



# Products Highlights Overview

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# CHALLENGES OF NETWORK MANAGEMENT WITHOUT A MANAGEMENT SYSTEM

- Limited information for fault isolation & resolution
- No visibility to end devices/sensors
- Reactive (vs. proactive) monitoring & maintenance
- Updating device firmware & change passwords require site visits
- Problem is only known when at site
- Dispatching correct personnel with skillset to resolve issue
- Missing necessary device information even with multiple polling applications



# IDEAL SOLUTION

- Comprehensive Solution with **low administration**
- **Purpose built** for managing critical industrial networks
- Enabling **intelligent operations**
- **Rapid deployment** and quick time to value
- Robust & **mature product** for monitoring of comms devices
- **Proactive management** with remote rule based alerting
- **Operational visibility** into critical performance metrics
- Alerts on broken thresholds



# **INDUSTRIAL MANAGEMENT SOLUTION (IMS)**



- ✓ **Intelligent Operations**
- ✓ **Operational Visibility by Device**
- ✓ **Operational Visibility - Topology View**
- ✓ **Proactive Management**
- ✓ **Large Scale Provisioning**
- ✓ **Low Administration**



# WHAT IMS DOES

- Provides network monitoring, change, and reporting for a “source of truth”
- Offers visibility into overall network and equipment health
- Improves resource deployment decisions during outages
- Integrates with existing communication and security processes
- Improves availability and performance by anticipating potential problems and auditing device configurations
- Nimble software development support for needed enhancements or changes



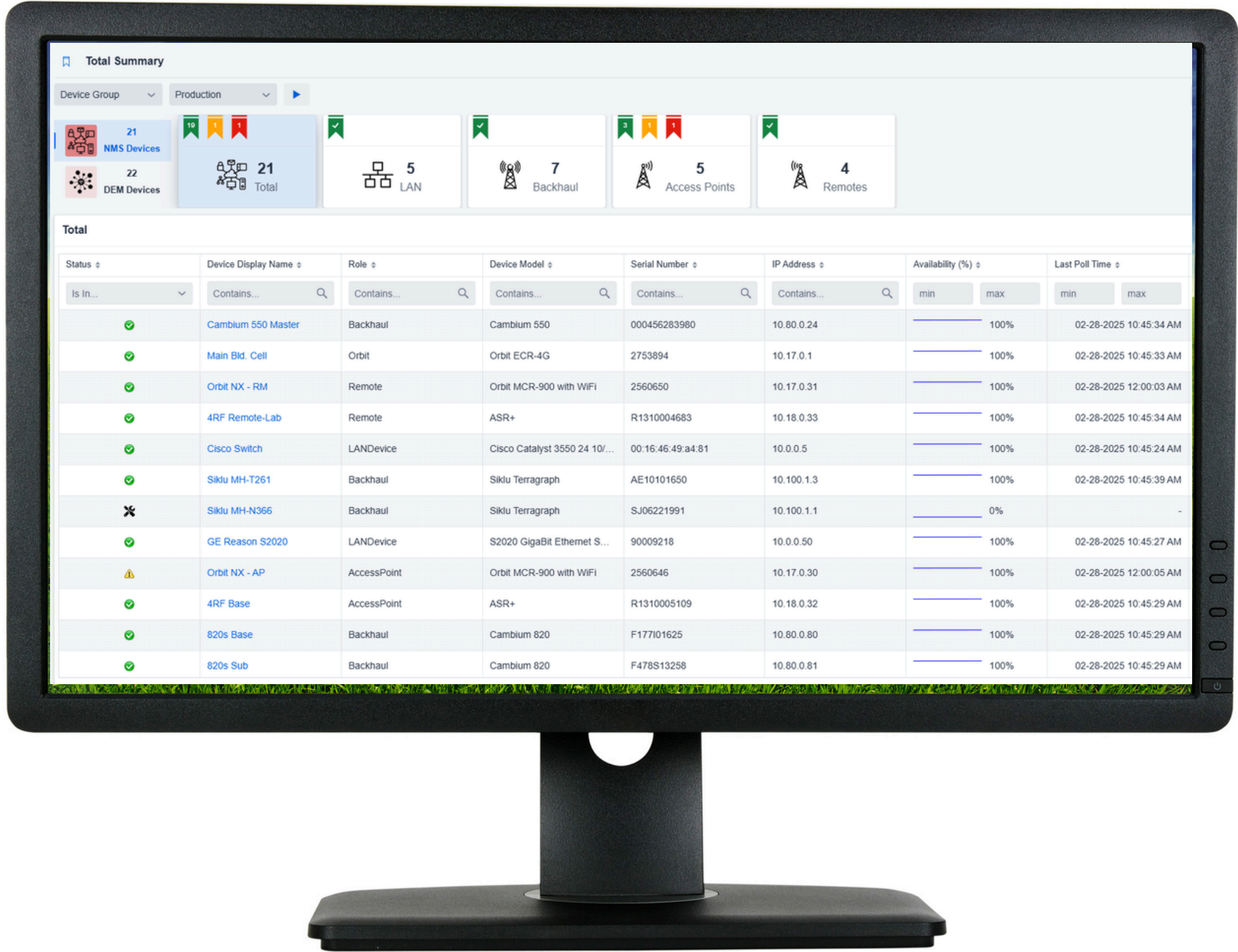
# END TO END MANAGEMENT OF THE DEVICE LIFECYCLE MATTERS

