

This presentation was live at:



# Smart Buildings

**SHOW**

18-19 October 2023 • ExCel London



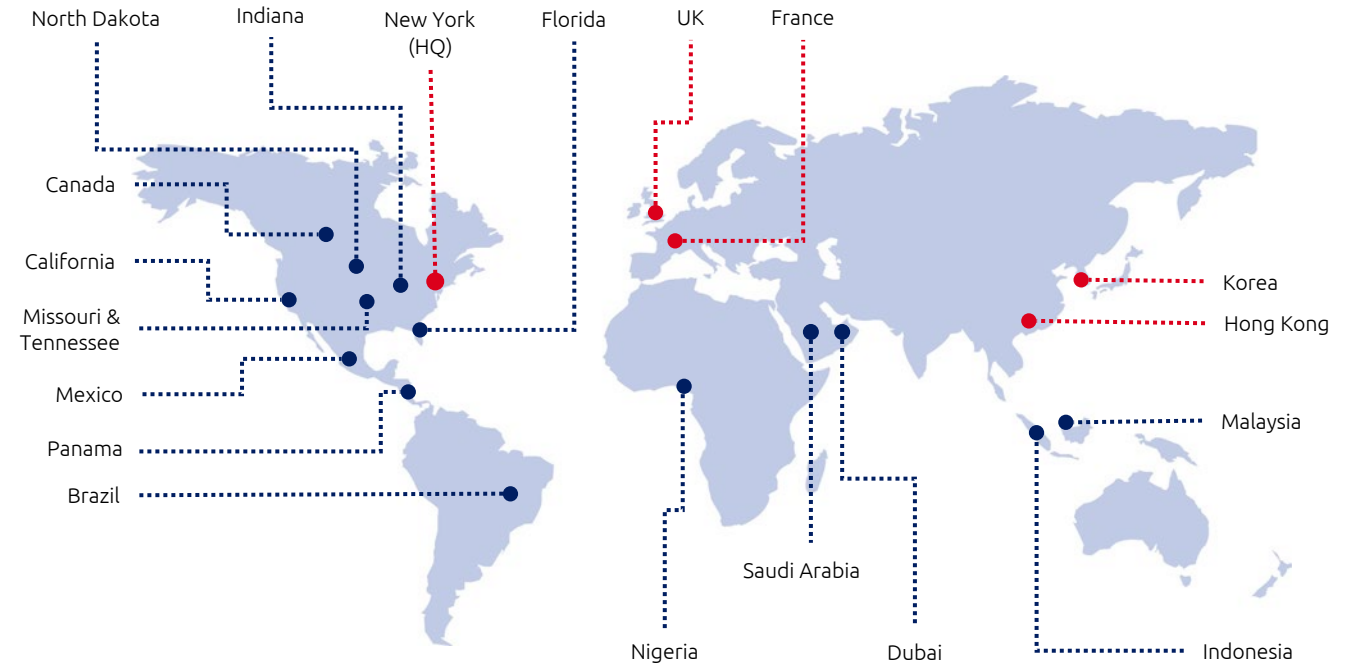
# Introducing Veeva Edge Platform

Extending Niagara reach and functionality

Roger Lucas

SVP of Systems Engineering

- **Headquartered in NYC**  
with presence in the Americas, Europe & Asia
- **Significant partner ecosystem**  
including Honeywell, CableLabs and Qualcomm
- **Global deployments** – including:
  - Digital Inclusion (Indonesia & Panama)
  - Precision Agriculture (North Dakota & Indiana)
  - Community Wi-Fi (Brazil & France)
  - Smart spaces (Florida & Korea)
- **99 patents granted, 33 pending**  
covering 26 patent families
- **Gartner-recognized leading smart edge platform**  
with secure IoT and application runtime support



**Offices & Key Deployments Worldwide**  
As of September 2023

- **Traditional built environment projects are targeted to enable expansion**
  - Featuring off-network cellular backhaul, enhanced Wi-Fi, Bluetooth, Zigbee and LoRaWAN
  - Add wireless devices to reduce deployment cost and increase granularity of info
  - Expand reach of Niagara cost effectively where wiring is too expensive
- **VeeaHubs allow Tridium partners to run SAAS applications**
  - Runs Containerized Portable Niagara 4.13
  - Run additional applications in parallel on the same VeeaHub
  - Advanced network architecture enable devices to connect to Niagara across a mesh
  - Centralized management and network monitoring
  - Remote mentoring of hubs from Control Center
- **Expand into new opportunities utilizing Niagara and Veea ecosystem**



