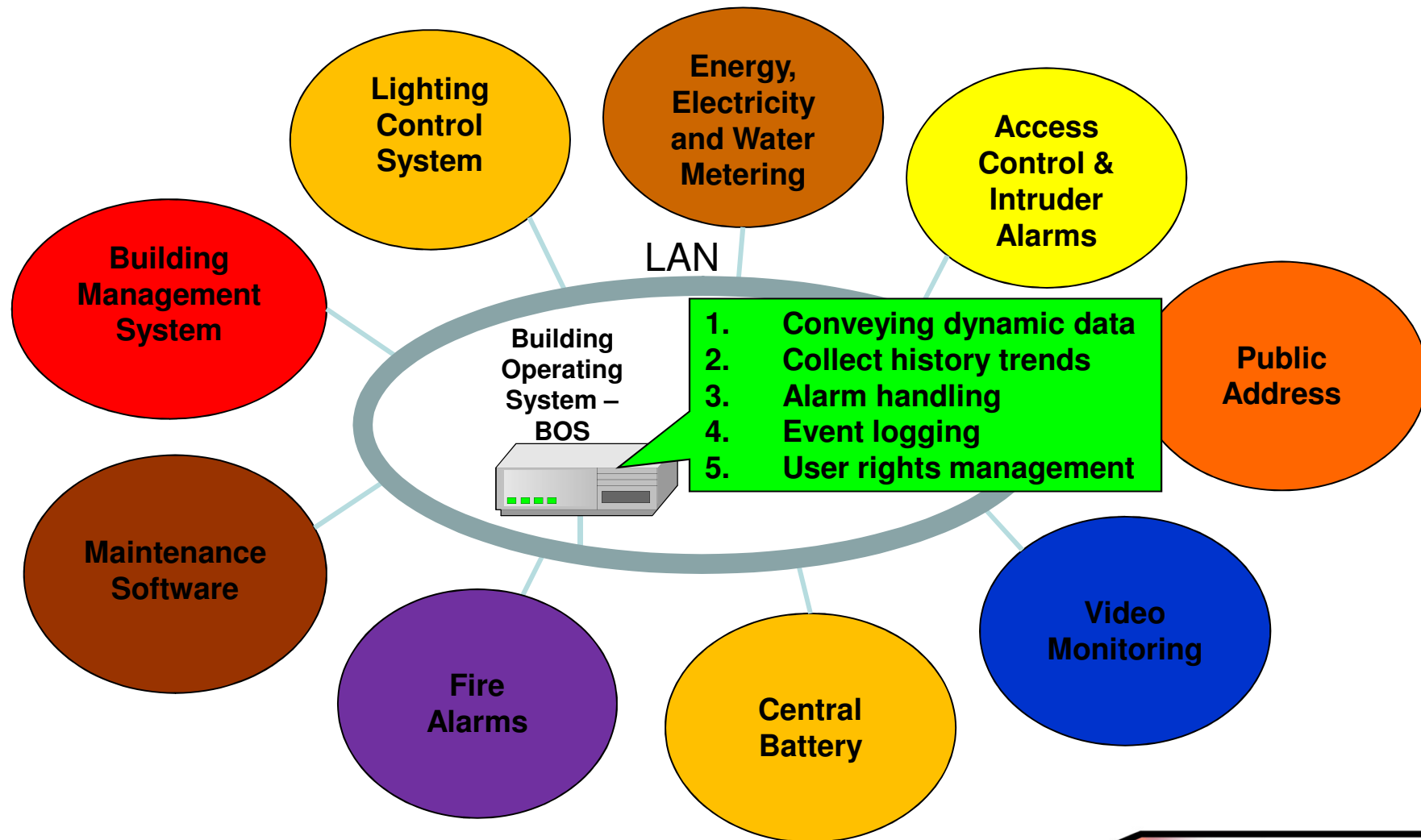
# Vertical silos of building monitoring and control systems prevent achieving **Green Building status**



