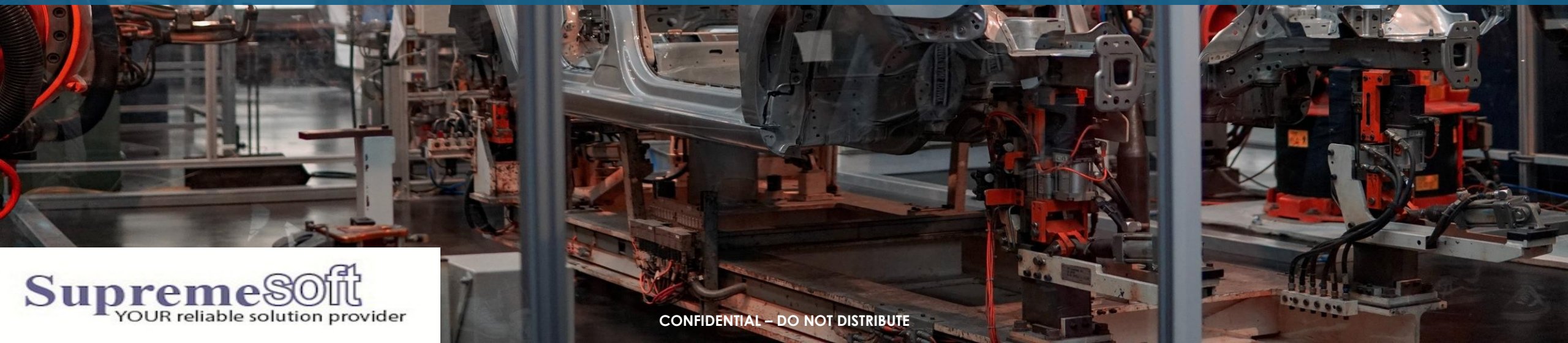**SupremeSoft**
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BUILDING THE DATA-DRIVEN

MANUFACTURING ECOSYSTEM
Industrial IoT Manufacturing Execution Platform (IIMEP)

The future of Industry 4.0 is now

Despite the potential of Industry 4.0,

91%
of midsize and larger manufacturers face major hurdles to digital transformation

- 2019 Survey by Dell Technologies

ADOPTION BARRIERS

Manufacturers continue to face formidable challenges in digitizing their production operations.

Costs Too High

Most all digital systems in the market are cost prohibitive, much too expensive and are massive packages that we don't need or can't afford.

Difficult to Use

Toolsets in the market are not user friendly, difficult for our team to learn how to use and to maintain in the long run.

Lack of Skillsets

Our workers are not trained to use the tool properly and the toolset is not easy to learn how to use and requires too much enforcement.

What end Customer Problems are we Solving ?

How can I

meet rising requirement on product quality?

How can I

better PREDICT AND Reduce Downtime?

How can I

optimize factory operation for higher throughput?