## Niagara Supervisor

- Server or PC-based software that aggregates and controls all data and devices on the Niagara Network.
- Workbench Universal Programming tool

## JACE (Java Application Control Engine)

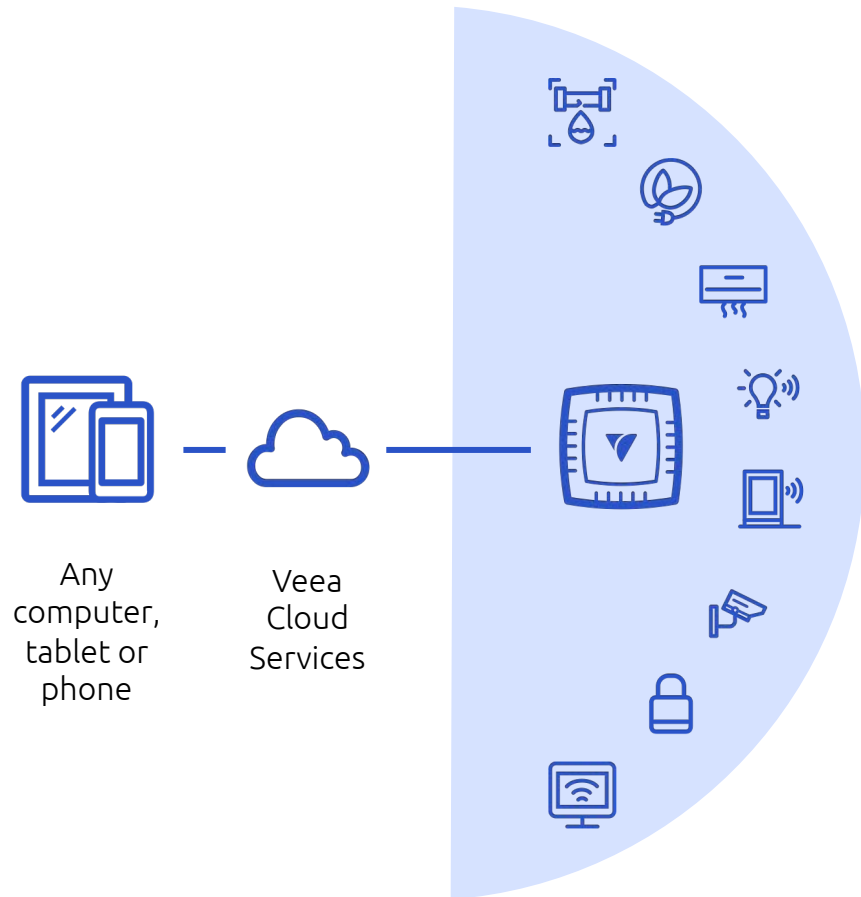
- Network area controller that physically integrates systems providing a server and simple browser interface.

## Edge Controller(s)

- Native-Niagara controller for field-level unitary applications.

## Veeva Linux Controller(s)

- VeevaHubs extend Niagara with container(s) + networking features + IoT suite



Access to your devices and troubleshoot from anywhere – without on-site visits.

Remote access to your deployments and devices

- Easily install and monitor status of devices
- Troubleshoot and fix remotely without on-site visits
- Access to Niagara and non-Niagara devices

Access to your telemetry & data collected at the edge

- Get actionable data for service improvements

Visibility and access to local networks

- Detect and prevent unauthorized access










# Veeva-Enabled Benefits of Smart Spaces



## The Old Way

## The New Way

## The Benefits

 <p>Hard-wired Niagara implementation to end-points and solutions</p>	 <p>Containerized Niagara running at the edge closer to the end-points and solutions</p>	 <p>Decreased latency and increased security</p>
 <p>On-site IT and site visits for configuration and troubleshooting</p>	 <p>Remote management and configuration of deployments</p>	 <p>Reduced ongoing maintenance costs &amp; elimination of on-site visits</p>
 <p>Wired end-points</p>	 <p>Mixed Wired and Wireless, mesh connected end-points</p>	 <p>Reduced installation cost for retro-fit sensors</p>
 <p>Different policies for different devices &amp; networks</p>	 <p>Single pane of glass to manage, view and access deployments and end-point devices</p>	 <p>Simplified management and maintenance of deployments</p>
 <p>Static and centralized data analytics</p>	 <p>Edge-based actionable data collection</p>	 <p>Real-time decision making and data processing</p>
 <p>Siloed functionality and limited use-case expansion</p>	 <p>VeevaHubs enable extended functionality and use-cases</p>	 <p>New and incremental revenue opportunities</p>