# Operation without integration is mission impossible

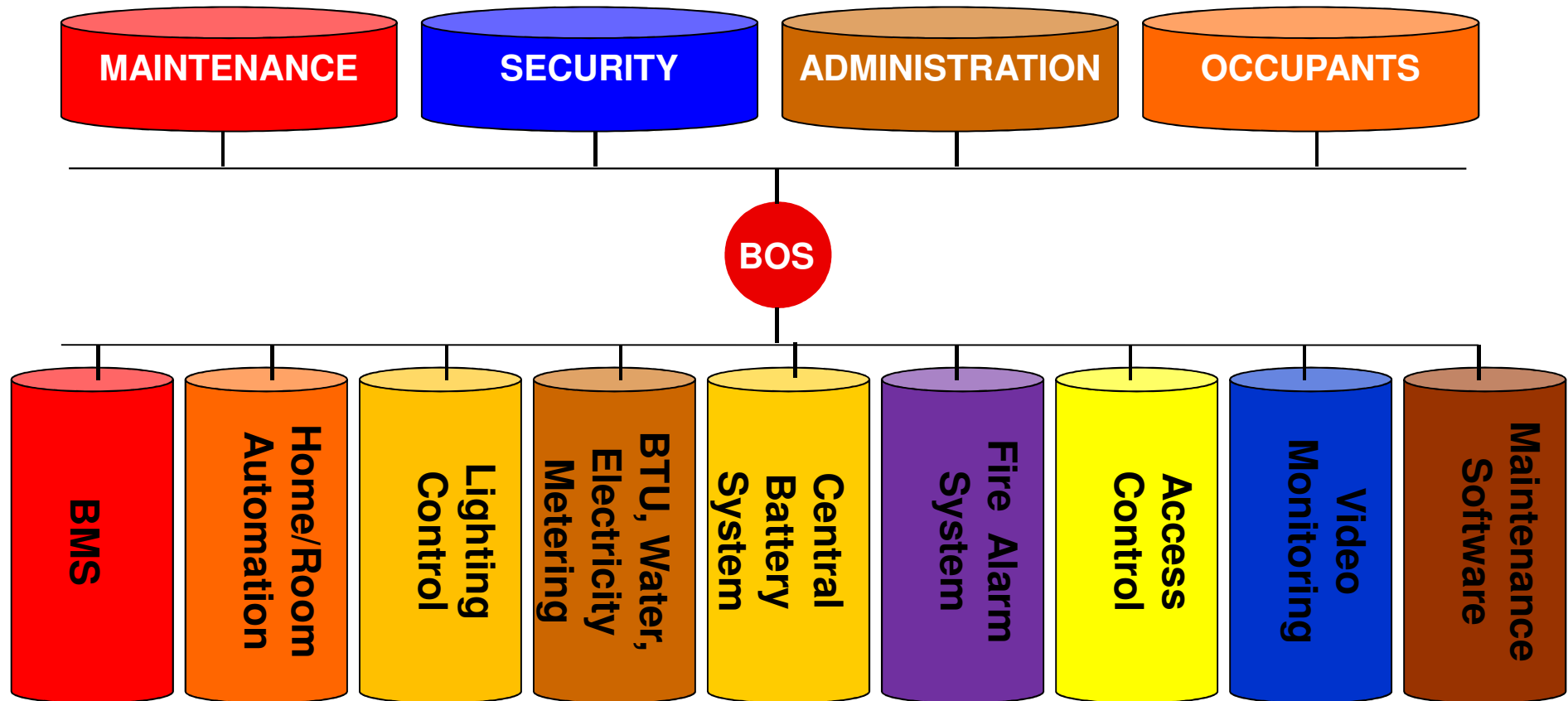


# Systems functionally integrated by BOS



BOS, Building Operating System

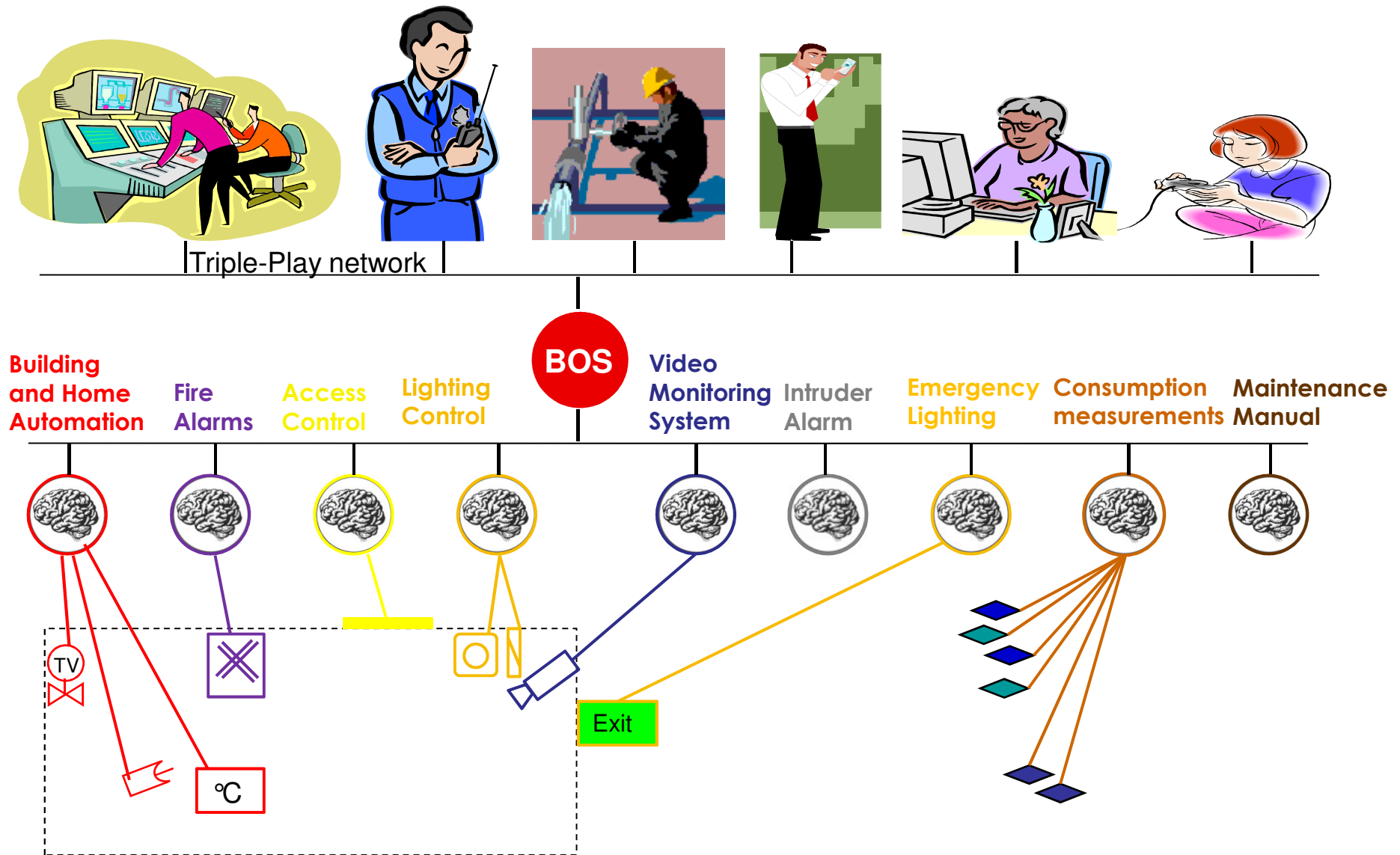
# Horizontal integration of building control systems adds value to all users - enables Green Buildings



