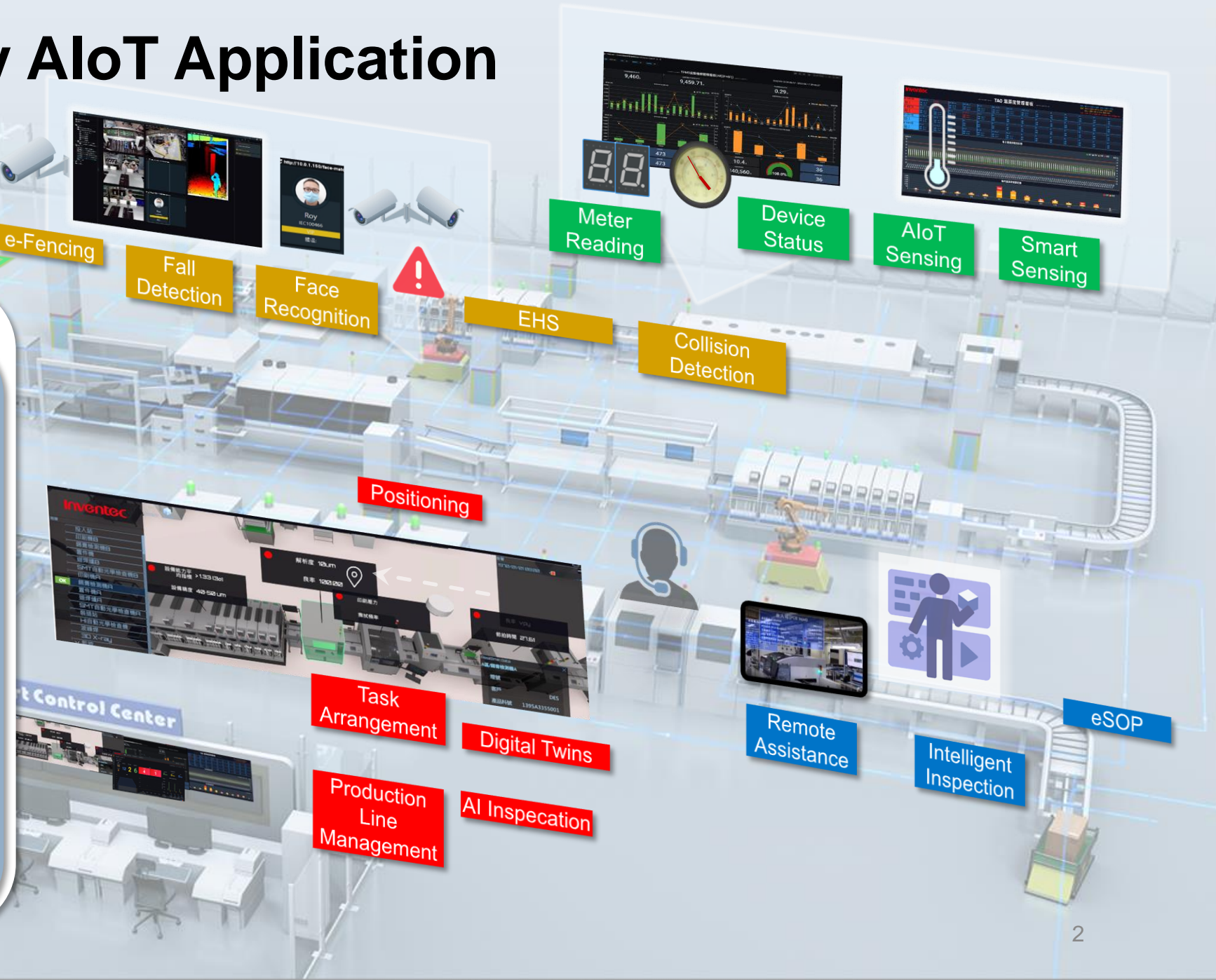