How can I

leverage latest technology for better business outcomes?
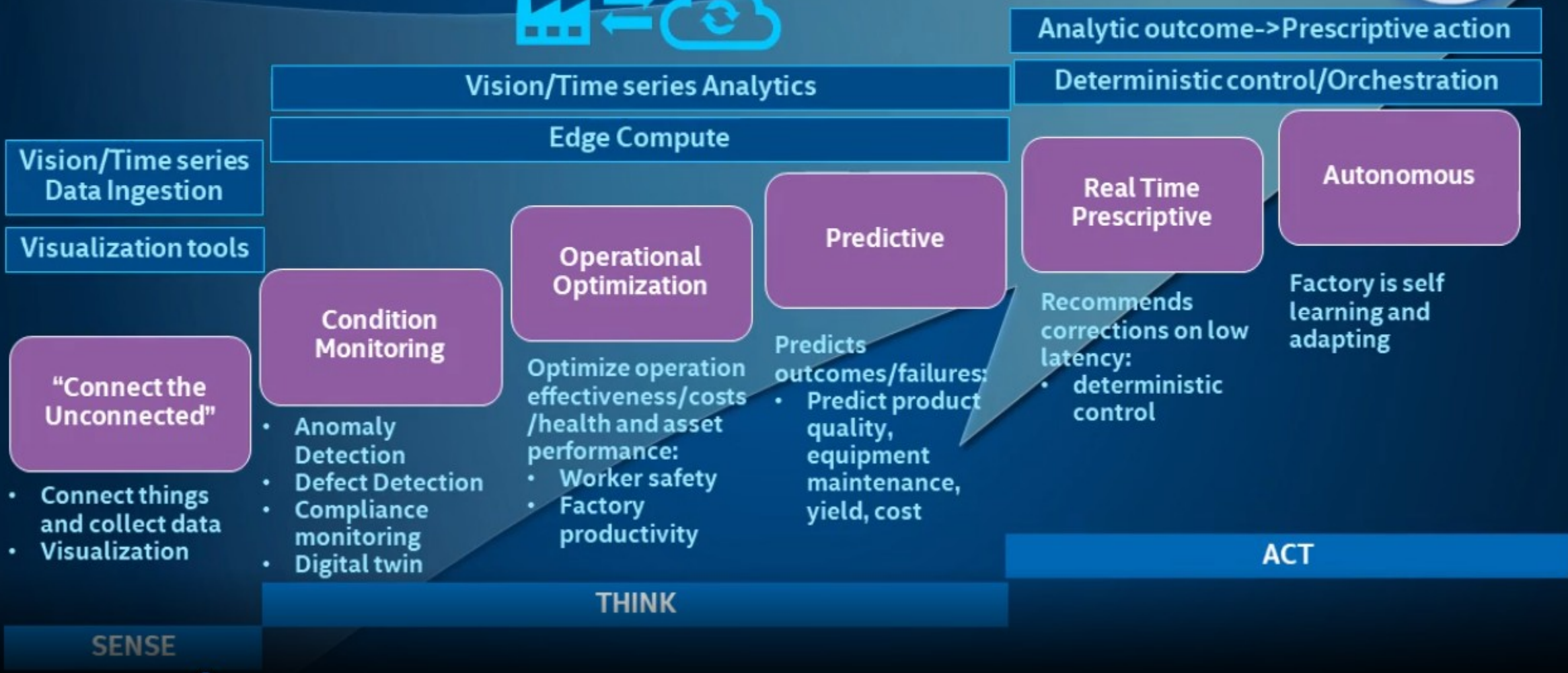
How can I STAND OUT IN COMPETITION in my industry?

Data analytics driven by AI are transforming Industrial segment

Insights are generated from basic/operational analytics to more advanced analytics.

Industrial players at different Edge AI Maturity level has different needs
–Industrial 4.0 Edge AI Maturity Model for consolidated analytics

4.0 INDUSTRY

Analytic outcome->Prescriptive action

Vision/Time series Analytics

Deterministic control/Orchestration

Edge Compute

Vision/Time series Data Ingestion

Visualization tools

Real Time Prescriptive

Autonomous

Predictive

Operational Optimization

Condition Monitoring

"Connect the Unconnected"

Factory is self learning and adapting

Recommends corrections on low latency:
- deterministic control

Predicts outcomes/failures:
- Predict product quality, equipment maintenance, yield, cost

Optimize operation effectiveness/costs /health and asset performance:
- Worker safety
- Factory productivity

- Anomaly Detection
- Defect Detection
- Compliance monitoring
- Digital twin

- Connect things and collect data
- Visualization

ACT

THINK

SENSE

Industrial IoT Manufacturing Execution Platform (IIMEP)

Ideal for diverse edge computing applications that bridging OT to IT seamlessly

Machine Builder
Equipment Facility
Factory Automation
Building Automation
Public Utility
Oil & Gas

Machine Control
Protocol Conversion
Visualization
Predictive Maintenance
Data Analytics

CODESYS WISE-PaaS/EdgeLink WebAccess/HMI WISE-PaaS/SCADA WISE-PaaS/DeviceOn EDGECROSS CONSORTIUM Microsoft Azure