BOS, Building Operating System



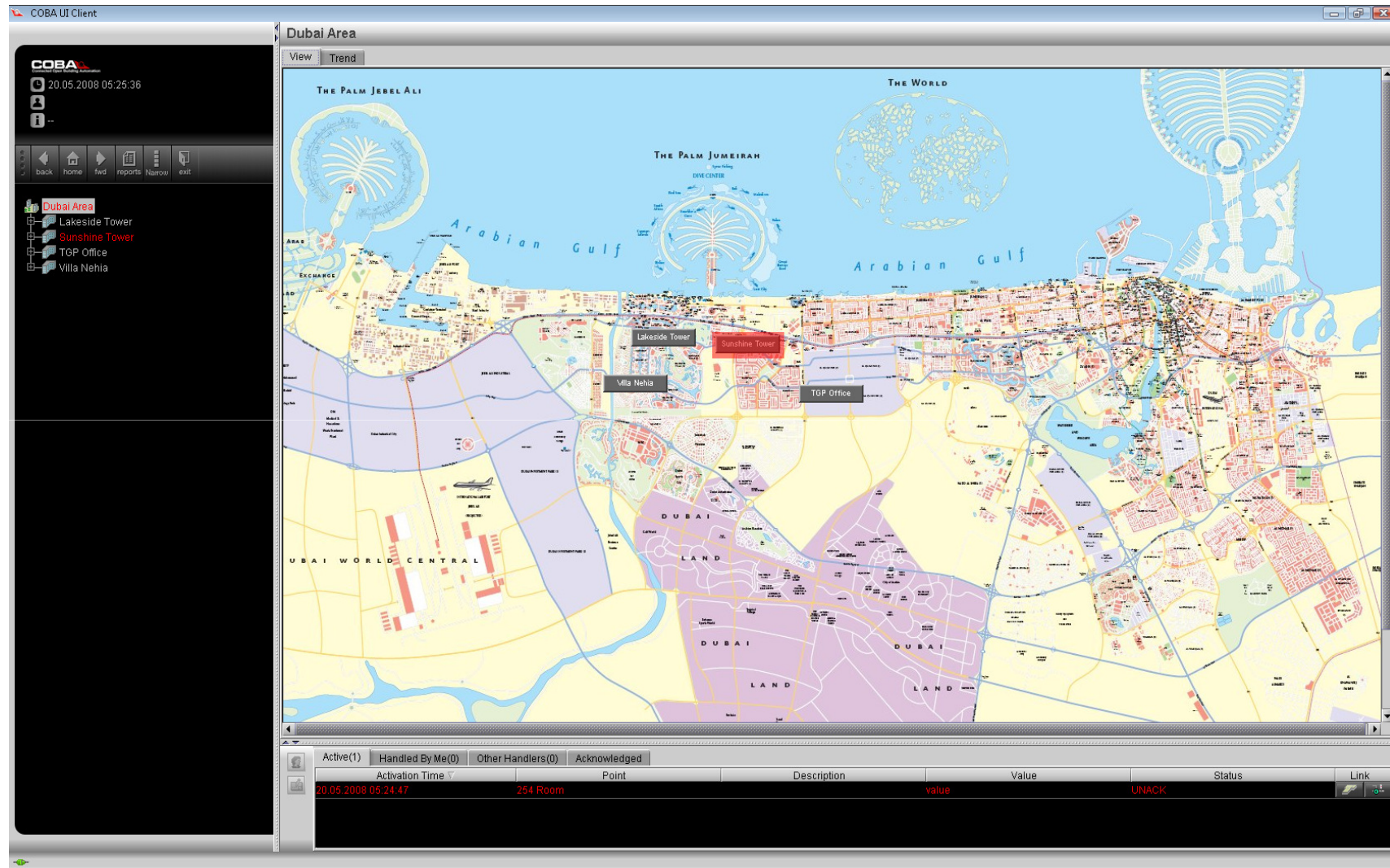
# Green Building usage and operation with BOS