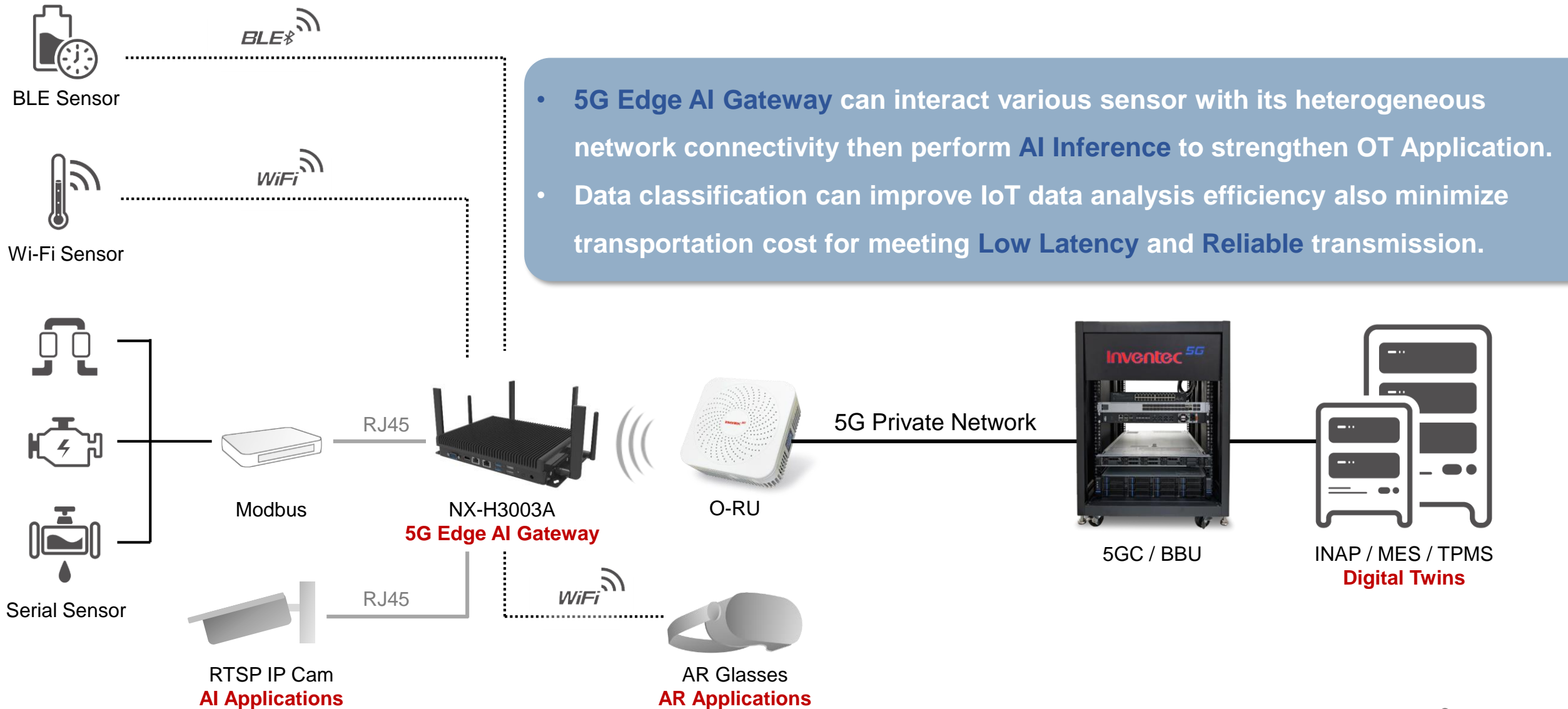**The Collaboration of 5G and Wi-Fi**