## The Past

## Today

## Future

Intelligently Connected™



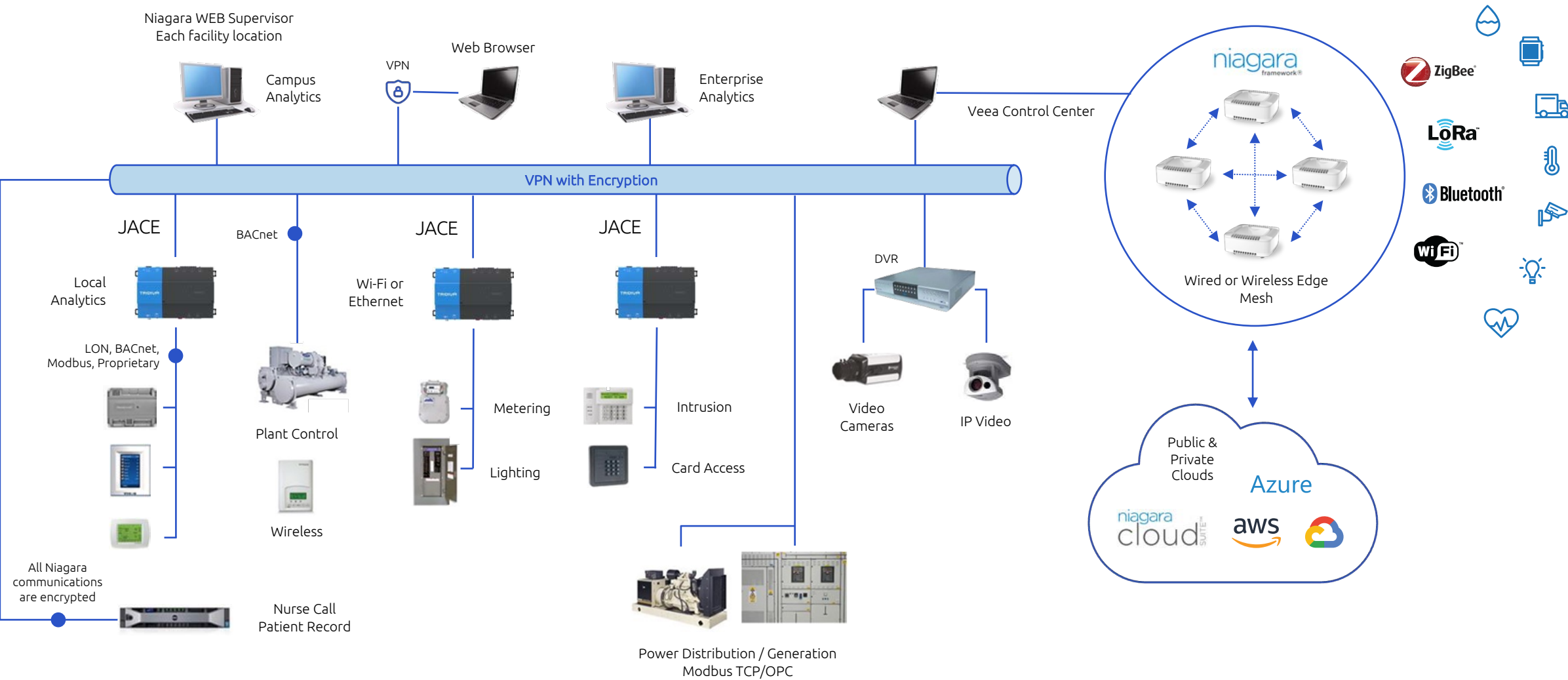
All Veeahubs share the same secure computing platform as well as Wi-Fi, Bluetooth, Zigbee, Matter, and Thread support with optional support for LoRaWAN and 4G/5G WWAN modules as well as storage expandability.