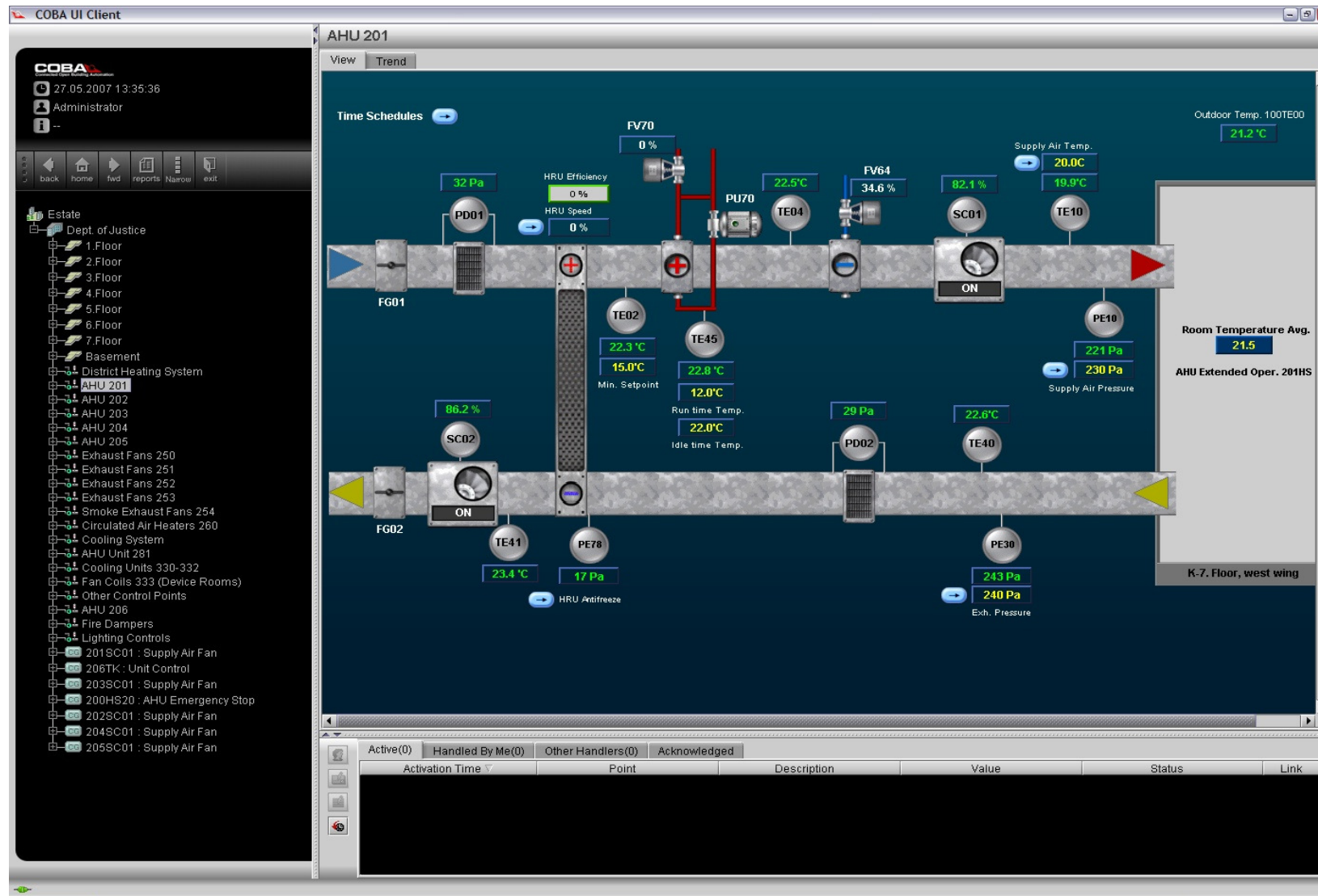
BOS, Building Operating System



# Area view of monitoring user interface



# BMS user interface for Air