Smart manufacturing

Comprehensive factory digitalization solution that connects and synchronizes data throughout the production area to the centralized management system, helping enterprises control operating procedures, optimize performance, and ensure safety and security

10+ Years of experience

Clients from
Vietnam, Singapore, Japan, Thailand, Netherlands, South Korea, United States

Safety & Security
- Fire Alarm Monitoring
- Restricted Area Intrusion Detection

Facility Monitoring
- Central Monitoring
- Video Management

Environmental Monitoring
- Water Treatment Management
- Air & Environmental Monitoring

Energy Management
- Energy Management Tools
- Remote Energy Metering



Operations Management
- Predictive Maintenance
- Smart Computerized Maintenance Management System (SCMMS)

Quality Control
- Defect Detection
- Product Counting & Classification

Warehouse
- Warehouse Management
- Forklift Speed & Collision Detection

Flexible integration

Connect easily with existing machinery, camera, and sensor systems to digitize factories quickly without replacement costs

Centralized management

Centralize and visually display all operational data in real time, creating a reliable database for production dispatching and performance review

Scalable deployment

Deploy flexibly according to each scale and practical need, minimizing investment risks and staying ready for next-phase expansion

Intelligent operations

Apply AI to identify anomalies early, optimize production performance, and reduce maintenance costs

www.tmasolutions.com
+84 28 3995 1060
sales@tmasolutions.com

Areas of expertise

Provide customized digital solutions for manufacturing.

- Workflow automation
- Machine optimization
- Production analytics
- Security & safety
- Defect detection
- Predictive maintenance
- Manufacturing analytics & dashboards
- ESG & energy monitoring

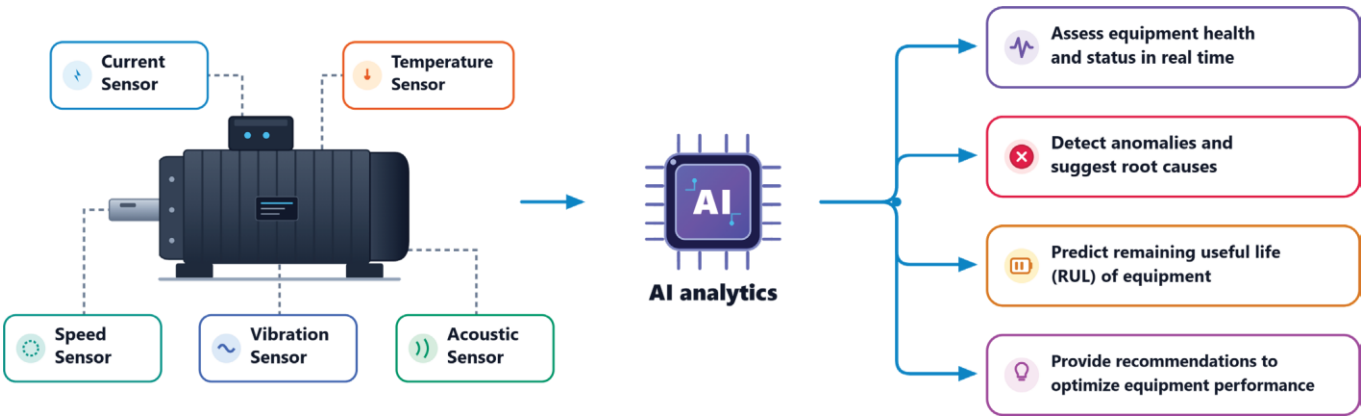
Technologies

Programming	Communication	OS
Edge computing, C/C++, Python, Java	2G/3G/4G/NBIoT/5G, Bluetooth/BLE, Wifi, LoRa/LoRaWAN, Modbus, CAN, LIDAR, SLAM, MQTT, CoAP, LWM2M, AMQP	Android, RTOS, Yocto, Windows IoT Core, Linux, Raspberry Pi OS

