Optimize Office Space Use, Energy & Capacity

Avnet Reference Architecture
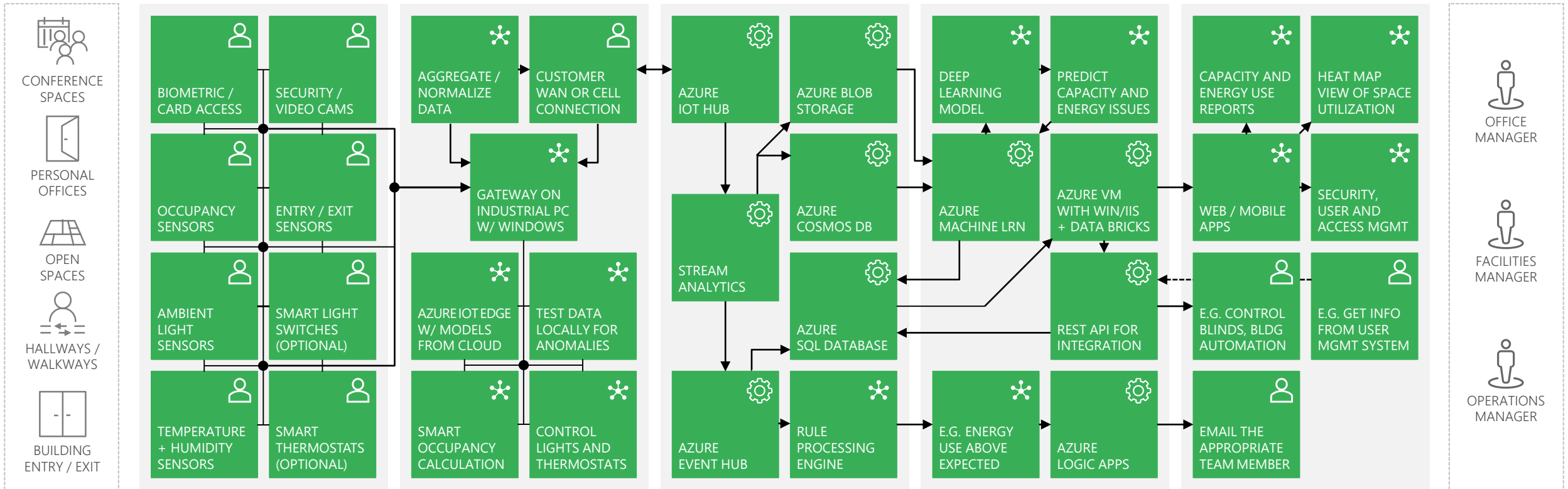

Sensors / Connections

Avnet's solution helps your team monitor space and energy use across your facility to optimize capacity and minimize op costs.

Edge Intelligence

Each facility includes an industrial PC that integrates with your systems, processes and tests data, then uploads it to the cloud.

Cloud Services

Microsoft's Azure provides the solution with a scalable and secure back-end for all your data and for our cloud solution components.

Cloud Intelligence

Avnet's AI-as-a-Service analyzes equipment and energy usage to deliver predictions on possible areas to address or improve.

Mgmt. Experience

Your team is notified of issues on the fly and can use the built-in reporting and analysis to improve execution and optimize results.

Left column (facility spaces)
- CONFERENCE SPACES
- PERSONAL OFFICES
- OPEN SPACES
- HALLWAYS / WALKWAYS
- BUILDING ENTRY / EXIT

Sensors / Connections
- BIOMETRIC / CARD ACCESS
- SECURITY / VIDEO CAMS
- OCCUPANCY SENSORS
- ENTRY / EXIT SENSORS
- AMBIENT LIGHT SENSORS
- SMART LIGHT SWITCHES (OPTIONAL)
- TEMPERATURE + HUMIDITY SENSORS
- SMART THERMOSTATS (OPTIONAL)

Edge Intelligence
- AGGREGATE / NORMALIZE DATA
- CUSTOMER WAN OR CELL CONNECTION
- GATEWAY ON INDUSTRIAL PC W/ WINDOWS
- AZURE IOT EDGE W/ MODELS FROM CLOUD
- TEST DATA LOCALLY FOR ANOMALIES
- SMART OCCUPANCY CALCULATION
- CONTROL LIGHTS AND THERMOSTATS

Cloud Services
- AZURE IOT HUB
- AZURE BLOB STORAGE
- AZURE COSMOS DB
- STREAM ANALYTICS
- AZURE SQL DATABASE
- AZURE EVENT HUB
- RULE PROCESSING ENGINE

Cloud Intelligence
- DEEP LEARNING MODEL
- PREDICT CAPACITY AND ENERGY ISSUES
- AZURE MACHINE LRN
- AZURE VM WITH WIN/IIS + DATA BRICKS
- REST API FOR INTEGRATION
- E.G. ENERGY USE ABOVE EXPECTED
- AZURE LOGIC APPS

Mgmt. Experience
- CAPACITY AND ENERGY USE REPORTS
- HEAT MAP VIEW OF SPACE UTILIZATION
- WEB / MOBILE APPS
- SECURITY, USER AND ACCESS MGMT
- E.G. CONTROL BLINDS, BLDG AUTOMATION
- E.G. GET INFO FROM USER MGMT SYSTEM
- EMAIL THE APPROPRIATE TEAM MEMBER

Right column (roles)
- OFFICE MANAGER
- FACILITIES MANAGER
- OPERATIONS MANAGER

Legend
- ✹ Partner component
- ⚙ Azure service
- 👤 Customer component