Handling Unit

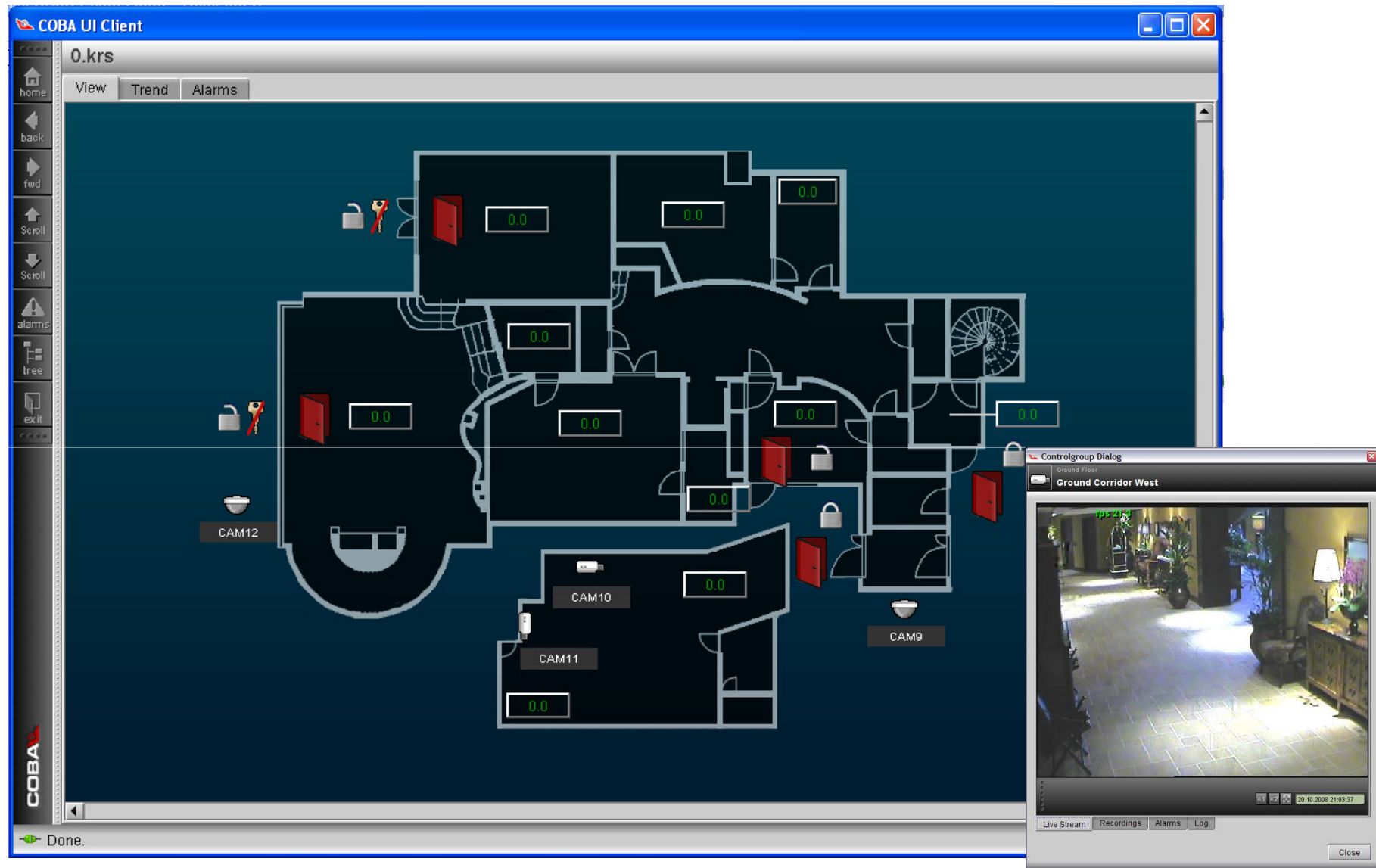




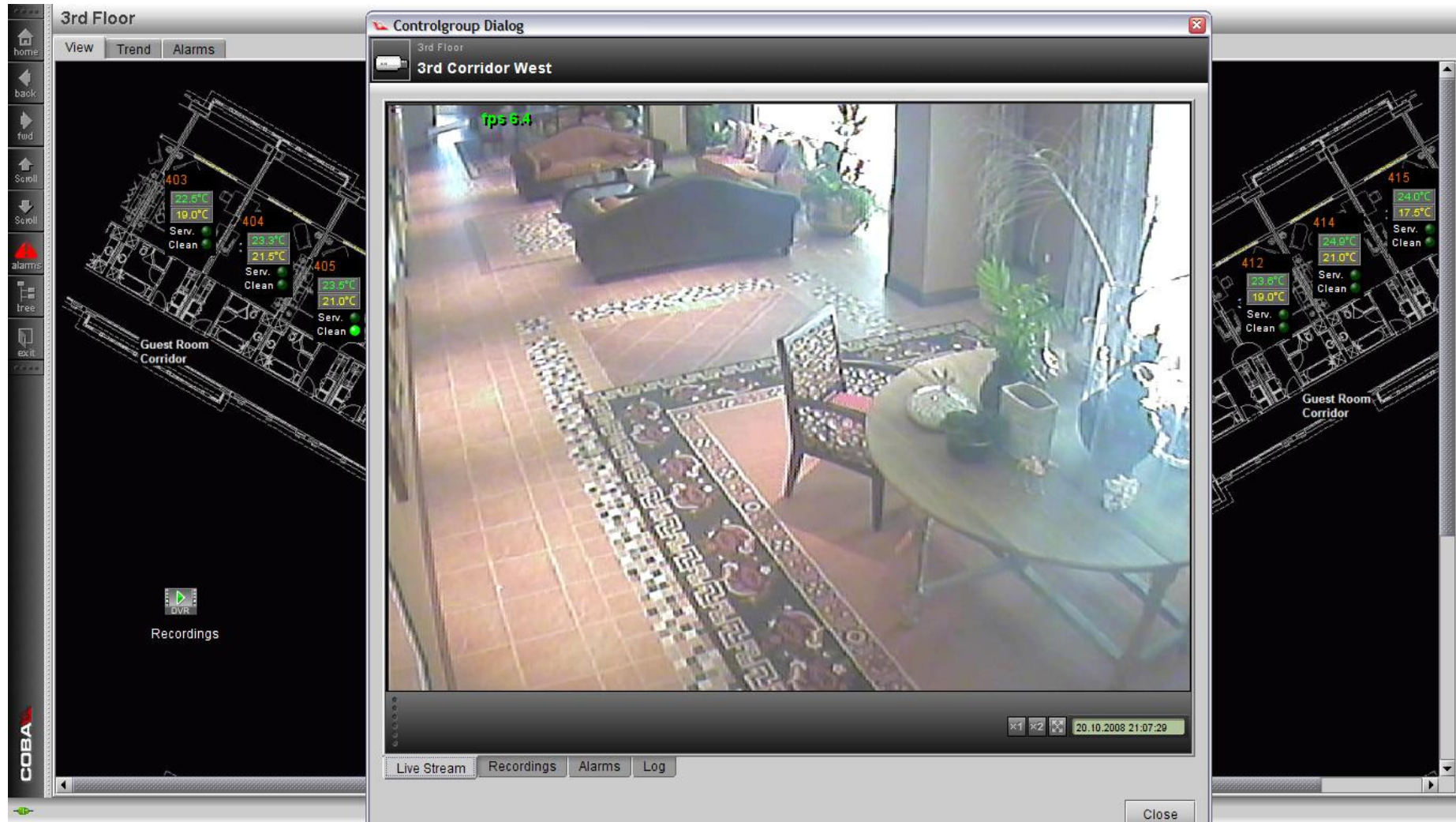
# Monitoring user interface for security systems