IoT Platform	Devices	Hardware
AWS IoT, Google Cloud IoT, Azure IoT Hub, Sierra Wireless Legato/Octave, Thingsboard	Mobile, Sensor, GPS, Light Therapy device, Beacon, Electronic plug, ARM, Ar7240, RT- Linux, Android	Adruino, ESP, NVIDIA, Jetson, Google Coral, Raspberry Pi, Xilinx, Sierra Wireless FX30, STM/ ARM/ AVR/ TI

Operations management

Collect continuous sensor data to evaluate asset health, detect abnormalities early, and optimize operations



Monitor equipment status and compare efficiency across production areas

Predict early risk of failure, notify spare parts replacement, and automatically create maintenance requests.

Analyze root causes of incidents, propose troubleshooting solutions, and optimize performance

Facility monitoring

Monitor the operating status of machinery and factory utility systems on a single platform



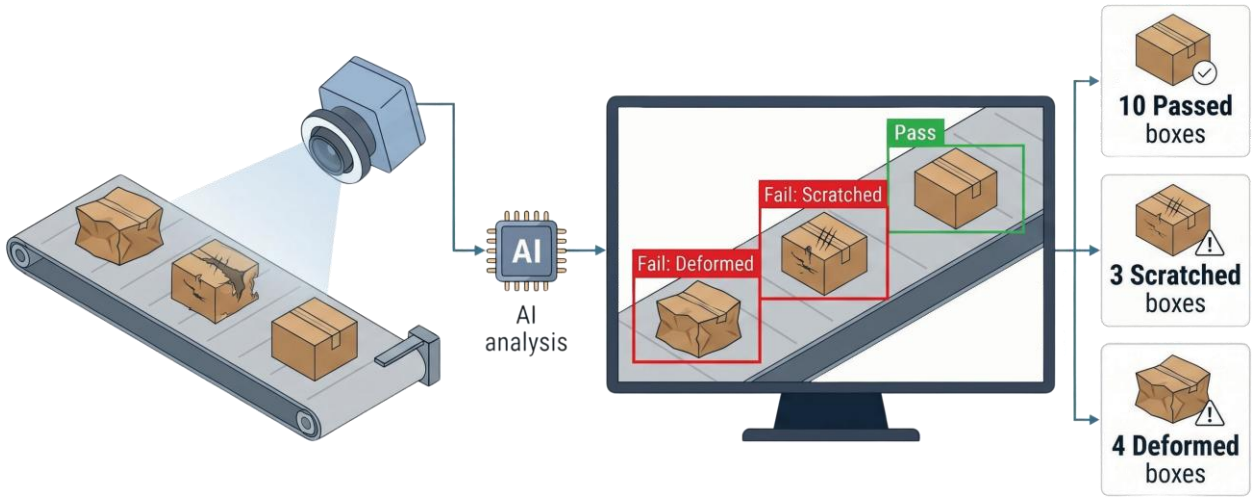
Monitor the connectivity status of machinery and the consumption level of factory utility systems

Simulate equipment with 3D models, integrate AI cameras to monitor, and automatically save incident videos for cross-checking

AI assistant helps search technical documents, sends automated alerts, and suggests timely troubleshooting actions

Quality control

Automate quality control processes using AI, detect defective products instantly, and optimize pass rates



Automatically detect and classify defective products to eliminate errors and reduce costs from manual inspection

Track pass rates, analyze defect trends, and support fast product traceability

Alert when the defect rate exceeds the allowed limit, prevent mass defects, and ensure output quality

Warehouse management

Manage all warehouse activities centrally, optimizing storage space and goods import/export processes



