



IIOT CUSTOMER CASE STUDIES

Automotive | Food & Commodities | Infrastructure



Automotive | OEM



Company focuses on manufacturing products through advanced research and technologies, ensuring quality and efficiency across its global facilities.

Challenge

- Manual traceability limited to a maximum of 3 days using Rslinx Gateway and Excel.
- IT/OT Divergence: Absence of a reliable network prevented seamless communication across production areas.
- Reliance on MicroLogix 1400 hardware posed integration challenges due to its limited capabilities and outdated technology.

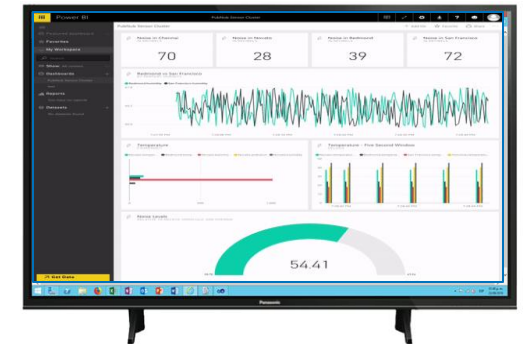
Solution

- Real time data collection and integration, increase system refresh and reporting frequency.
- Power BI integration for visual dashboards, centralized database and reporting.
- Performance measurement and quality control.

Customer Outcome

- Real-time data visibility allowed for data-driven decision-making for proactive management.
- Reduced downtime by identifying production issues (cable wear, grounding faults, etc.)
- **4% reduction in the plant's energy consumption**, customer recognized with the Group's Kaizen Energy Award.
- Consistent operator productivity.
- Higher product standards.

Products: Controllers, HMI, Sensors, Power Supply



Automotive | Parts Supplier

OMRON

Company specializes in manufacturing and selling tires for various vehicles and offers mobility-related services and products.

Challenge

- IT/OT Divergence.
- Inaccuracies and insufficiencies in manual data and reporting.
- Automated data collection is often incomplete, resulting in data gaps.

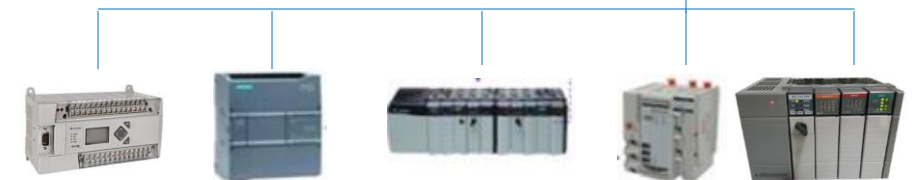
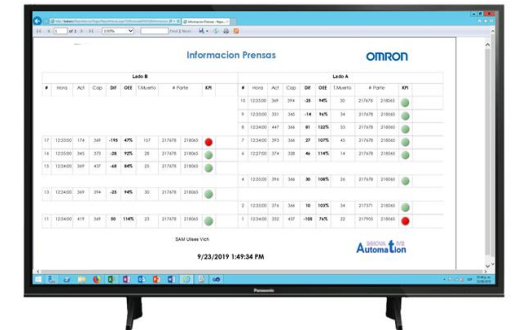
Solution

- Integrated multiple production lines into the manufacturing model.
- Collaboration revealed a unique NX102 feature: the ability to create data structures between controllers. This feature reduces network traffic and enhances efficiency with ease of access.
- Standard function blocks are part of the toolkit providing a distinctive advantage in data management and control.

Customer Outcome

- **2,404 competitor tags integrated, using only 7 lines of code per function block** in Sysmac Studio.
- Successfully implemented a comprehensive traceability system.
- Enhanced visibility and control across production lines with real-time tracking through multiple monitoring screens.
- Empowered operators and managers with actionable insights to maintain production efficiency.

Products: NX102-9020



Automotive | Parts Supplier



Company focuses on the development and manufacturing of innovative lightweight aluminum components for various applications including e-mobility, structure and chassis, and internal combustion engine powertrains.

Challenge

- IT/OT Divergence: Inflexibility in the network infrastructure.
- Integration complexity with existing line control systems.
- Critical applications are occurring, real-time responses are needed.

Solution.

- .Provided a real-time information system with secure data logging through tunnel to SAP (IT) from machine (OT).
- Integrations with Microsoft Power Apps and Power Automate improved traceability and data flow without IT database permissions.
- The NX Gateway allows manufacturing teams to manage tags directly, enhancing flexibility and understanding of variables.

Customer Outcome

- By replacing transaction manager, eliminated the need for a separate computer and licensing fees, resulting in **over 60% cost savings**.
- Improved reporting capabilities led to faster data collection and ensured only trained operators could start production, improving efficiency and safety.