Model	Environment	Connect							Compute					
		Wi-Fi		Ethernet	Cellular & IoT				Memory				CPU	Storage
		Dual Band	Tri-band		4G	5G	LoRa	BT & Zigbee	2GB	3GB	4GB	8GB	GHz	
STAX	Indoor		●	10 100 1G 2.5G 5G	▲	▲		●		●			1.4	32 GB Up to 2 TB
VHE09 (Pro)		●			▲		▲		●		▲		1.5	
VHE10 (Pro S)			●		▲						●	▲		
VHH09 (Outdoor)	Outdoor	●			●		●				●	▲		
VHH10 (Outdoor S)			●		▲	▲	▲				●	▲		

● Standard    ▲ Optional Upgrade

Intelligently Connected™

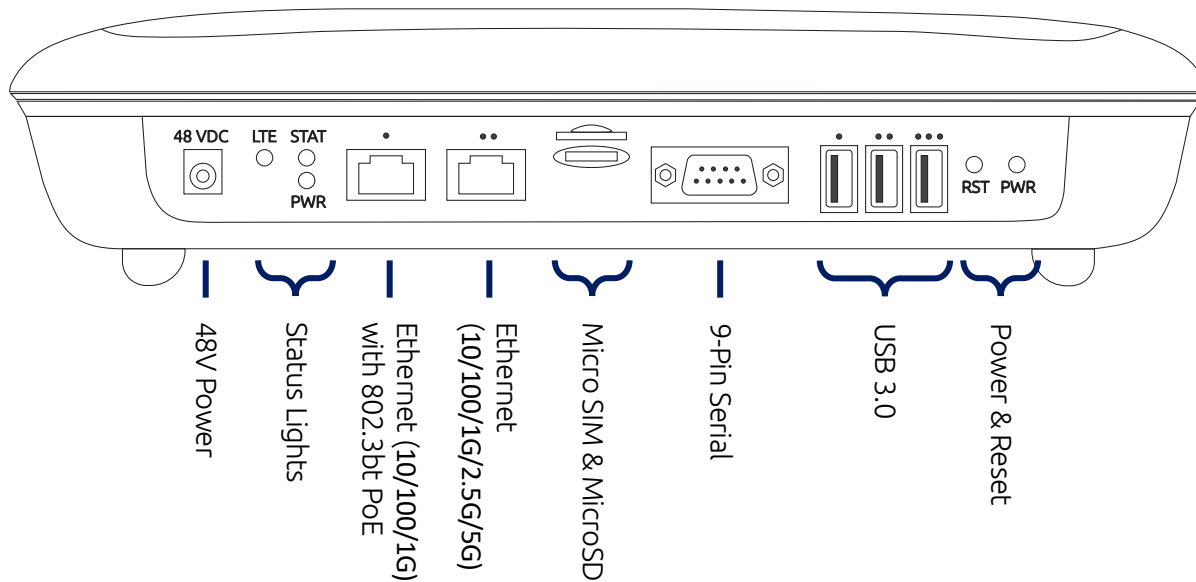




# Veeahub Pro (VHE09) and Pro S (VHE10) Indoor Models



Veeahub Pro (VHE09) and Pro S (VHE10) models bring a wide range of connectivity and expansion options for enterprise-grade applications.