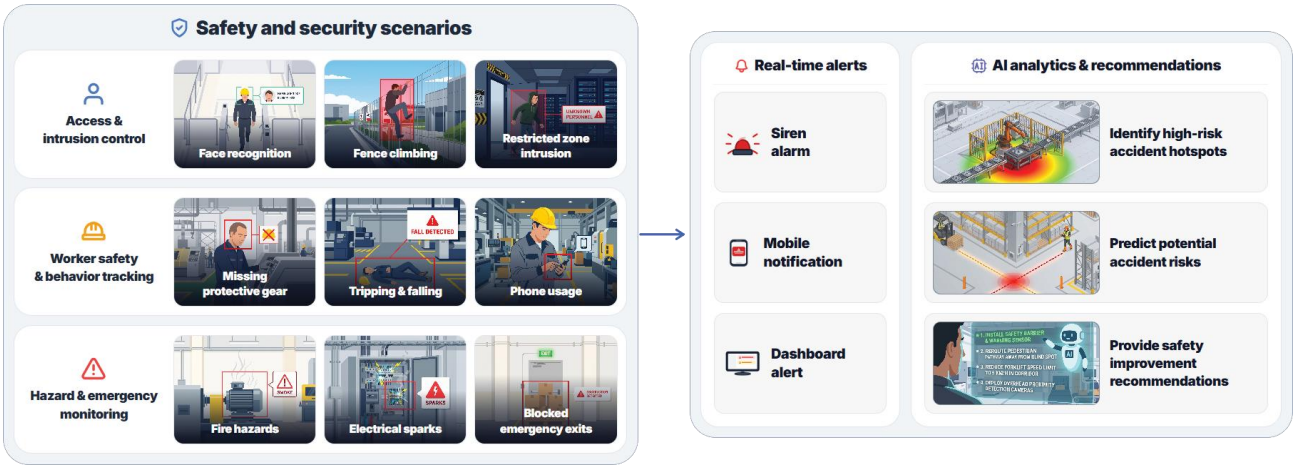
Locate every item on a real-time visual layout map to eliminate the risk of missing cargo

Provide advance warnings for item expiry dates and alert when inventory drops to minimum levels

AI assistant supports searching package data instantly and suggests optimal storage locations

Safety & security

Ensure total workplace safety and perimeter security by spotting violations and emergencies early



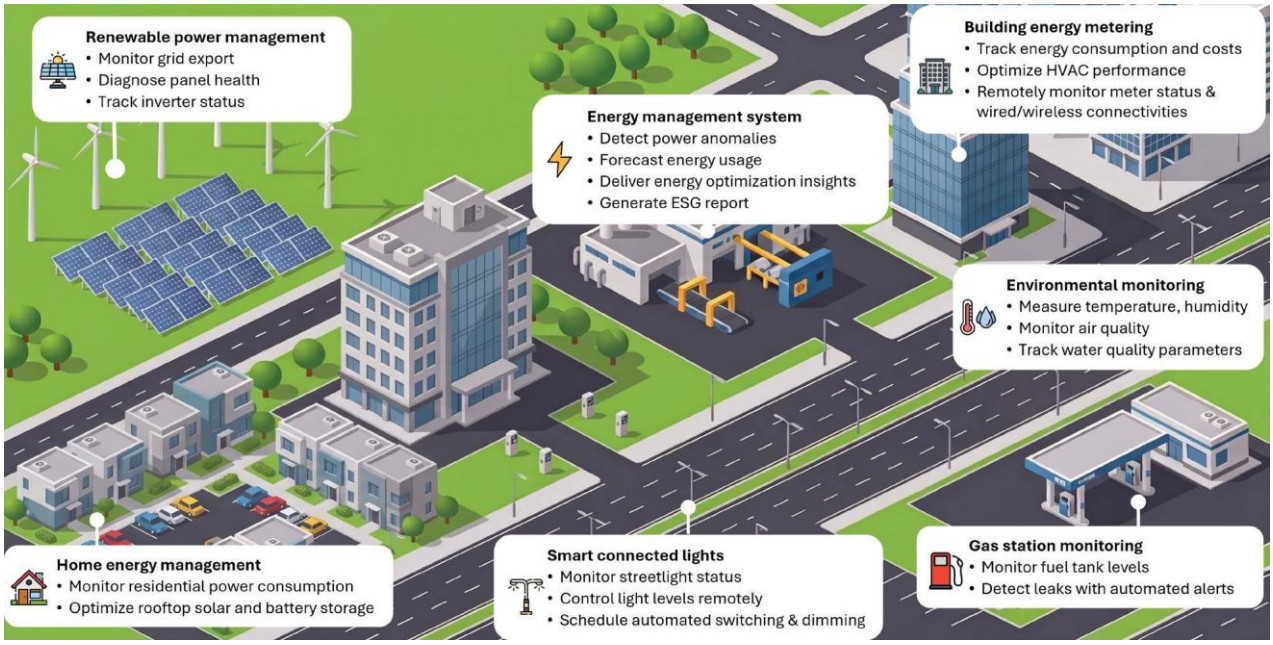
Control access via face recognition, smart cards, and QR codes, and detect break-in behavior