Real-time Embedded Controller
WISE-700/ UNO-100

Edge AI Expandable PC
UNO-3000

IoT Automation Gateway
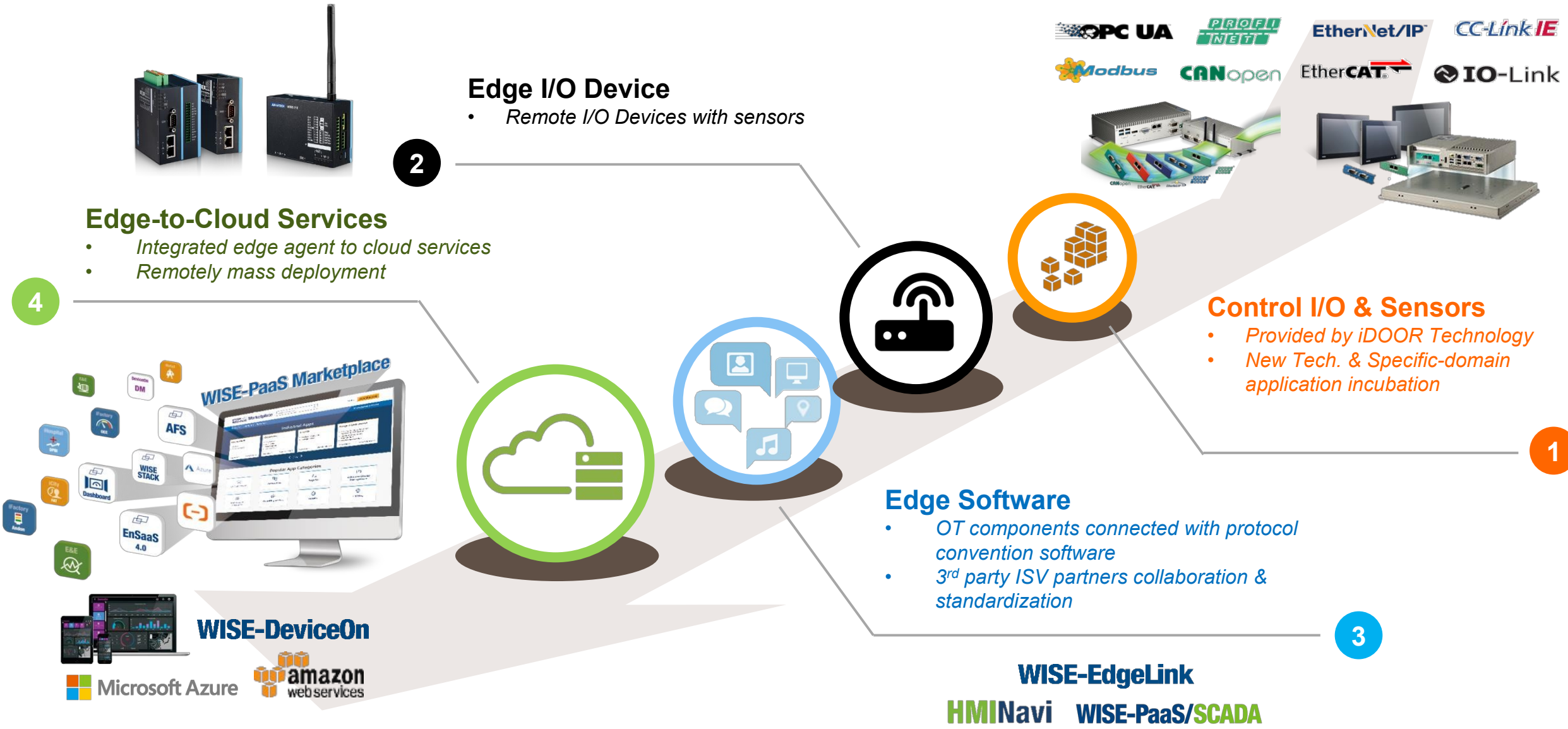UNO-2000

IoT Edge Gateway
WISE-700/ UNO-200

Domain Application Edge
UNO-400

ATEX PoE Class I,Div.2

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Solution Architecture

- EI Driver/FW/OS Update
- Predictive maintenance
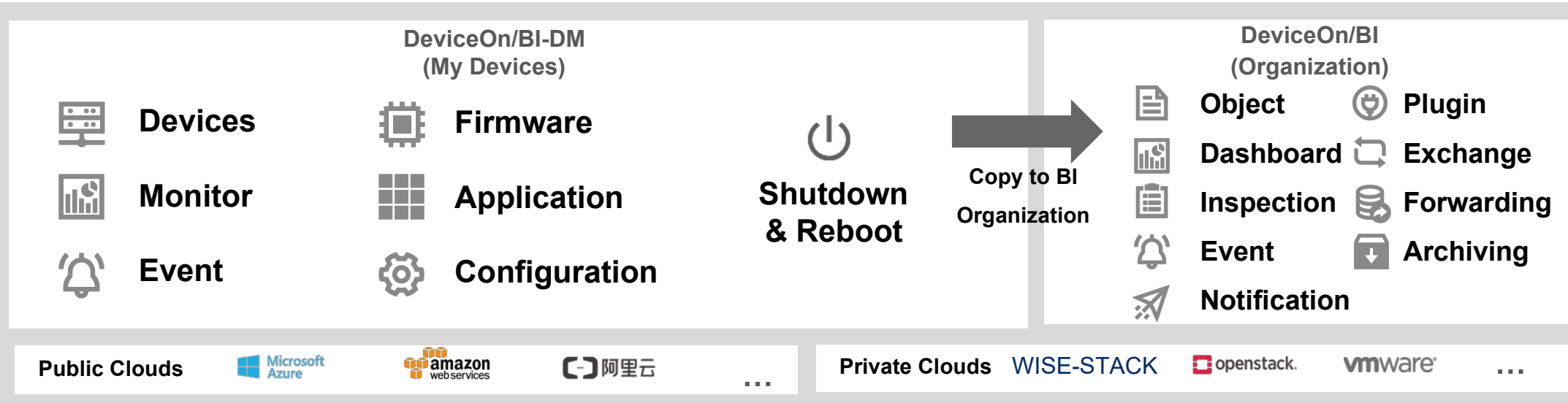- Traceability and recovery

- I.App Deploy
- Domain Dev.