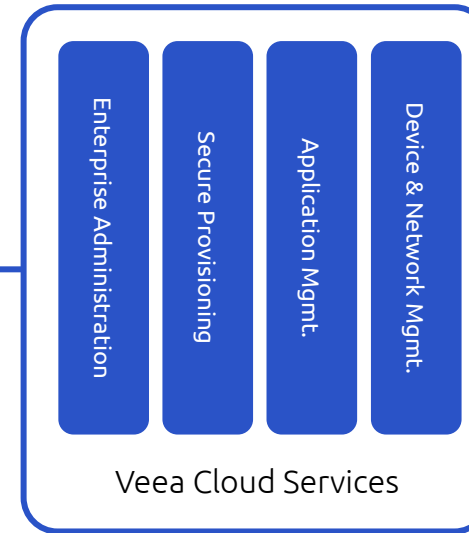
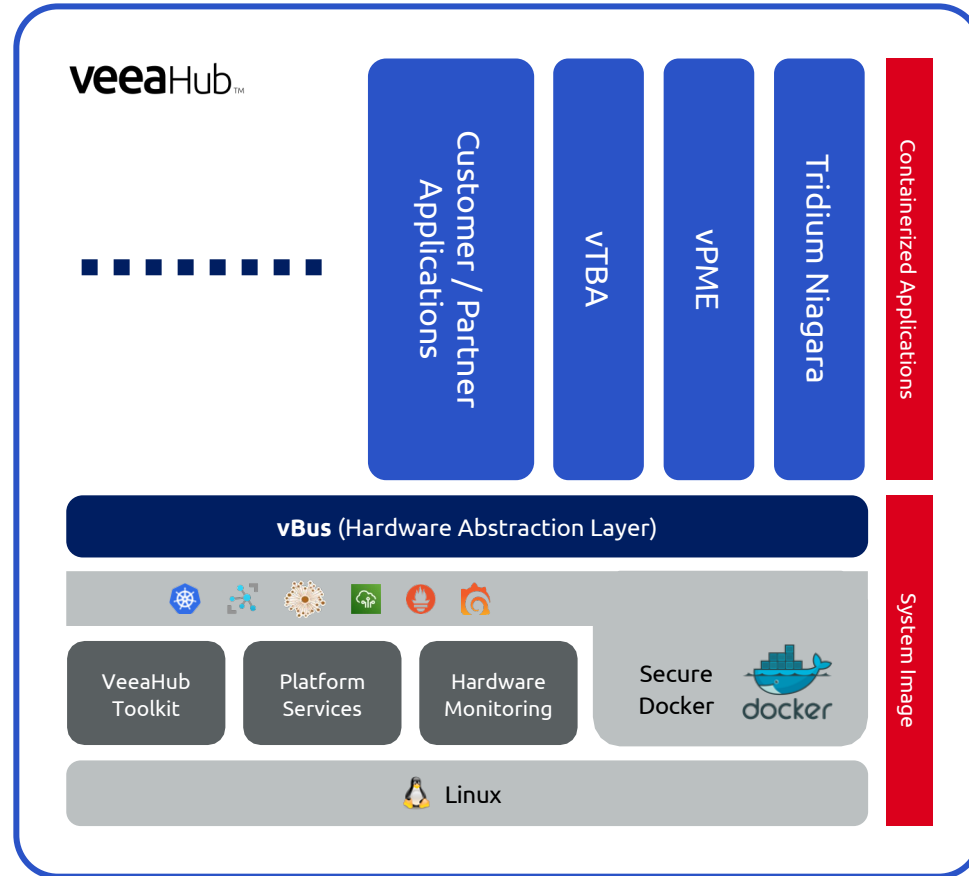
## Powerful & versatile

- Wi-Fi, Bluetooth, Zigbee, Thread, USB and Serial
- Optional Cellular (4G/5G) and LoRaWAN functionality
- Powerful CPU and expandable storage

## Everything needed to get started is included:

- Universal Power Adaptor
- Mounting Bracket and installation parts
- External antennas

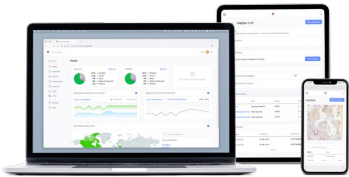
Intelligently Connected™



Veeva Control Center

- Patent Pending Secure Docker Container System
- **vMesh** – Highly extensible device connectivity (wired & wireless) and application mesh
- **vBus Hardware Abstraction Layer** – Enable devices (IP and non-IP) to securely connect to containers distributed across vMesh
- **Veeva Cloud Services** – Orchestration and Management





Veeva Control Center



**VeevaCloud**

Authentication

Provisioning

Monitoring

Device Mgmt.

Application Mgmt.

Network Mgmt.

Subscription Mgmt.

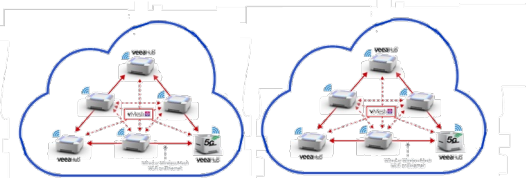
Tenant Mgmt.