5G Private Network Solutions Division

5G Smart Factory AIoT Application

Plenty of Machinery Sensors run in different media which consists of 5G; Wi-Fi; Bluetooth and Ethernet Cable…

e-Fencing

Fall Detection

Face Recognition

EHS

Collision Detection

Meter Reading

Device Status

AIoT Sensing

Smart Sensing

Positioning

Task Arrangement

Digital Twins

Production Line Management

AI Inspecation

Remote Assistance

Intelligent Inspection

eSOP

Heterogeneous Network Connectivity

BLE Sensor

Wi-Fi Sensor

Serial Sensor

- **5G Edge AI Gateway** can interact various sensor with its heterogeneous network connectivity then perform **AI Inference** to strengthen OT Application.
- Data classification can improve IoT data analysis efficiency also minimize transportation cost for meeting **Low Latency** and **Reliable** transmission.

Modbus

RJ45

NX-H3003A
5G Edge AI Gateway

O-RU

5G Private Network

5GC / BBU

INAP / MES / TPMS
Digital Twins

RTSP IP Cam
AI Applications

RJ45

WiFi

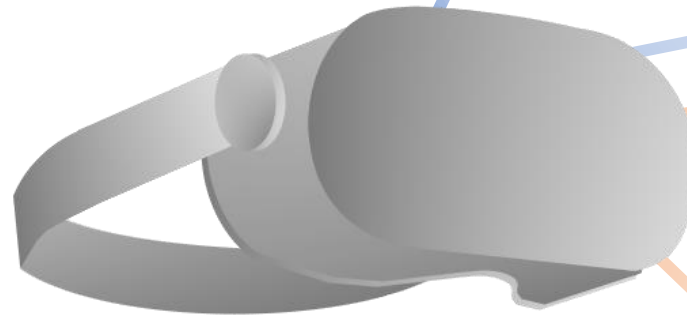AR Glasses
AR Applications

3

AR Application

- **Solve Remote Assistance Difficulty.**
- **Minimize Learning Curve for New Comer.**
- **Keep Lessons Learned Continuously.**
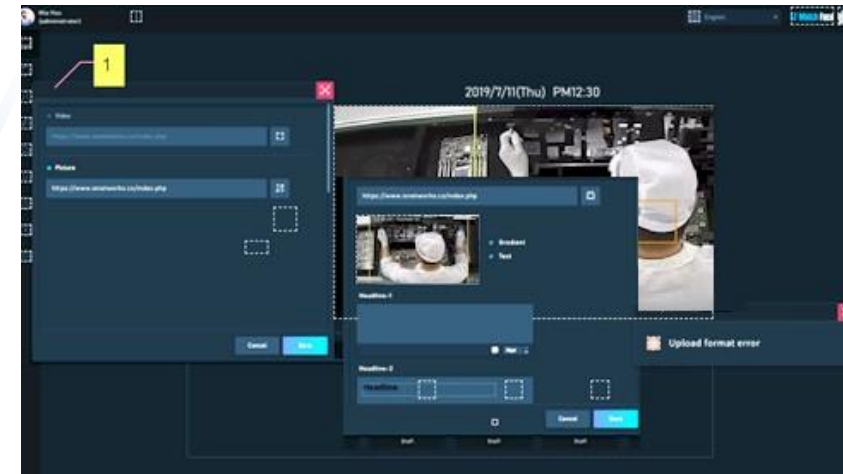- **Eases Machinery Operation Complexity.**