Products: NX7 & NX2 Controller Cards I/O, Sensors, Power Supply.



Historical Data



Automotive | End User

Company provides products and services like construction materials and personal protective equipment.

Challenge

- Diverse equipment and legacy systems.
- Limited budget for improvements.
- Technical complexity for vision system requirements.

Solution

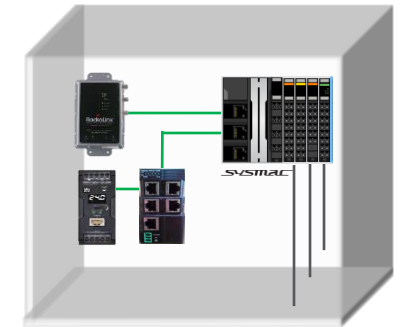
- Unified data collection and centralized, flexible data monitoring.
- Enhanced traceability with streamlined downtime and defect logging.
- IIoT Service Implementation by SAT Team.
- Pulled data from existing systems to database.

Customer Outcome

- Increased production rates and availability by simplifying information.
- Enabled manufacturing employees to have access to this data which allowed them to assess downtime bottlenecks.

Products: NX Controllers, I/O Cards, Barcode Reader, Power Supply

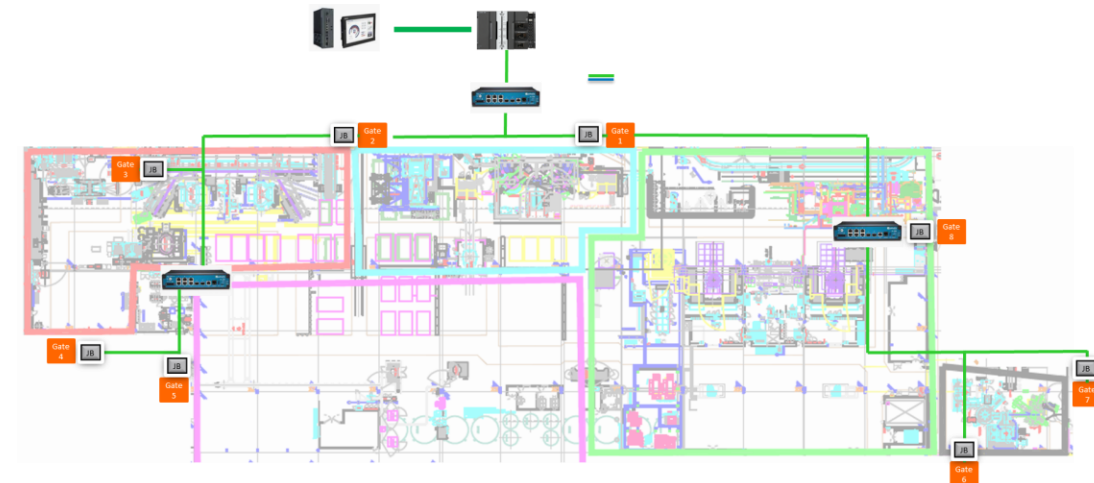
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GATE 1



Mag Lock



Food & Commodities | End User



Company focuses on delivering a diverse array of daily need products across categories like beauty, personal care, home care, and nutrition.

Challenge

- Managing and monitoring the oven's behavior efficiently.
- Reducing CO2 emissions.

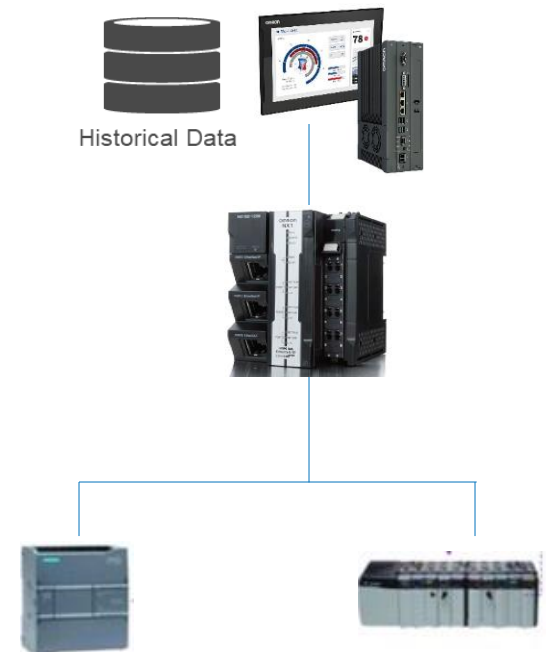
Solution.

- Instrumentation of critical variables such as gas consumption, temperatures, stays in the oven, air humidity, and air consumption.
- Connection of this data to generate historical data in Azure SQL.
- Implementation of advanced analysis of variable correlation and Machine Learning algorithms for self-adjustment of the process and its consumption through programming in the database as part of the code in Sysmac.
- Initial use of NX Edge gateway and main sensors.