- Health monitoring and proactive notifications
- Historical trend analysis
- Automated device configuration updates
- Customized views and alerts based on user role/group
- Correlation engine automatically identifies the root cause and suppresses downstream impacts (1 alert vs many)
- Device level grouping aligns technology operators needs
- Prescriptive & customizable workflows

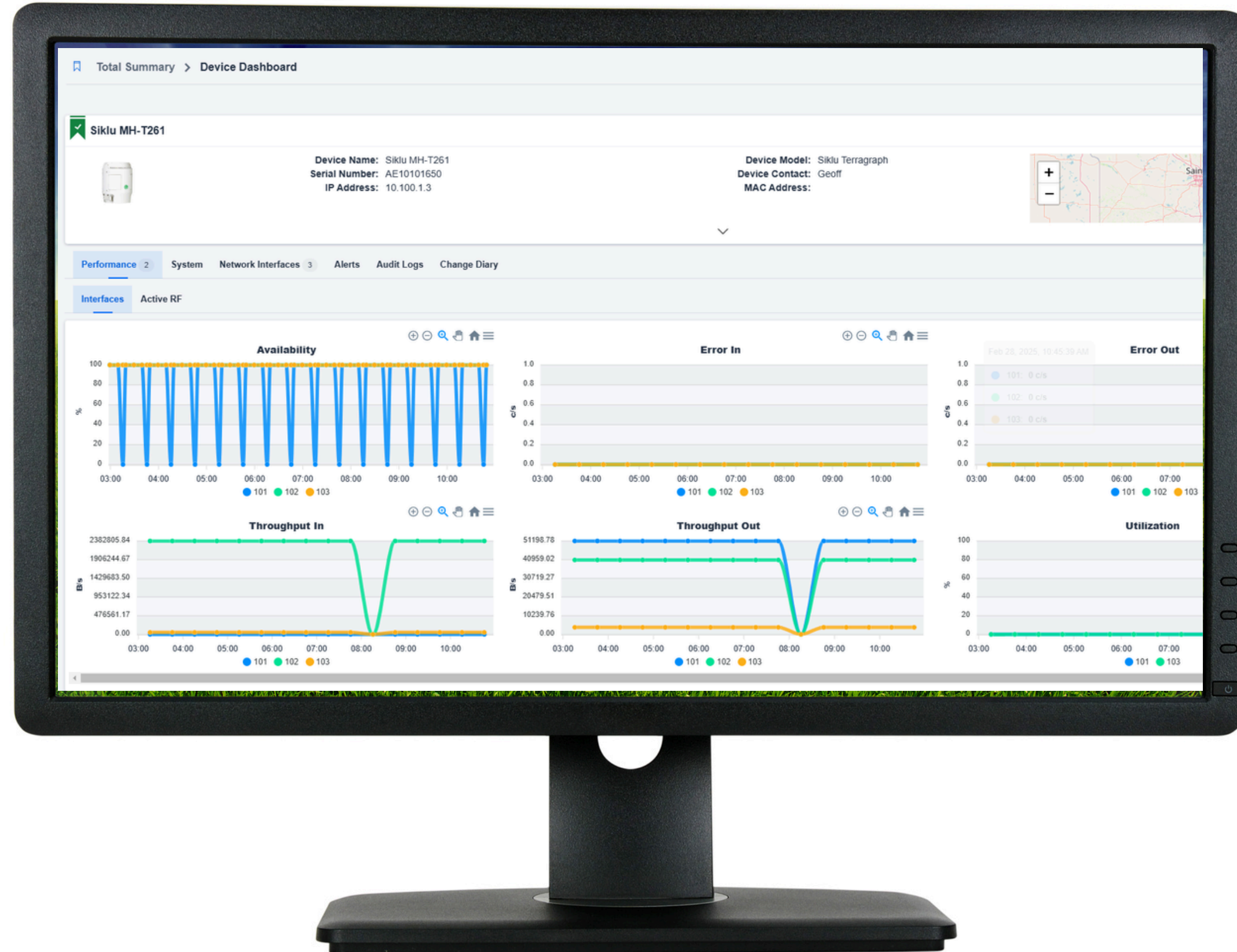




# INTELLIGENT OPERATIONS: SUMMARY VIEW



# OPERATIONAL VISIBILITY: DEVICE VIEW



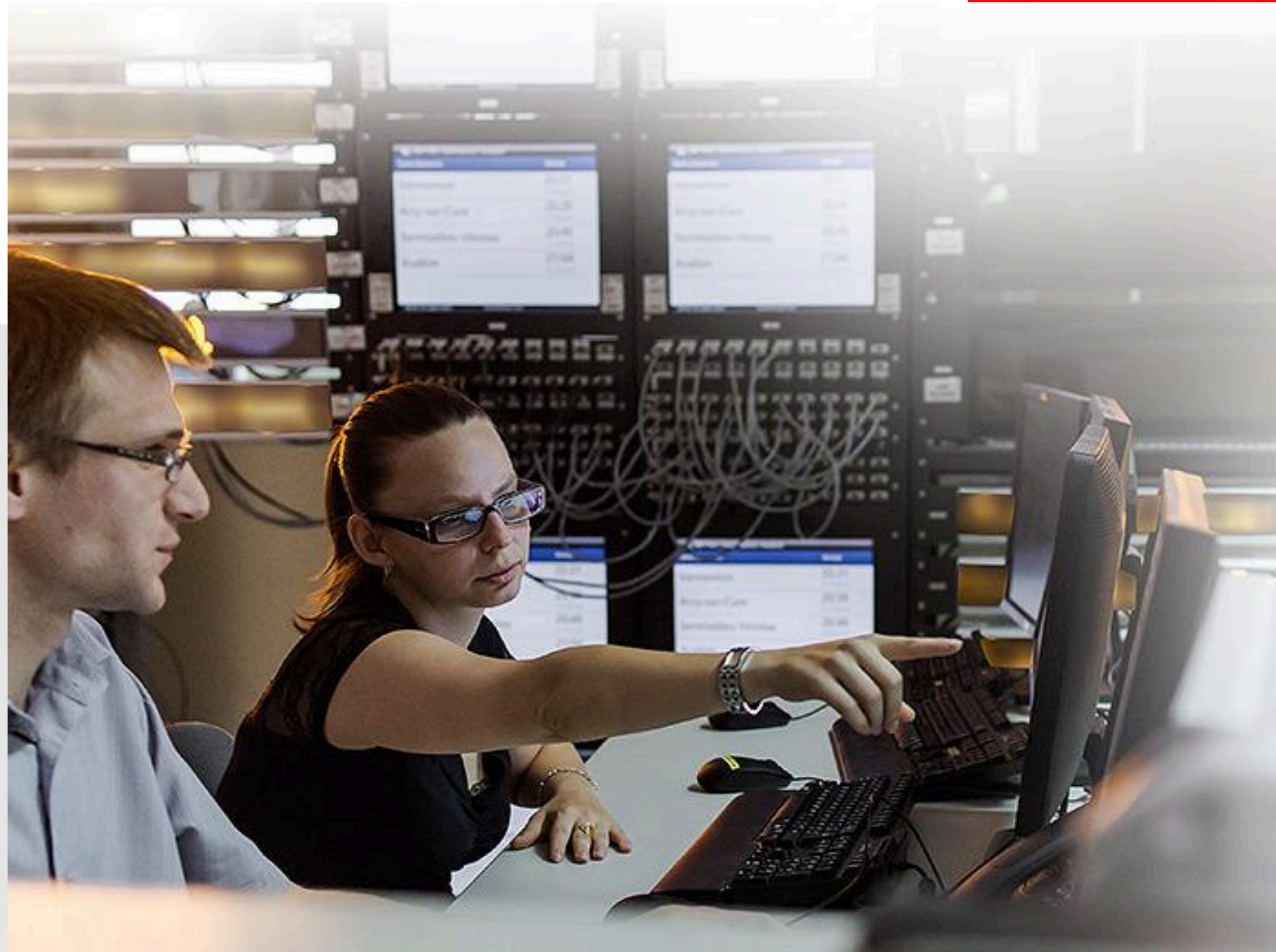


# **THE IMS NETWORK MANAGEMENT SOLUTION MAXIMIZES THE RETURN ON YOUR DEVICE AND NETWORK INVESTMENT**

- Quickly and accurately notify and deploy maintenance resources with intelligent data to resolve equipment and network failures
- Historical performance trending data to resolve network & equipment failure quickly
- Purpose built and pre-loaded with recommended radio performance thresholds
- Oversee the “big picture” of the network with real-time data







**E2E offers a comprehensive portfolio of professional services that help proactively manage the network with IMS NMS, achieving an unprecedented level of operational performance and efficiency.**

Consulting  
Planning and Design  
Training  
Deployment  
Integration  
Service Level Agreements