- Eco-environment Bridge
- Microservice Management

- Private Hub
- Customized Portal
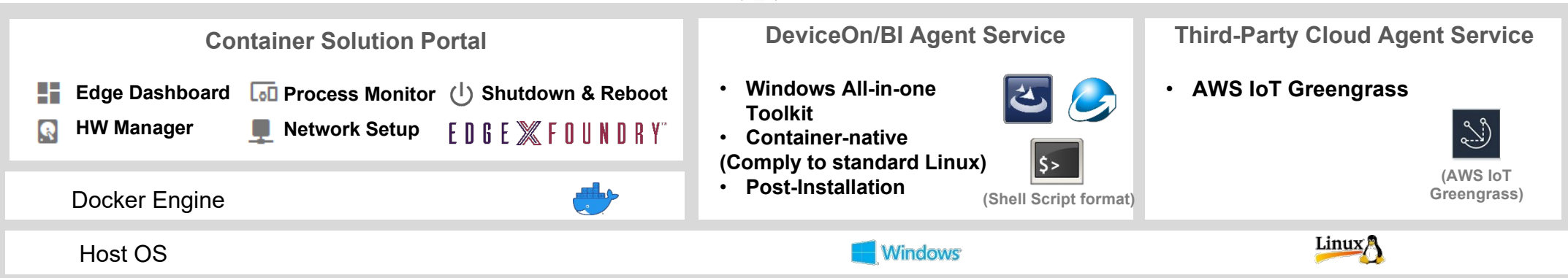- Marketplace Dev.

Cloud Intelligence (DevIceOn/BI)

DeviceOn/BI-DM (My Devices)

- Devices
- Monitor
- Event
- Firmware
- Application
- Configuration

Shutdown & Reboot

Copy to BI Organization

DeviceOn/BI (Organization)

- Object
- Dashboard
- Inspection
- Event
- Notification
- Plugin
- Exchange
- Forwarding
- Archiving

Public Clouds — Microsoft Azure, amazon web services, 阿里云 ...

Private Clouds — WISE-STACK, openstack, vmware ...

MQTT.ORG

Edge Intelligence (EIS)

Container Solution Portal

- Edge Dashboard
- HW Manager
- Process Monitor
- Network Setup
- Shutdown & Reboot

EDGE X FOUNDRY

Docker Engine

DeviceOn/BI Agent Service

- **Windows All-in-one Toolkit**
- **Container-native (Comply to standard Linux)**
- **Post-Installation**

(Shell Script format)

Third-Party Cloud Agent Service

- **AWS IoT Greengrass**

(AWS IoT Greengrass)

