Endress+Hauser & Rockwell Automation
Strategic Alliance Overview

Collaborating to Provide World Class Solutions
Endress+Hauser & Rockwell Automation
Value Proposition

• Reduce integration costs throughout engineering, commissioning and start-up
• Optimize plant availability and output
• Ensure product quality and consistency
• Optimize traceability to meet regulatory demands
• Enable predictive maintenance through intelligent devices
Combined strengths deliver real value

Working together to address the challenges manufacturers face when integrating advanced instrumentation into a connected enterprise …

Breadth of Expertise and Portfolio

... Endress+Hauser world class instrumentation
... Rockwell Automation scalable modern DCS PlantPAx
... Proven interoperability and value-added differentiation
... Scalable across application and industries

Open Standards

... Reduced downtime with common plant platform
... Lower integration costs
... Reduced operator error and training costs
... Compatible with commercial off the shelf technology

Integration Tools

... Step by step technical guidance
... Pre-engineered code and tools (AOIs, AOPs)
... Operator faceplates
... Support for EtherNet/IP, HART, Foundation Fieldbus and Profibus PA

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SOCAR deploys PlantPAx to maximize Kalmaz gas storage capacity and help improve efficiency and safety

Inkoel automation solution helps state oil company improve output and reliability

**Solutions**
A Rockwell Automation PlantPAx Process Automation Solution was installed, which included:
- Allen-Bradley ControlLogix
- EtherNet/IP network
- Stratix 8000 managed switches
- FactoryTalk Site Edition

**Results**
- Robust solution in a short installation window
- Cost effective
- Combined solution – process management and flow computing
- PlantPAx system makes real-time information readily available throughout the distributed network
- FactoryTalk Site Edition has a distributed and scalable architecture
- Seamless communications
- System level and process values are transmitted to the process control system with a high degree of accuracy
- Automating data collection has eliminated manual rounds, helping to improve operator efficiency and safety

**Background**
The State Oil Company of the Azerbaijan Republic (SOCAR) is involved in exploring oil and gas fields, producing, processing, and transporting oil, gas, and gas condensate, marketing petroleum and petrochemical products in domestic and international markets, and supplying natural gas to industry and the public in Azerbaijan.

The Kalmaz underground gas storage, with a total operating capacity of almost 3 billion cubic meters, plays a vital role in supporting the development and stabilization of the gas market in Azerbaijan.

The primary parts of the surface facilities of the Kalmaz underground gas storage comprise two-stage separation of solids and condensate, gas flow measurement at wells, gas compression, pre-heating and pressure control and drying and treatment.
Driving differentiation, together

A unique partnership in the market…
…focusing on innovative ways to solve application challenges. Together.

Best of Endress+Hauser
• People and Process Expertise
  Expertise in the area of Process measurement
  High quality devices allow you to measure multiple process variables at the same time
  Robust offering instrumentation, solutions and services

Best of Rockwell Automation
• Plantwide control to meet total application needs
  Expertise in the areas of drives, motion, process safety, discrete automation
  Information-enabled architecture
  Proven PlantPAx process automation system

Best for Process Applications
• Information delivered from field device to the enterprise
  Step-by-step technical documents for easy integration
  FactoryTalk View Faceplates for Endress+Hauser instruments
  Common support for open networking standards
  Industry and application integration expertise
Driving Differentiation

Plant-wide Control and Optimization

... Process, Power, Information and Safety
... Scalable across applications, operations and environments

Lower Total Cost of Ownership

... Common plant platform - reduced
downtime
... Reduce operator error and training costs
... Lower licensing renewal costs

Unified IT Infrastructure

... Easy plug-in to EtherNet/IP
... Information enable for decision support

OEM Scalable

... DCS-compliant, easy integration of skids to DCS
... Supports multi-vendor integration in projects
... Rapid field device integration
Value-Added Integration Tools

Integration Documents
- Details on field instrument and control system
- System specifications

Installation – how to:
- Connect instrument to HART I/O module
- Connect HART handheld

Configuration – how to:
- Configure HART I/O module
- Configure instrument and manage parameters

Visualization
- Implementing Add-On Instructions and Faceplates
Value-Added Tools

- Pre-designed Add-On-Instructions
  - Two-way exchange of data between the faceplates and the ControlLogix controller

- Faceplates provide instrument:
  - Tag name, Description, Message/Label, Engineering Units, fault status

- Configure the faceplates to provide:
  - Mode, Alarms, Range, etc.
  - Diagnostic Information
### Time savings during start-up

First measurement point: **without vs. with** add-on instructions (AOI) / Faceplates

- **68% time savings with** device integration tools

Additional measurement point(s): **without vs. with** add on instructions (AOI)/Faceplates

- **34% time savings with** device integration tools

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Shaw Industries - success with EtherNet/IP™

- Optimize plant availability and output
- Ensure product quality and consistency, avoid waste

- Leading manufacturer of floor coverings needed a high accuracy Coriolis flow measurement to reduce product loss and enhance product quality.
- Flowmeter had to seamlessly integrate into a Rockwell Automation Logix™ environment.
- Needed a device based on an open standard of unmodified ethernet.