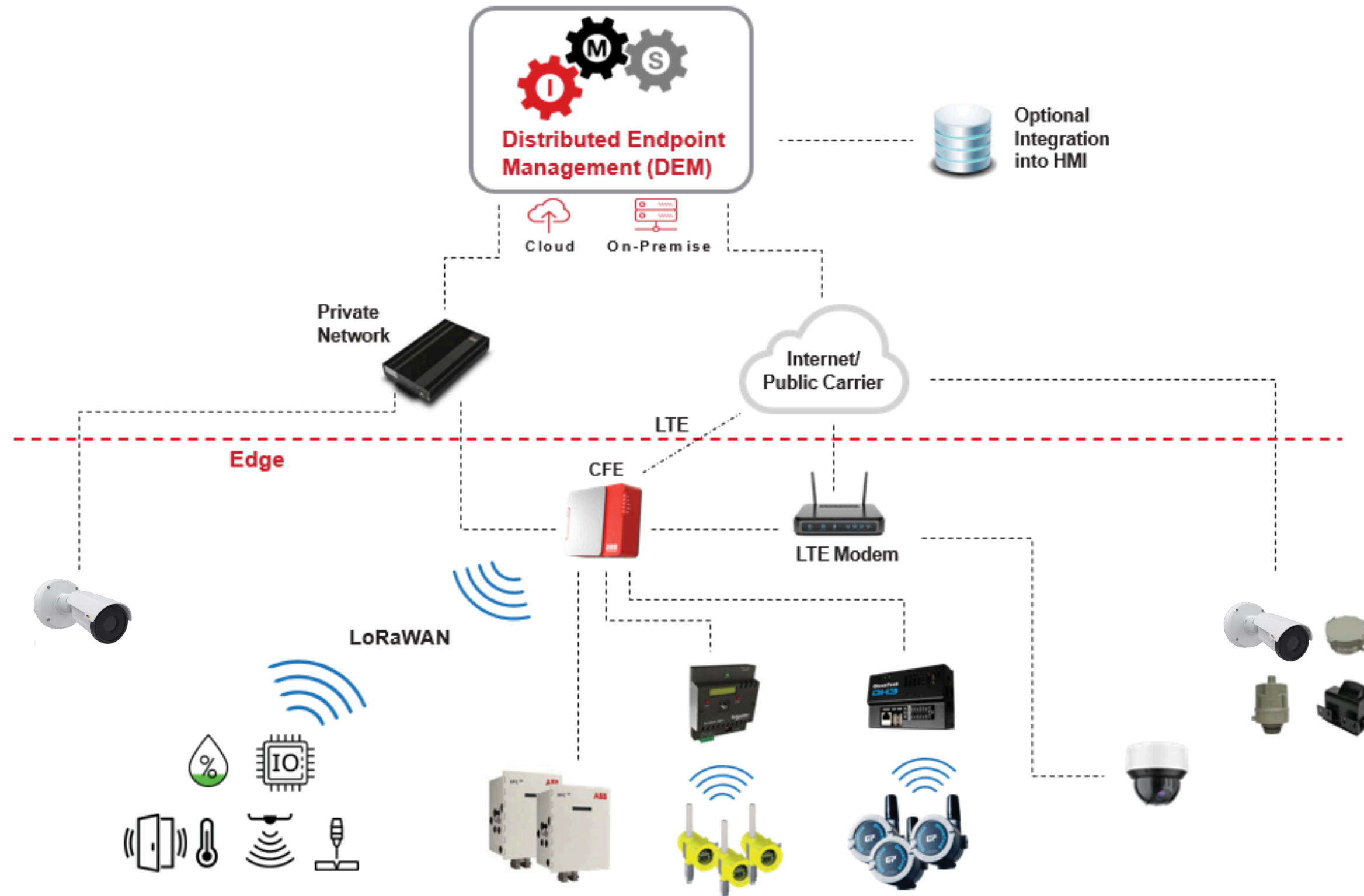
**We also provides hosting services for a Network Operations Center (NOC)**

24x7 Monitoring  
Automated Ticketing and Dispatch  
Long-Term Support

# **IMS NETWORK MANAGEMENT SOLUTION PROFESSIONAL SERVICES**




# E2E'S EDGE PLATFORM



Note: Integrations not inclusive of offering

# EDGE SOLUTION DETAILS

Oversee the “big picture” of the network environment with data from real-time availability & long-term performance.




**Integrates other vendors sensors/PLC's with E2E's offerings**




**Seamlessly integrates into E2E's IMS Network Management Solution**




**Complementary database for integration with other North bound products like HMI's (E.g. Cygnet)**



**Easily creates an Operational Technology (OT) dashboard perspective**



**Low administration with quick ROI**



**Enables proactive management and reporting... all remotely!**



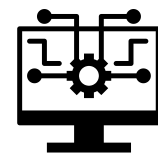


# NETWORK & EDGE MANAGEMENT PLATFORM & SERVICES



## Customized

Wirelessly change configuration settings on serial-only and IP remote radios in the field. Collects device configuration & performance information from the field



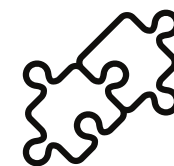
## Software Tools

The only deployment and configuration automation tool on the market that supports GE MDS™ Orbit, SD, TransNET and 4RF™ Aprisa™ devices.



## Out of the Box

IMS network management software requires no customization to get started, providing true out-of-the box functionality.



## Advanced Integration

For narrowband and proprietary network devices (GE MDS™, FreeWave, 4RF™ Aprisa™, Sierra Wireless, Cambium, RADWIN, Ubiquiti, and more)

# E2E EDGE PRODUCTS

The Collector and The Extricator:  
Both products forward the data  
exclusive to the IMS DEM solution.



## The Collector

Collects operational information from LoRa/LoRaWAN sensors, supporting E2E sensors in addition to select 3rd party sensors. There is a sub-category of the Collector that has a Forwarder - which is like a listener of LoRaWAN packets and forwards it on to a Collector.