Host OS — Windows — Linux

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From Edge Visualization to Digital Twin
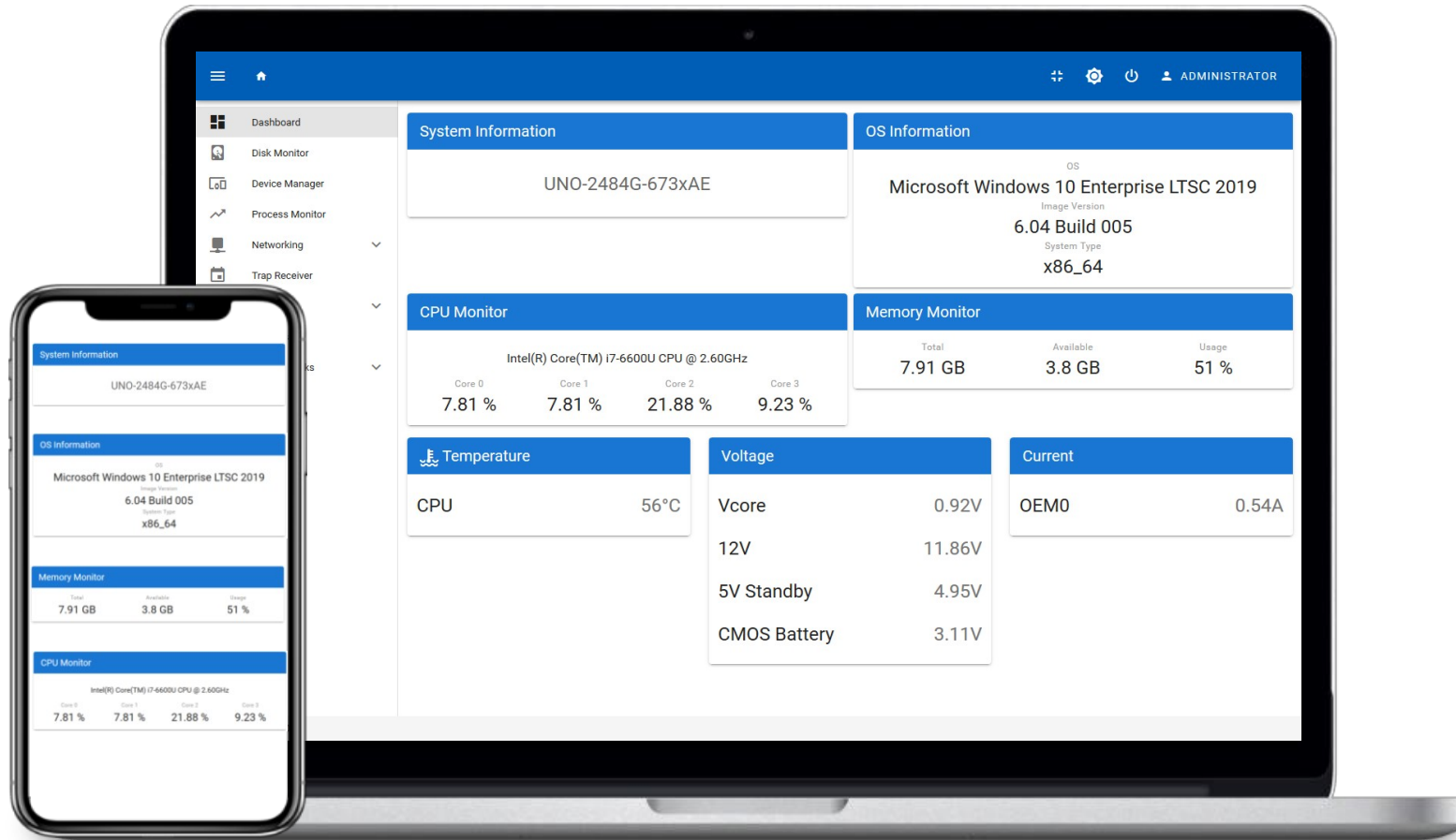
Hardware Monitoring
- Status Monitoring and Diagnostics
- Event Alarm and notification

Software Management
- Running Process Monitoring And Shutdown
- Installed Software Update And Remove

Communication Configuration
- Networking Connection Configuration
- Cloud Protocol Configuration

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DeviceOn/BI Device Management Portal

Simple and smart device management

Device list view for all functions with intuitive user interface allowing customers to manage device operations in clicks over a browser anywhere.

With the aid of advanced features and business integration functions, DeviceON/BI can help to accelerate your domain application command center setup within minutes.

Device connection setup and configuration

Real time trends and monitoring

Device event history

Firmware OTA management and updates

Platform software installation management

Remote configuration setup management

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Cross Platform Achieves Business Integration