eSOP / Remote Assistance

5G Edge AI Gateway
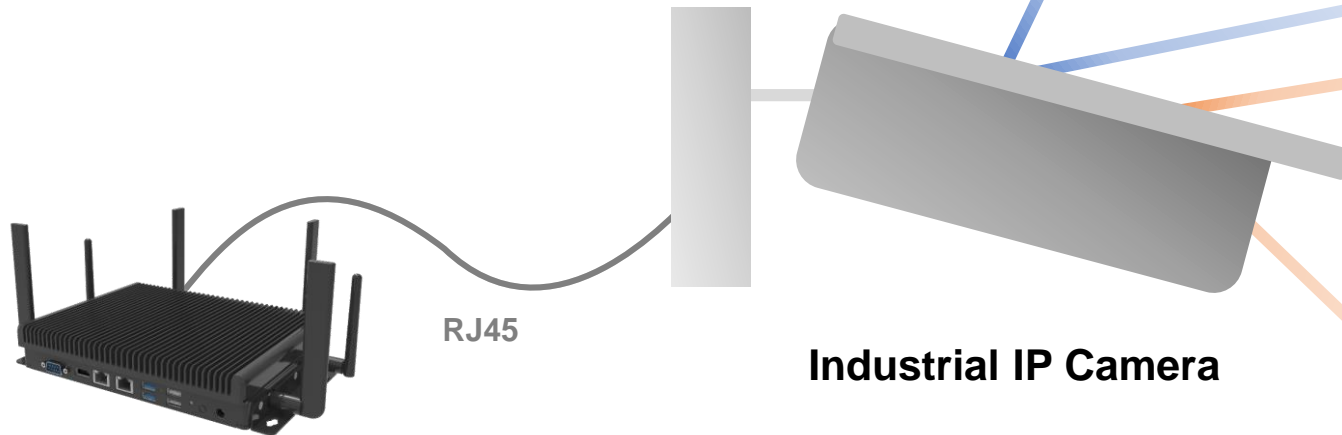
Wi-Fi

AR Glasses

Intelligent Inspection

4

AI Application

- **Solve Human Error Problem.**
- **Solve Environmental Problem.**
- **Address Manpower Shortage.**
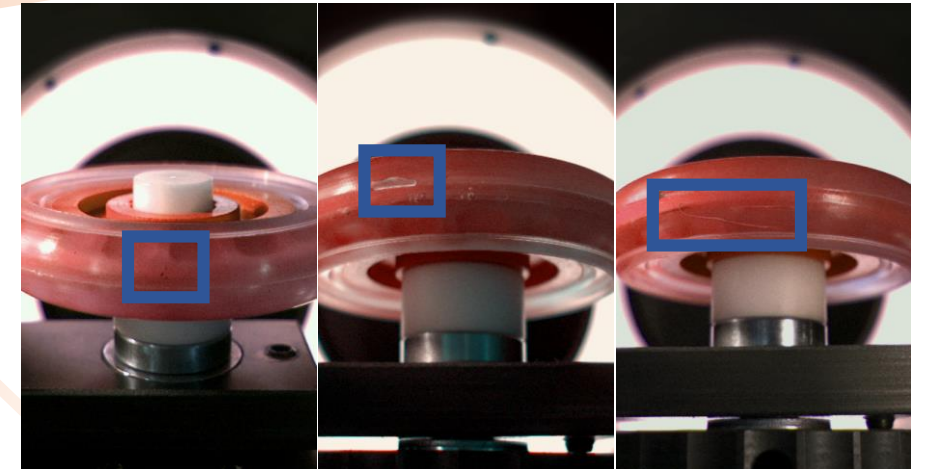- **Solve Blind Spot Monitoring Problem.**