## The Extricator

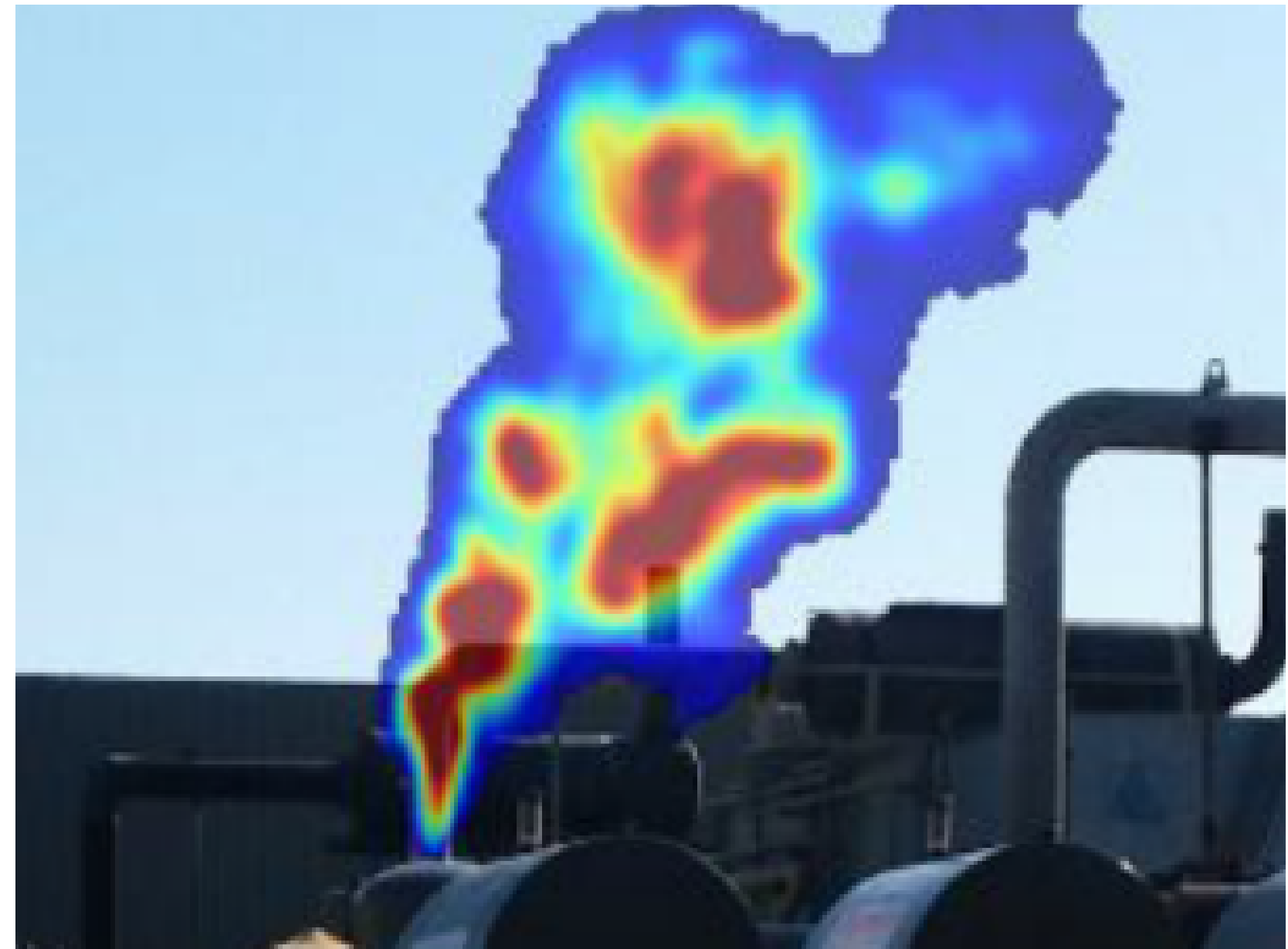
Extracts operation information from new and existing devices/sensors using MODBUS.