# Monitoring user interface for all systems



# Monitoring user interface for all systems

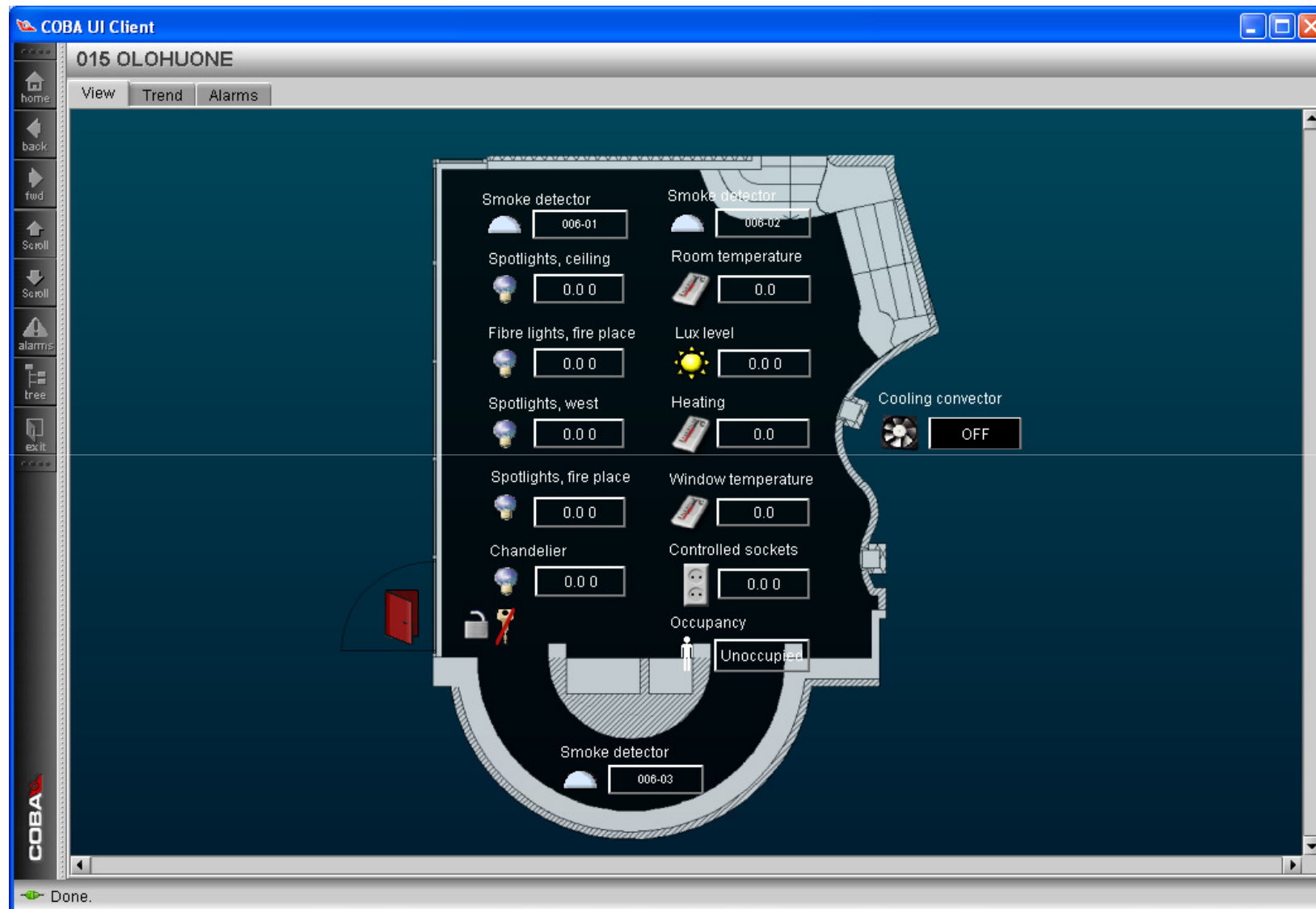




# Monitoring user interface of Central Battery System

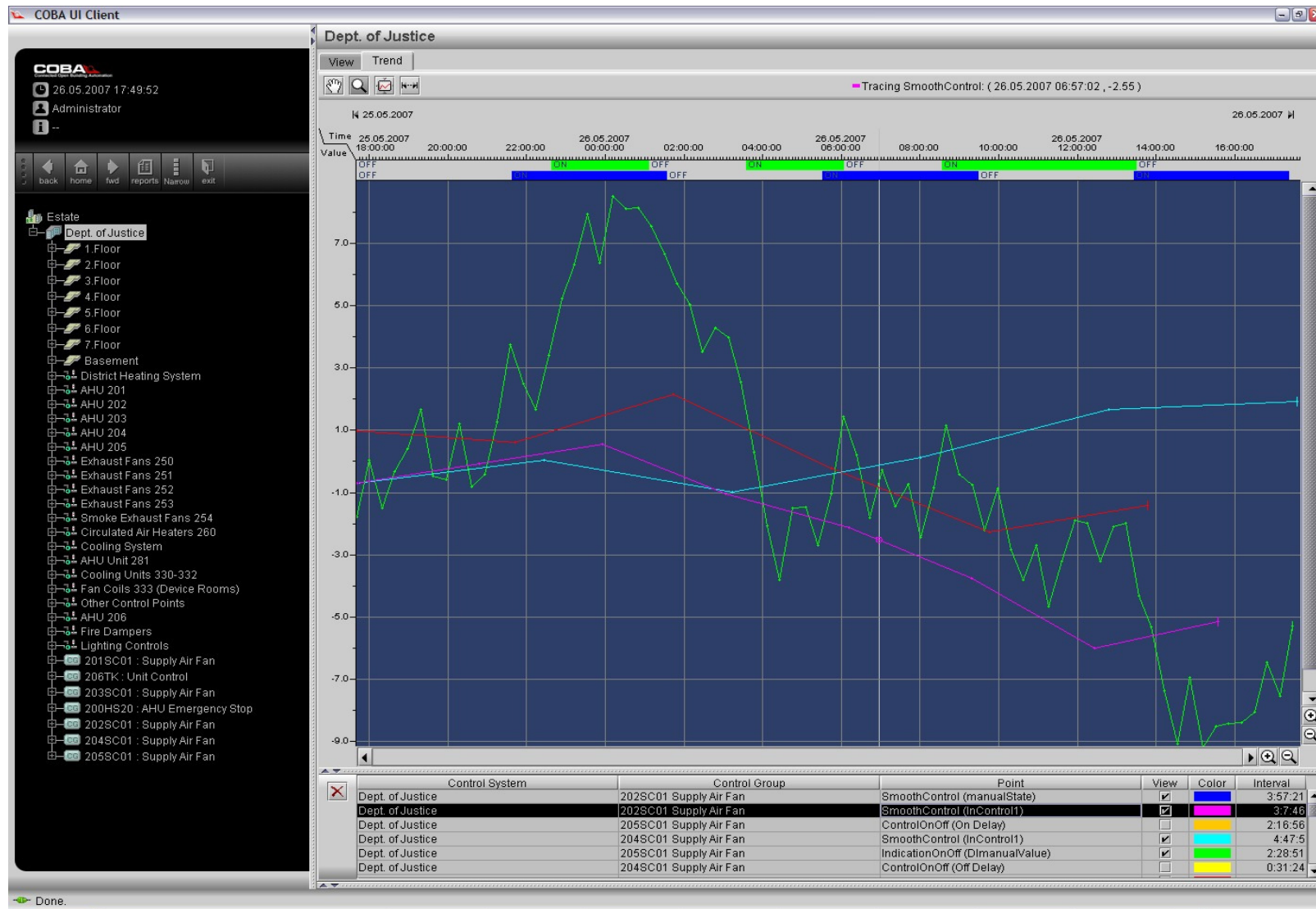


# Integrated user interface for all systems in a room





# History trend view to all systems



# Integrated user interface for all systems at home

The image displays a user interface for a home automation system, titled "Signature Residences" at the top. The interface is divided into a left sidebar and a main content area.

**Left Sidebar:**

- Home (selected)
- Back
- Fwd
- Spaces
  - Living Room
  - Lift Lobby
  - Dining Room
  - Kitchen
  - Pool Area
  - Master Bedroom
- Cameras
- SMS
- Settings

**Main Content Area:**

At the top, it says "Signature Residences". Below that is a logo consisting of three horizontal bars in blue and green, followed by the text "OCEAN HEIGHTS" and the tagline "the most breathtaking of views".

In the center, there is a table showing outdoor conditions:

Outdoor Temperature	29.0°C
Outdoor Humidity	85%
Outdoor Lux	200LUX

Below the table, there are five buttons: "Home" (highlighted with a green underline), "Party", "Away", "Away Long", and "Night". Below these buttons is a button labeled "Acknowledge Alarms".

At the bottom of the main content area, it says "Technology provided by" followed by the "LONIX" logo and the website "www.lonix.com".

**Right Panel:**

A separate panel on the right shows a smaller version of the "OCEAN HEIGHTS" logo and tagline. Below this, it displays "Outdoor Temperature: 5,5°C" and "Outdoor Humidity: 60%". At the bottom of this panel is a button labeled "Signature Apartments".

# All systems in a room

The main interface displays the 'Living room' status with various system controls. The left sidebar includes navigation options: Home, < Back, > Forward, Room list, Living room (selected), Dining room, Kitchen, Pool area, Master bedroom, Logout, and Settings.