Alarms & Events

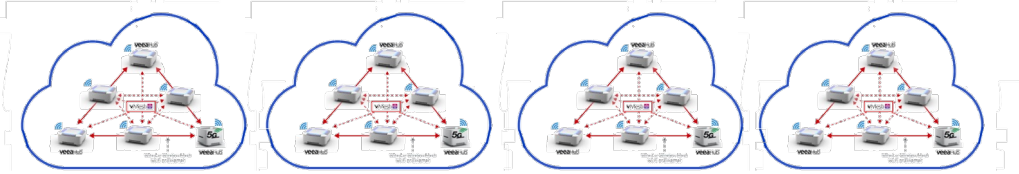
Analytics



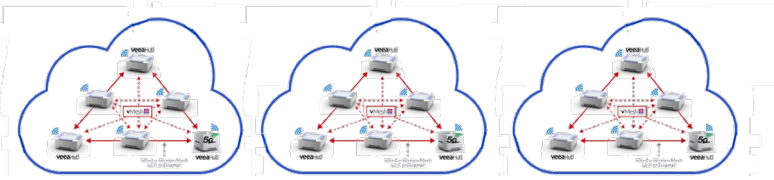
Customer 1



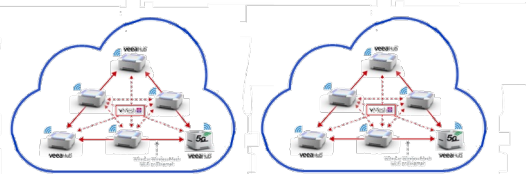
Customer 2



Customer 3



Customer n



# Target Verticals for Veeahub + Containerized Portable Niagara



## Smart Campus, Building or CRE

- Air Quality
- Energy Use & Management
- Smart Building Controls
- Regulatory Compliance
- Reporting & Insurance Claims

## Smart Multi-Family Dwelling (MDU)

- Safety & Security
- Energy Efficiency
- Regulatory Compliance

## Smart Agriculture

- Greenhouses & Controlled Environment
- Realtime Management and Controls

## Industrial & Enterprise

- Warehousing & Distribution Centers
- Factories
- Transportation Hubs
- Retailers



Intelligently Connected™

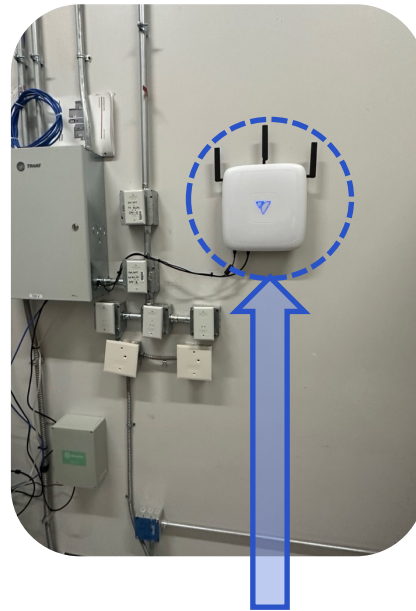


## Fast/Easy Extension of Niagara based systems to add Wireless and Edge Processing

- 4G/5G Connection to Internet
- IIoT Radios – LoRa (most common), Bluetooth, Zigbee
- Bridge to wired world – Ethernet, RS-485/RS-232



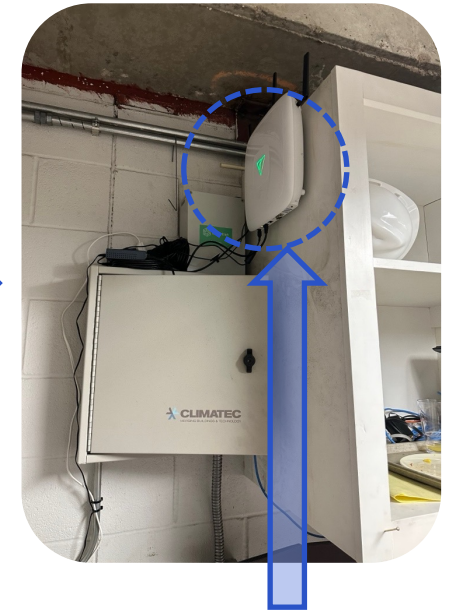
Existing  
BMS



Veeahub  
TRIDIUM  
niagara4



Existing  
BMS



Veeahub  
TRIDIUM  
niagara4  
Intelligently Connected™



# Thank you

Intelligently Connected™



To learn more about Veeva and our solutions,  
visit [veeva.com](https://veeva.com) or scan the QR code



To contact us,  
visit [veeva.com/contact-us](https://veeva.com/contact-us) or scan the QR code



# Smart Buildings **SHOW**

9-10 October 2024 • ExCeL London

We look forward to seeing you in 2024