Monitor protective gear compliance, detect violations, and issue immediate warnings

Detect fire and explosion risks, identify emergency incidents, and trigger instant alerts

Energy & environment

Monitor energy consumption and environmental metrics to reduce operational costs and maintain a stable workplace environment



Monitor electricity and water consumption, and control and switch devices on/off remotely

Monitor indicators of temperature, humidity, air quality, and carbon emissions

Monitor fuel levels and temperatures in storage tanks, and detect and warn of leaks

www.tmasolutions.com
+84 28 3995 1060
sales@tmasolutions.com

Featured projects



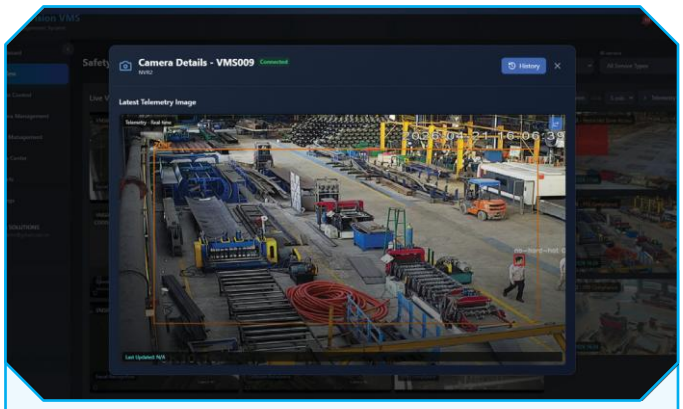
Vietnamese container solutions provider

Container storage environment monitoring



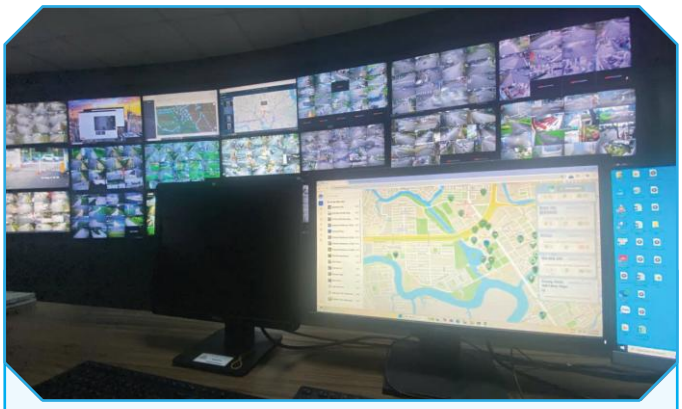
Vietnamese water treatment solutions provider

Water treatment system management



Vietnamese container solutions provider

Factory security and safety management



Vietnamese real estate & urban developer

Fire alarm monitoring



Vietnamese plastic pipe manufacturer

Sound-based defect detecting



Multinational courier & logistics operator

Product classification & quality control