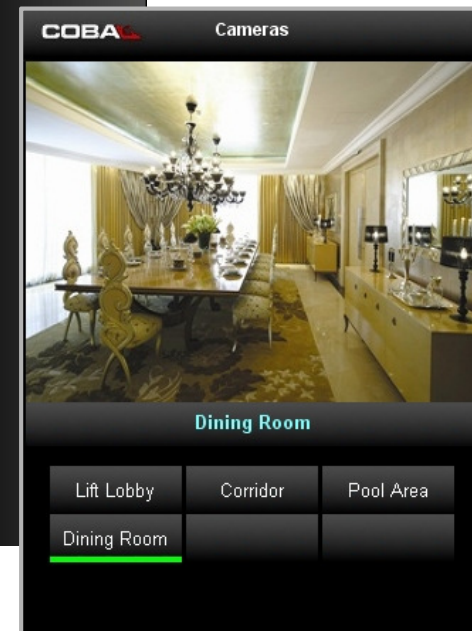
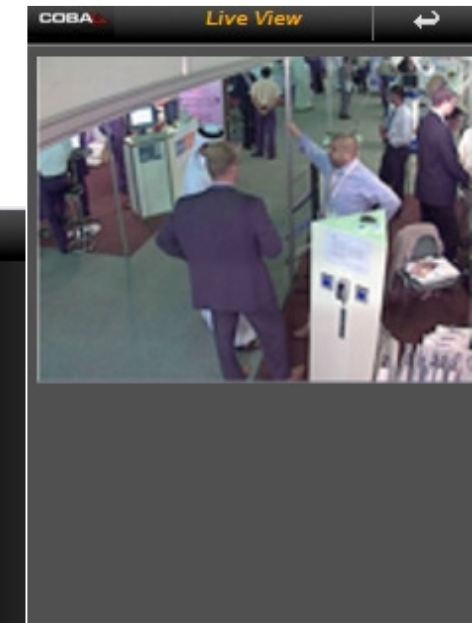
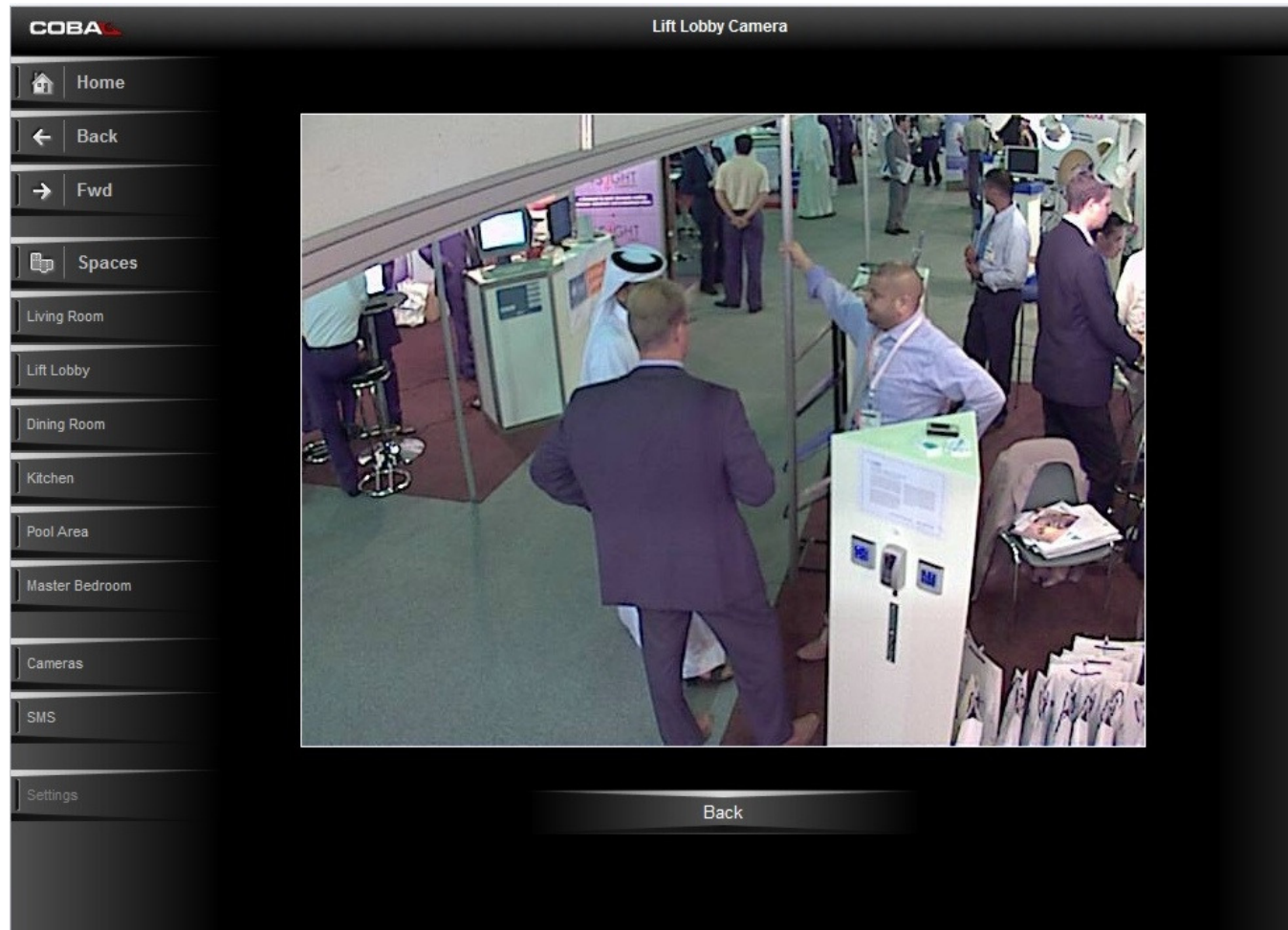
System	Current State	Controls
Occupancy	Unoccupied	
Smoke Detector	Idle	
Temperature	38.10	
A/C Setpoint	22.0	+, -, AUTO, OFF
Light Scenes	All OFF, Romantic, TV, Party	
Table Lights	ON, OFF	
Ceiling Halogens	100.0%	+, -, OFF, ON
Chandelier	100.0%	+, -, OFF, ON
Fluorescent	100.0%	+, -, OFF, ON
Window Halogens	100.0%	+, -, OFF, ON
Curtains	OPEN, CLOSE, STOP	

Overlaid panels show detailed controls for 'Living Room' and 'Ceiling Halogens'. The 'Living Room' panel includes 'Lighting Scenes' (Table Lights, Ceiling Halogens, Floor Lamp) and a 'Modes' section with a vertical slider (100%, 50%, OFF) and 'ON/OFF' buttons. The 'Ceiling Halogens' panel shows a detailed view of the ceiling halogen controls with a vertical slider and 'ON/OFF' buttons.

Bottom right panel (Living Room summary):

System	Current State	Controls
Temperature	20.81	
A/C Setpoint	21.00	+, -, OFF, ON
Lighting Scenes	ALL OFF, DIM, BRIGHT, ALL ON	
Table Lights	ON, OFF	
Floor Lamp	45%	+, -, OFF, ON
Ceiling Halogens	100%	+, -, OFF, ON
Curtains	OPEN, CLOSE	