Customer Outcome

- Optimization efforts specifically **reduced CO2 emissions by at least 10%** through the implemented methods.

Products: NX7 & NX2 Controller Cards I/O, Sensors, Power Supply.



Food & Commodities | End User



A global baked goods manufacturer faced challenges in reducing downtime and maintaining a safe working environment.

Challenge

- Manual Processes: unstable & inconsistent data tracking, increased downtime, safety risks.
- Compliance: Legacy controllers lacked compliance with modern manufacturing standards.

Solution

- Enhanced data tracking using EtherNet/IP for seamless integration with no modification to existing systems.
- Automated data logging and improved line communication with direct connection to database.
- Data from ovens was centrally collected and analyzed in real time via SQL or IPC, eliminating manual logging.

Customer Outcome

- Synchronized processes and automated data collection eradicated errors.
- Mitigated operator risks with improved data visualization for performance analysis and problem resolution.
- Streamlined creation of dashboards, **reduced implementation speed by 90%.**
- Significantly reduced panel space by removing switches.
- Boosted product availability and shareholder satisfaction.

Products: NX502, Sysmac Studio, Industrial PC



EtherNet/IP



Food & Commodities | End User

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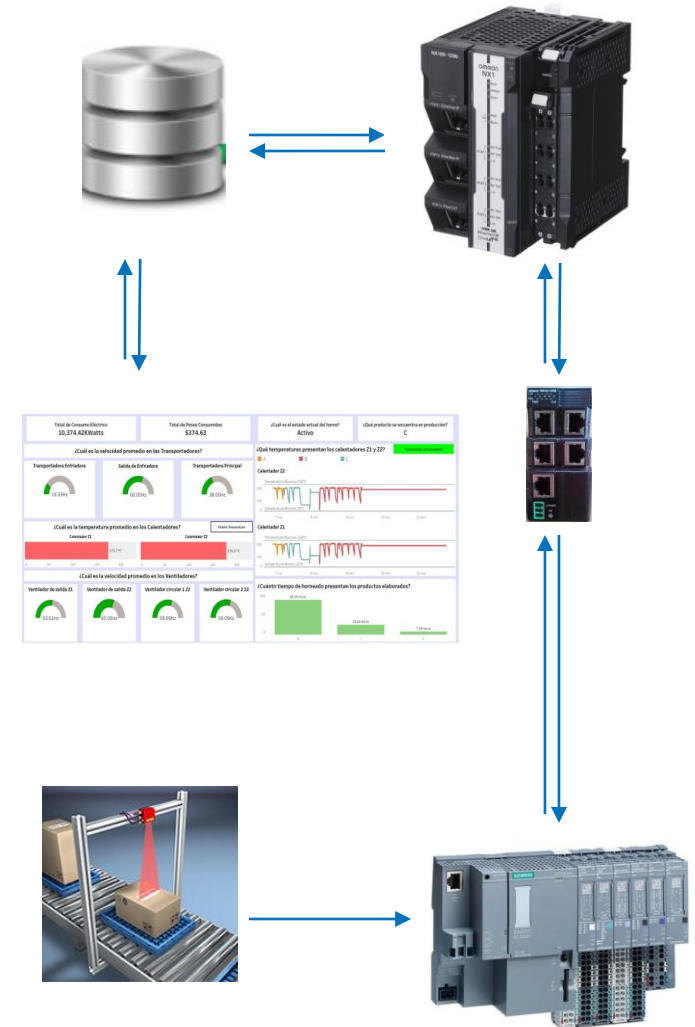
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Infrastructure | End User

Company focuses on sustainable construction materials and solutions. They produce environmentally friendly and efficient building materials.

Challenge

- Legacy equipment with no communication interface.
- Communication speeds were limited, impacting data flow and reliability of real-time monitoring and control.
- The equipment operated in a highly aggressive environment, challenging for maintaining connectivity and system durability.

Solution

- Connected legacy equipment to the cloud via a 3G network. MQTT connectivity was crucial.
- Developed dashboards for monitoring, analyzing trends and identifying areas for optimization.
- Modbus RTU for data extraction integrated with OMRON hardware.
- Inclusion of a LoRa Radio component for additional sensor data to enhance traceability and monitoring capabilities.

Customer Outcome

- Real-time data transmission to Microsoft Azure provided valuable production metric insights, allowing quicker response to issues.
- Streamlined data flow from production lines to the cloud, reducing manual tracking and improving overall efficiency.
- Key metric dashboards resulting in increased productivity and resource allocation.
- Additional monitoring enabled predictive maintenance and reduced downtime in a challenging operational environment.

Products: NJ101-1020

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Modbus RTU



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