Results delivered:

- 40% reduction in device commissioning
- 25% reduction in loop identification, device integration and process loop tuning
- The fastest update of measurement parameters needed for device control
- Immediate device recognition as a network node
- No special training requirements
- Transparency of the field devices from the factory floor to the enterprise system
Selected Customer Comments

**Food & Beverage**

“Very successful throughout the commissioning phase… thanks to the system integration documents”.

**System Integrator**

“My customer was building multiple plants. We were able to reduce the start-up time from 2 – 3 months to about 10 days. Bottom line: production up and running much sooner!”

**Consumer Goods**

“I have never before commissioned 27 Coriolis meters in 3 hours. It is obvious that EtherNet/IP integration offers a clear reduction in commissioning time – as great as 40% in a customer application.”
Customized blending option for soft drinks

- World leader in the development of process skids for the food and beverage industries
- Invested in the area of °Brix syrup control leading to their release of a 2-Stream syrup and blending system used for soft drink manufacturing incorporating the Endress+Hauser Promass 83F.
- Needed to meet their high standards of accuracy, repeatability and stability in demanding process conditions.

Results delivered:

- Improvement of syrup and water yields, fast changeover between products, limited operator interaction, and maintained beverage quality
- 10 times better online density performance than any competing Coriolis meter
- 0.05% repeatability results in process
- Reduced water and high fructose corn syrup loss - Quick changeover between products
- Elimination of costs and time associated with laboratory product sampling with real-time inline measurement
- Seamless implementation of process control through Rockwell Automation and Endress+Hauser collaborative alliance
- Solution projected to save millions in °Brix syrup and process water
Mars, Austria Increases Production by 100%

Challenge:
• Design & develop a new production line in 6 months
• Maximize capacity & minimize maintenance
• Manage recipes & traceability requirements

Solution:
• Allen-Bradley PAC combining sequential control, motion applications and process control in a single platform
• Allen-Bradley Motion Control with GuardMotion function provide multi-axis control, with quick-start functions & assured safe shutdown.
• Integrated control environment monitors the exact status of all system components, and simplifies fault diagnosis.
Cadbury Optimizes Line Control & Enhances Safety Functionality

Challenge:
- Obsolescence & onerous fault finding issues lead to Cadbury implementing new automation & safety infrastructure

Solution:
- Improved troubleshooting via intelligent Instrumentation
- Increased productivity due to reduced risk from downtime
- Safety zone approach simplifies fault finding
- More effective "operator buy-in“ thanks to the ability to create existing look and feel on modern interface and software
Teaming to deliver value

- Fastest growing insulation manufacturer in the world
- Goal to leverage the latest technology in process control in expansion project
- Lanett, AL and Shelbyville, IN facilities
- Joint presentation showed support of multiple bus protocols in one process controller using Integrated Architecture platform, Control Logix
- Provided a “bus neutral” view – an explanation of pros and cons of Profibus, HART and Foundation Fieldbus

Project has 18 separate networks with more than 300 instruments plus control valves

Key factors were:

- Speed of bus, cost and the number of devices on each segment
- FDT/DTM technology enabled management of instruments and valves using the same network without adding wiring or hardware

Delivered Value: The ability to replace devices without reconfiguring or shutting down network
Teaming to deliver value

- Family-owned business producing 100 tomato products since 1942
- The nation's largest tomato supplier outside of California
- Three state-of-the-art processing facilities, located in Indiana
- Customer wanted assurance the Endress+Hauser FieldCare, FDT-based tool to configure the intelligent field devices, would integrate with the Rockwell Automation process controller

Project uses HART cards with more than 100 instruments

Delivered Value: Superior distribution channel due to local support, collaboration between firms to deliver a better product.
For additional information:

• PlantPAx: [www.plantpax.eu](http://www.plantpax.eu)


• Request a PlantPax Demo: [http://www.emea.rockwellautomation.com/process](http://www.emea.rockwellautomation.com/process)

• Join us at PSUG & AF: [http://www.rockwellautomation.com/rockwellautomation/events/automation-fair/overview.page](http://www.rockwellautomation.com/rockwellautomation/events/automation-fair/overview.page)
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