# CCTV camera view





# Green Building connected to service centers via BOS

**Layer:**  
Remote Clients  
and Services

*Interface: COBA XML, COBA Open JMS  
(TCP, SSL, RMI, HTTP)*

**Layer:**  
Local Clients

*Interface: COBA XML, COBA Open JMS  
(TCP, SSL, RMI, HTTP)*

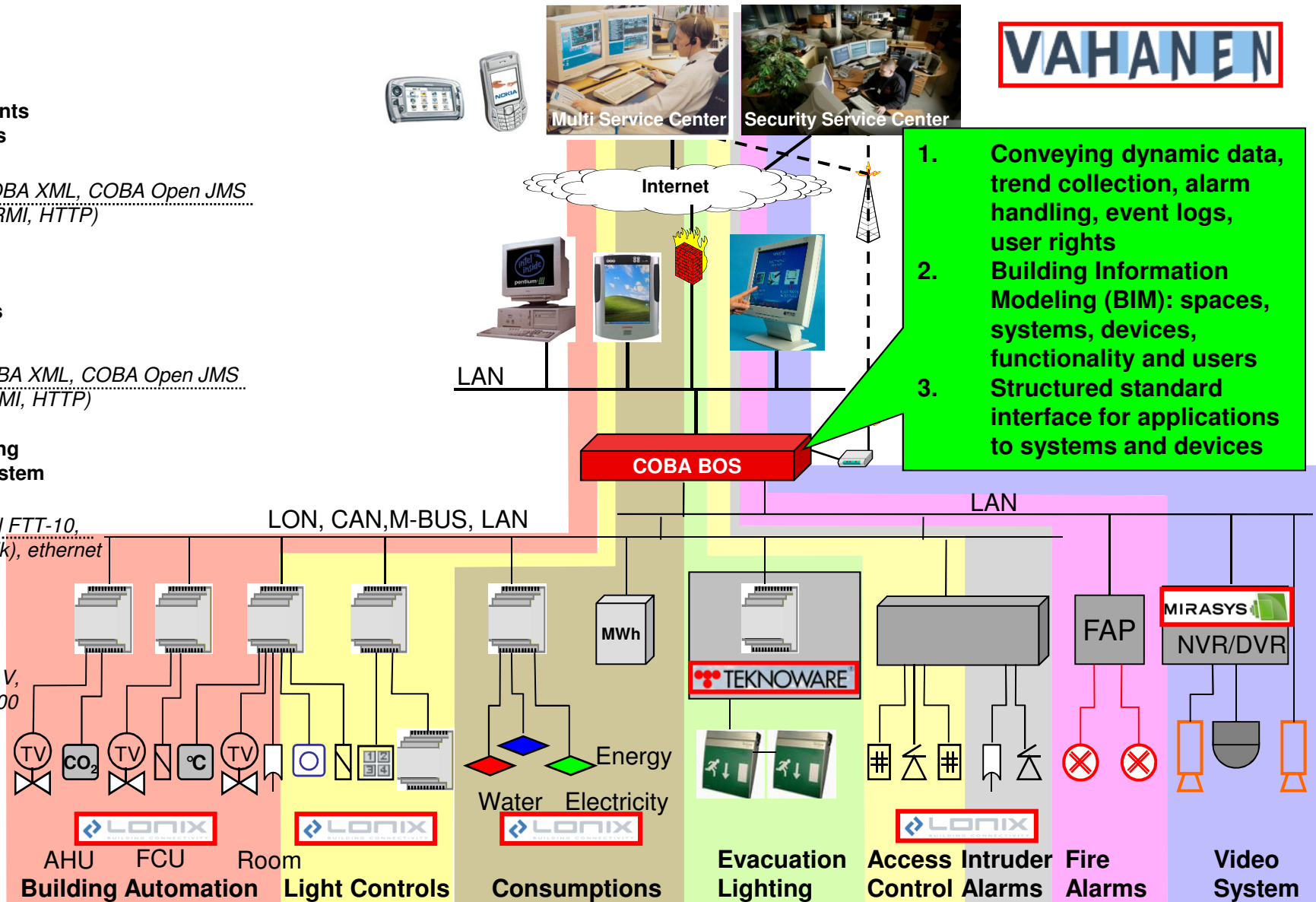
**Layer: Building  
Operating System**

*Interface: LON FTT-10,  
SNVT (LonTalk), ethernet*

**Layer:**  
Distributed  
Intelligence

*Interface: 0-10 V,  
Ni-1000, Pt-1000*

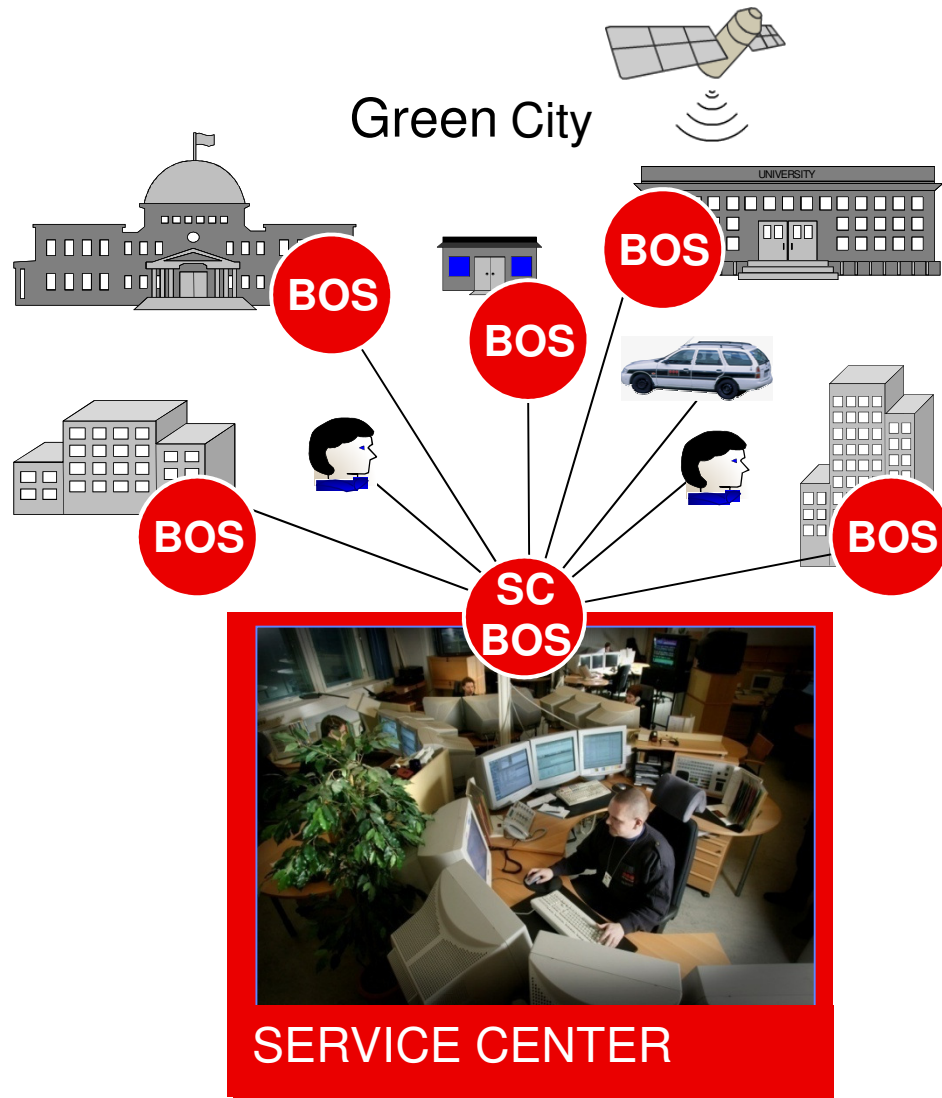
**Layer:**  
Field  
Devices



**enervent** **LIFAIR**

**COBA**  
Connected Open Building Automation

# Simple & efficient management of Green Buildings



BOS, Building Operating System

## 1. Energy optimization and trending

- Setpoint adjustment
- Control optimization
- Peak load management
- Trending
- Preventive maintenance

## 2. Consumption based billing

- Remote reading and automatic reporting
- Billing services

## 3. Remote diagnostics of all devices

- Immediate feedback from all devices
- Quick replacement of faulty units
- Regular SW updates

## 4. Alarm monitoring

- Intruder alarms
- Fire alarms
- Maintenance alarms
- Advanced video monitoring
- All alarms trigger corrective action

## 5. Tracking (option)

- Guards
- Maintenance personnel
- VIPs
- Objects

## 6. Access rights management

- Physical access rights
- Virtual access rights

## 7. Documentation and training

- All systems in common 3D model

## 8. Help desk

- Contact center