# VISUAL SENSOR INTEGRATION

**Combining visual images with sensor data to verify, validate & respond from end-to-end.**

E2E's visual sensors seamlessly integrate into our IMS Distributed Endpoint Management (DEM) platform, giving you eyes in the field alongside your existing other network devices

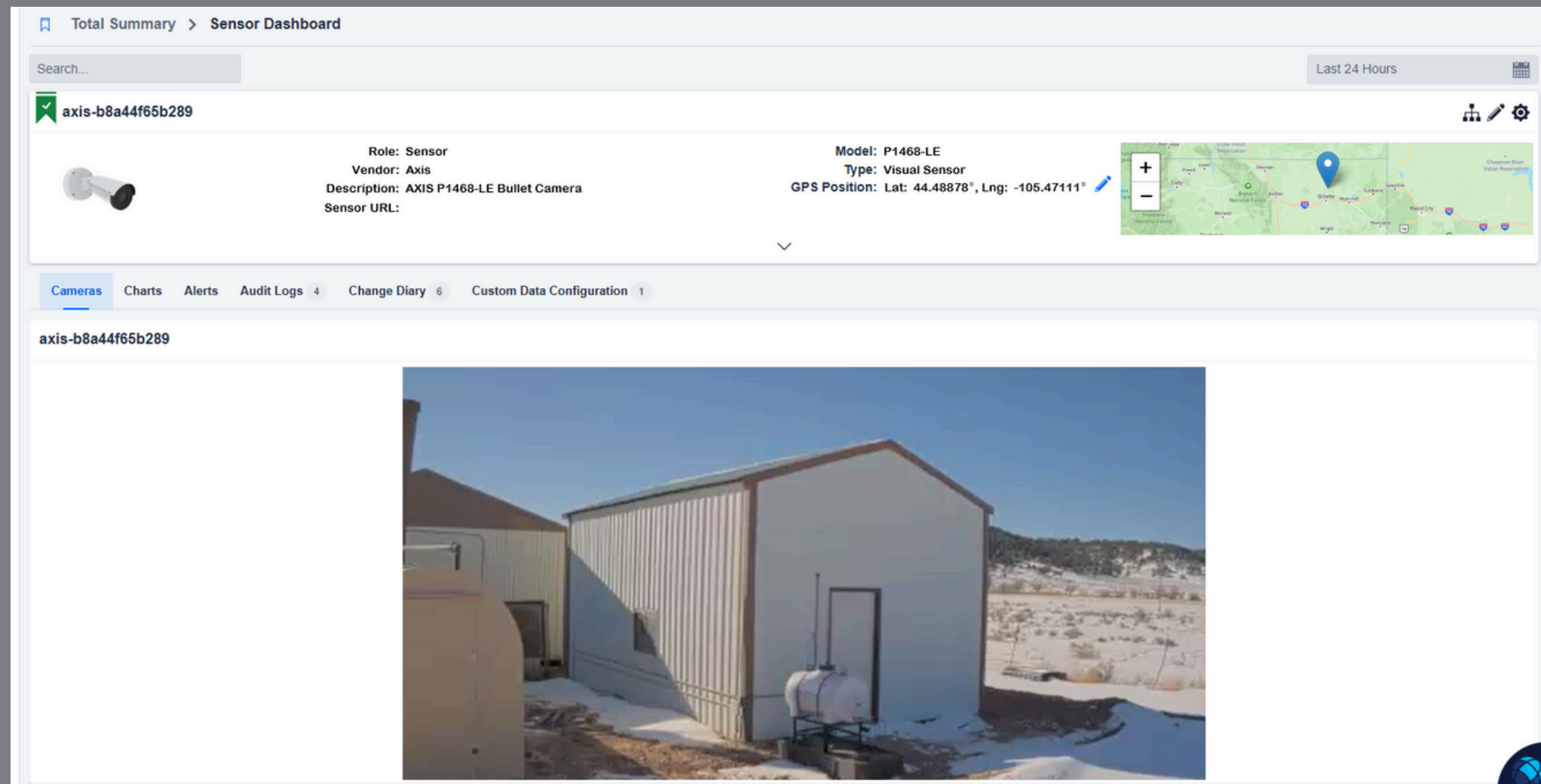


# VISUAL SENSORS

Visual sensors can operate as a standalone sensor or be used with other E2E sensors to provide context for data. Visual sensor alerts can leverage the processes within the IMS for a single systems and one dashboard.