Standardize Platform Physical Parameter

We transfer physical parameters like CPU performance, temperature, and input voltage in hardware as a digital tag point in DeviceOn/BI, which allows the user to compare the same physical parameters across different platforms.
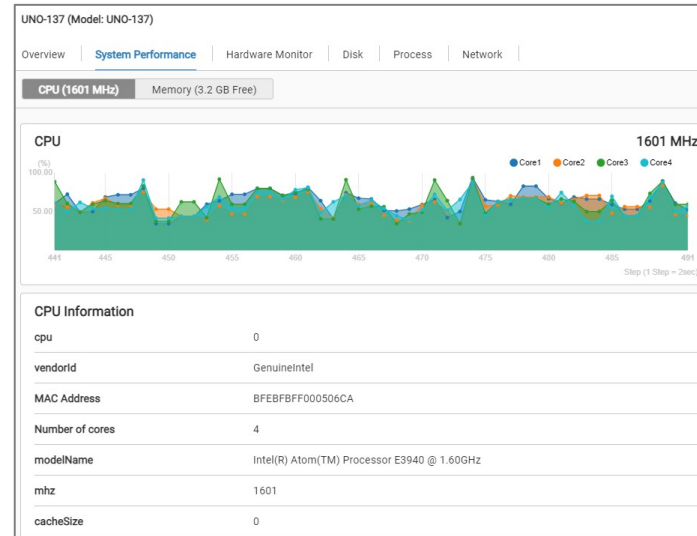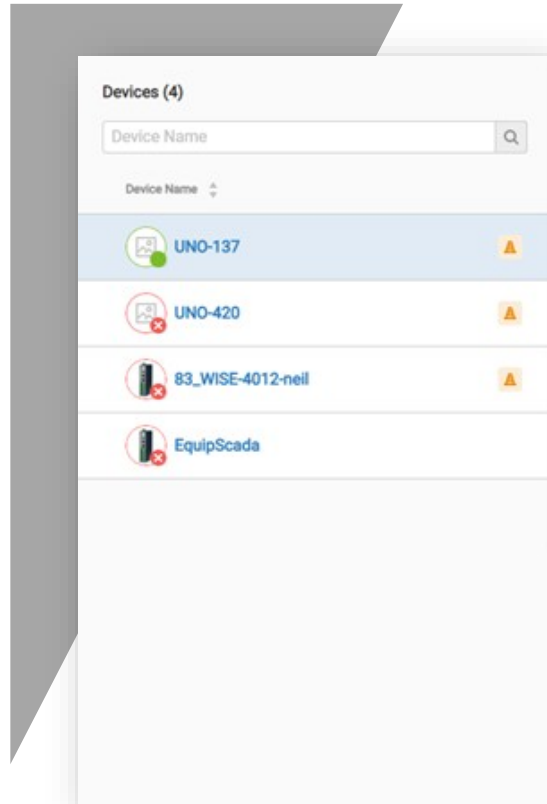
DeviceOn/BI DM

DeviceOn/BI

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Twin Object-Oriented Factory Visualization

System Performance   Hardware Monitoring   Process Management

Platform Portal

DeviceOn/BI

System Performance   Hardware Monitoring   Process Management

UNO-238 & TPC-315
IT gateway Edge-as-a-Service
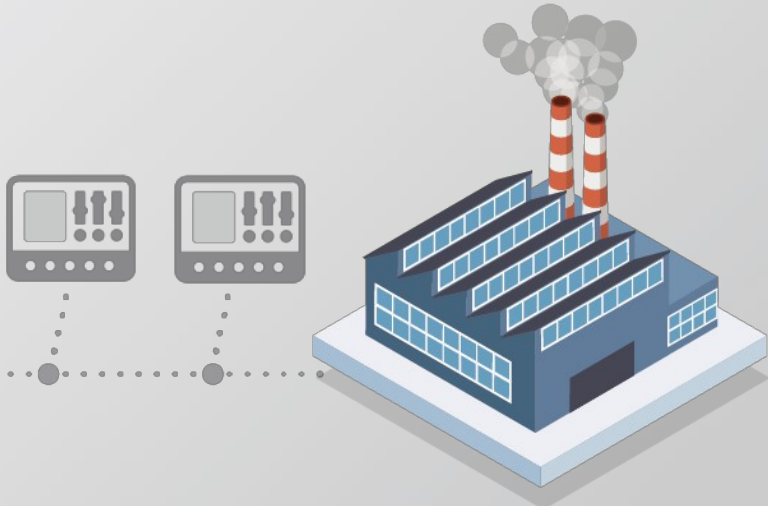
Best choice for…

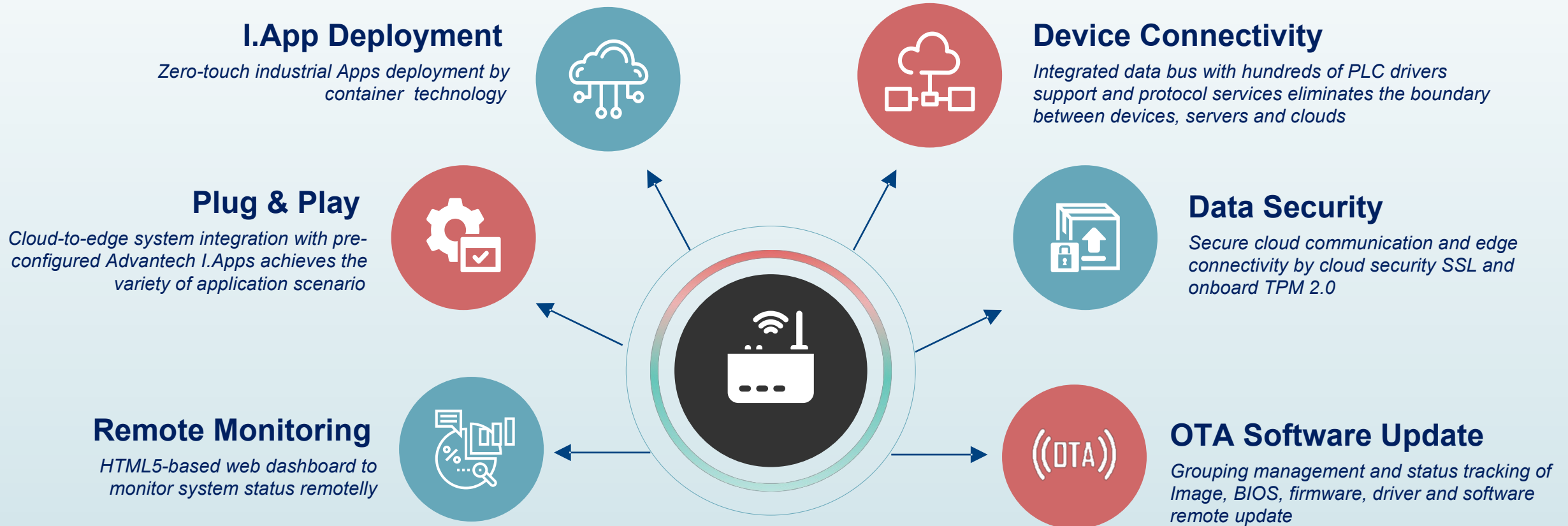| Factory Digital Twinning			Alarm and Notifications		
Generator	HVAC	Pump	Monitoring	Alarm	Management