Gesture and Cycle Time Monitoring

5G Edge AI Gateway

RJ45
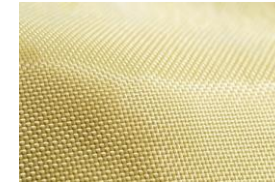
Industrial IP Camera

Defect Detection

5

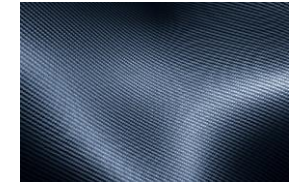# AI Computer Vision in Textile Industry

- **Movable** to fit textile machinery.
- **Adjustable design (camera;**
  coverage… etc.)
- **Change camera arm in different height.**
- **Stop the conveyor when defect is**
  inspected.
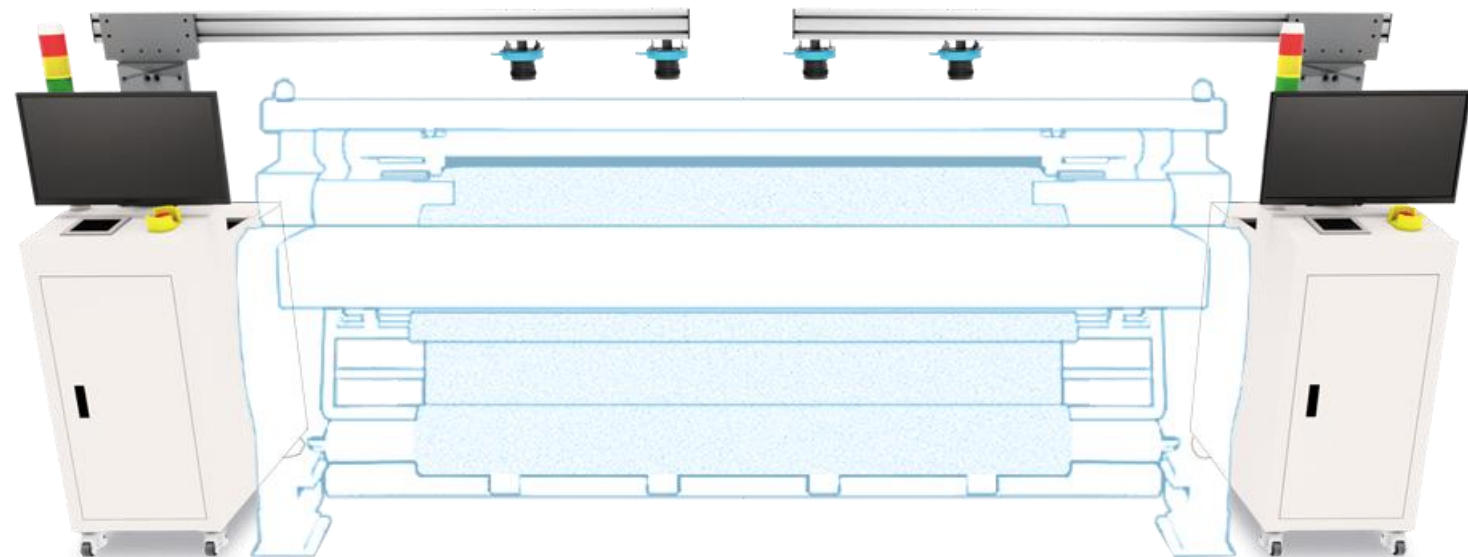- **Send the defect checking event log**
  immediately.

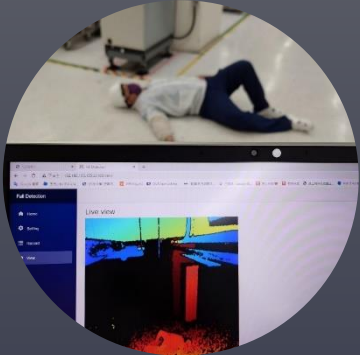
Electronic Glass Fabrics

Kevlar Fabrics
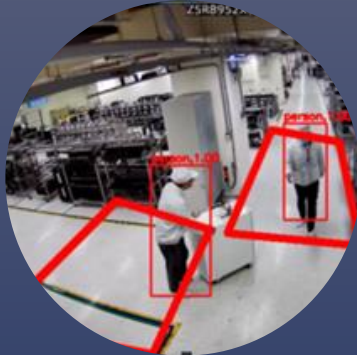

Carbon Fiber Fabrics

AIoT+ Efficiency

Electronic Fencing

- Improve EHS
- Eliminate Incident

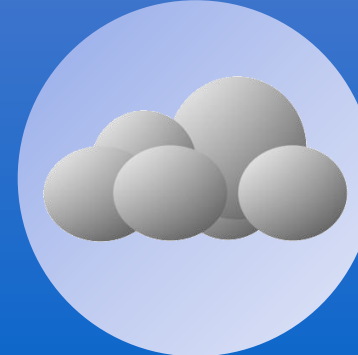**Regional Control**

- Reduce Collision
- Minimize Accident

PPE Detection

- Improve Safety
- Avoid Disaster

Heterogeneous Networking

- OEE Management
- Boost Productivity

CMS System

- Failure Forecasting
- FPY Improvement

Inventec 5G

Inventec Confidential