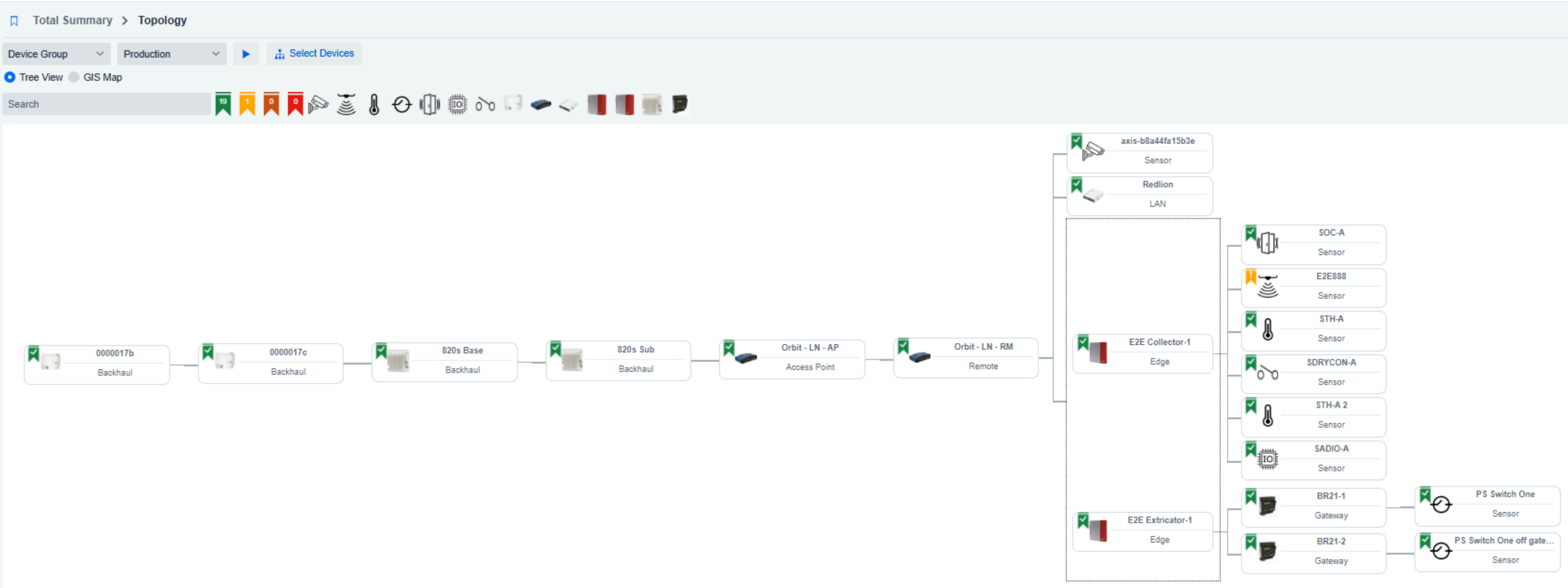
## Use cases

- Thermal/IR Imaging
- Site Security
- PPE compliance
- Remote visual inspection
- Process Validation
- Substation monitoring
- Leak Detection
- Flare Detection
- Fire/Smoke Detection





# VISUAL SENSOR INTEGRATION IN THE IMS



# OPERATIONAL VISIBILITY: DEVICE DETAIL VIEW





# DIGITAL TWIN CAPABILITIES

When combining the E2E network and edge solutions, you get an automated capability to display your operational assets in a real-time Digital Twin dashboard with integrated topology. The power of the integration and automation from end-to-end makes it the most powerful solution in the market.





# CONTACT US



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