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The IIMEP Intelligence Functionality

I.App Deployment
Zero-touch industrial Apps deployment by container technology

Device Connectivity
Integrated data bus with hundreds of PLC drivers support and protocol services eliminates the boundary between devices, servers and clouds

Plug & Play
Cloud-to-edge system integration with pre-configured Advantech I.Apps achieves the variety of application scenario

Data Security
Secure cloud communication and edge connectivity by cloud security SSL and onboard TPM 2.0

Remote Monitoring
HTML5-based web dashboard to monitor system status remotely

OTA Software Update
Grouping management and status tracking of Image, BIOS, firmware, driver and software remote update

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Optimize Manufacturing with The IIMEP
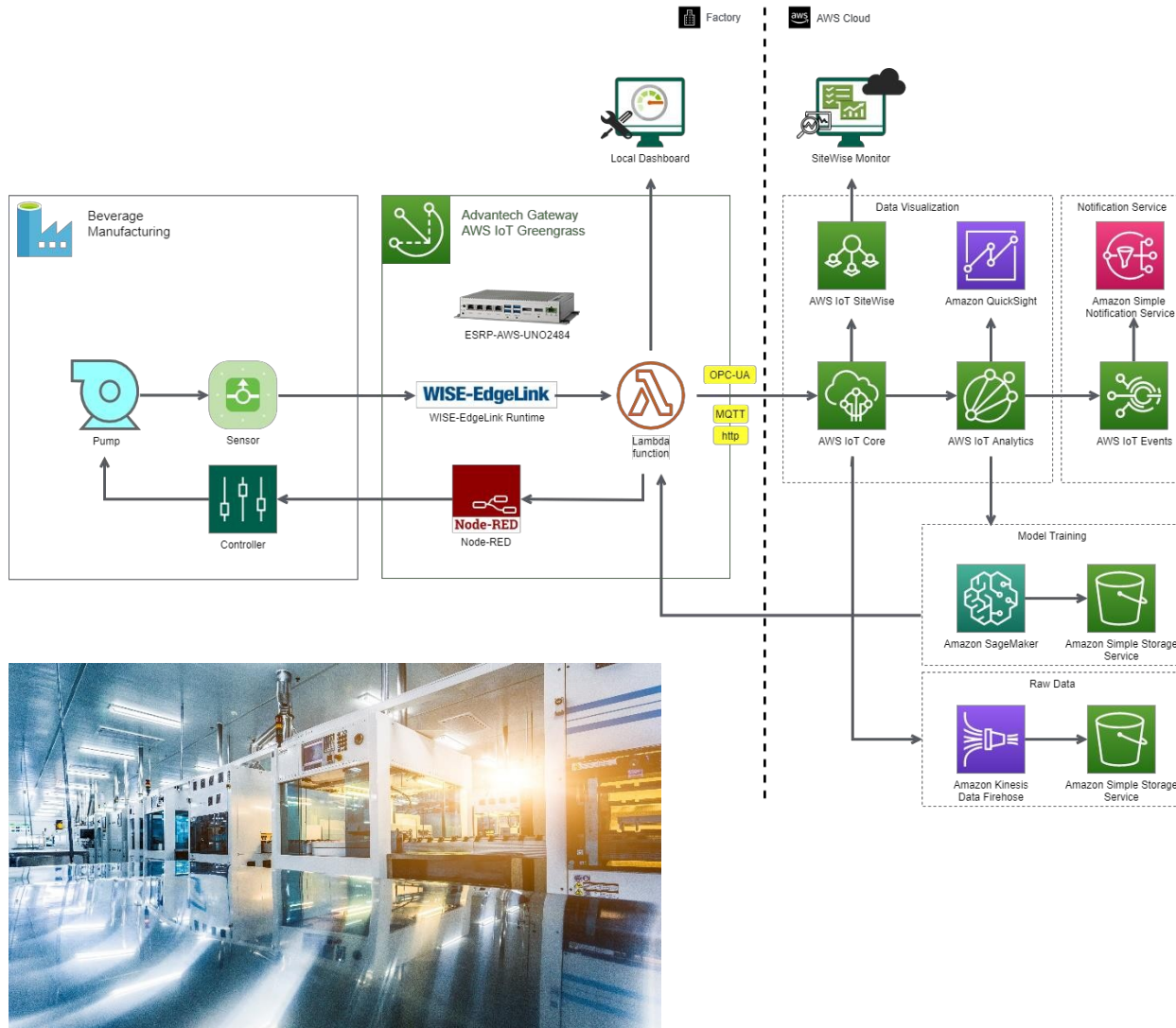
- ## Problem

  Food & beverage manufacturing process involves a complex series of sequential steps that can exacerbate quality problems. The ability to respond in real time to any issues that arise is required in order to prevent interruptions and ensure reliable operations.

- ## Solution

  The IIMEP of the AWS series products were deployed to improve operations. WISE-Edgelink was used to collect data from numerous sensors. The data was then analyzed using an AWS IoT SageMaker AI model to determine suitable responses to real-time production line problems

- ## Impact

  Massive amounts and types of sensor data were collected by WISE-Edgelink and used for AI model training. AWS IoT SageMaker and SiteWise were used for equipment monitoring to achieve failure prediction and real-time management of all production processes.

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KEY BENEFITS

END-TO-END VISIBILITY
of all manual production processes in real-time

1 DAY INSTALLATION
forge into Industry 4.0 at a speed with which the manufacturing landscape has never seen

FULL DIGITISATION
to eliminate inefficient paper-based workflows

COST REDUCTION
through the discovery and elimination of wasteful processes

REAL-TIME TRACEABILITY
to oversee facility operations in real-time globally

DATA SECURITY
through full ownership over onsite data or cloud instances

POWERED BY MES Standard   IIMEP

Basic Toolset
IIMEP

IIMEP provides a powerful backbone to digitize your production end-to-end

Workflow Builder

Enables facility wide creation and management of workflows allowing for real-time monitoring of personnel, resources and equipment

Equipment Monitoring

Basic toolset for real-time equipment monitoring; Fully synced to workstation control and dashboard viewing for dashboard generation

Production Scheduler

Basic toolset for real-time scheduling, creation of work templates, generation of runs; Fully synced to personnel workstations

Personnel Management

Basic solution to track personnel in real-time; Fully synced to workstation control and dashboard viewing for dashboard generation

Workstation Control

Real-time workflow monitoring through any browser-based devices with full step timing, QC, resources, drawings and personnel tracking

Dashboard Viewing

Charting toolsets for basic and advanced visual dashboard viewing with fixed preset templates

Inventory Management

Tracks utilization of all raw materials throughout the entire production process from incoming inventory to WIP to finished goods

DIY or Supremesoft Support

Supremesoft's solutions installations are fully DIY or you could contact Supremesoft for installation and training support. Support packages can be purchased as required

We digitally run factories

&

connect them across the
entire supply chain

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Join us at the Forefront of Industry 4.0
Industrial IoT Manufacturing Execution Platform (IIMEP)

SupremeSoft
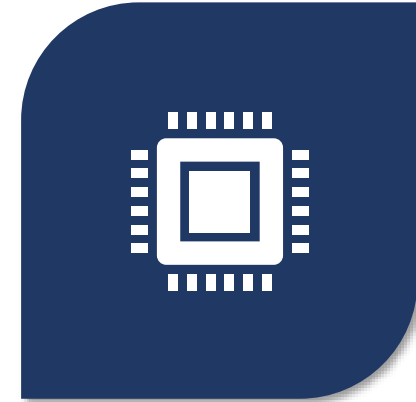YOUR reliable solution provider

Visit our Office Center

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63000 Cyberjaya, Selangor, Malaysia

Schedule for technical consulatation

We'll setup a POV (Prove of Value) for your current projects

Contact Us

info@supremesoft.com.my

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