Welcome to
Industrial Internet of Things
by Honeywell
“The Industrial Internet of Things is a network of networks that uses the internet to connect people, processes and assets enabling a new way to optimize business results.”

…it leverages smart connected assets, enterprise integrated automation, secured cloud-based data, and advanced analytics.

The iiOT is an industrial evolution

“Industrial Internet is the next industrial (r)evolution for the 21st century. It leverages smart connected assets, enterprise integrated automation, secured cloud-based data, and advanced analytics enabling people, assets & processes to run more efficiently, reliably and facilitate new business models centered on customer value”
Welcome to Industrial Internet of Things by Honeywell

The Industrial Internet of Things (iiOT) by Honeywell provides a progressive approach to help customers connect their people, assets and processes to transform their business - assets become more reliable, new ways to run with greater efficiency are uncovered, and performance is optimized across the enterprise.

iiOT by Honeywell leverages smart connected assets, enterprise integrated automation, secured cloud-based data, and advanced analytics, delivering solutions across all elements of the Industrial Internet of Things.

Honeywell brings customers top iiOT-Ready technology that combines deep industry expertise with the latest in IT capabilities such as: Matrikon OPC UA, a full portfolio of industrial cyber security solutions, exclusive access to innovative, iiOT-Ready services such as Assurance 360, and a track record of lean project delivery by Honeywell experts with both IT and operations know how.

Honeywell is Transforming iiOT Ideas into Action Today

Key Messages

- Industrial Internet of Things by Honeywell enables digital transformation.
- Start your iiOT plan with what you already have – no need to rip and replace
- Choose from the widest array of secure, ready to deploy technology to make it happen

Leverage Honeywell domain expertise to deliver a step change in your business performance.
Impact of implementing iiOT in the process industries

Local control in the plant via robust smart devices will be essential, while the cloud will enable enterprise optimization of data access and analytics. This will eliminate the time and costs associated with server implementation and maintenance, while maintaining localized control of the plant.

- Operators will become less task-oriented and take on a role of higher-level decision making assisted by the iiOT, which will provide guidance on abnormalities and display the right information to the operator at the right time in an intuitive format.
- New tools are needed for the industrial workforce:
  - Data visualization – new control room uses more modern technology such as wider displays, touchscreens, better interfaces to help make sense of the increasing data
  - Control systems that walk operators through tasks such as critical emergency shutdowns
  - Virtual reality being used to train operators to respond to plant emergencies or issues
  - Greater importance placed on mobile technologies to provide plant insight and facilitate collaboration such as Honeywell Pulse™ so customers stay connected to their enterprise wherever they are
  - Greater importance placed on remote operations to allow multi-plant/site operation from a single location – managing an offshore oil rig from an onshore location is a more desirable and safer work environment

As more industries begin deploying iiOT solutions, repetitive tasks will become automated, freeing up the human workforce to focus on tasks that require more analytical skills, including creative problem-solving and collaboration.
## iiOT by Honeywell Enables Digital Transformation

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<tr>
<th>CUSTOMER NEED</th>
<th>HONEYWELL iiOT-READY SOLUTION</th>
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| Production Efficiency | • CPS (Connected Performance Services)  
| | • Remote monitoring of APC  
| | • Operator Competency tracking and training  
| | • Operations Integrity monitoring  
| | • A360 remote applications support  
| | • OPC UA |
| Reliability | • Equipment analytics  
| | • Predictive fault analysis  
| | • Operator loading & training program  
| | • 3rd party asset performance mgmt  
| | • Equipment calibration and maintenance  
| | • Pulse mobility alerting  
| | • OPC UA |
| Enterprise Optimization | • Collaborative work environments  
| | • Enterprise dashboards  
| | • Centralized deployment & support centers  
| | • OEM/licensor knowledge as a service  
| | • Big data analytics  
| | • OPC UA |

### Production Efficiency
- Real time production process optimization that incorporates:
  - Real time raw material quality fluctuation
  - Structured data (ie. Process variability)
  - Unstructured data (ie. weather, stock market)

### Reliability
- End-to-end maintenance solution that eliminates unplanned downtime, that:
  - Predicts equipment failure
  - Defines maintenance program and shutdown (when, how long and how many staff required)
  - Optimizes spare part and inventory

### Enterprise Optimization
- To determine the cheapest way to serve customers end-to-end across the value chain and across multiple sites, depending on:
  - Customer orders
  - Plant availabilities and cost to produce
  - Raw material costs and time to procure
The Honeywell iiOT ready approach for Pulp, Paper and Continues Web Solutions

MES (Manufacturing Execution System) | OptiVision® is Honeywell’s order-to-cash solution for pulp, paper and flat sheet industries. It helps users plan, schedule and deliver orders in time, at the right cost, and in precise quantities while meeting stringent quality standards. Using sophisticated algorithms and business logic, it helps users make the best decisions to minimize costs, optimize resource usage and respond to customer demands profitably. Whether managing a single site or a multi-site enterprise, OptiVision enhances profitability at each stage and improves customer satisfaction.

OptiVision delivers real business transformation:
- Better supplier and customer relationships
- Optimal sourcing of orders
- Effective recipe management and reductions in raw material consumption
- Reduced losses at each stage of production
- Real-time cost-to-manufacture measures through all stages of production
- Intelligent decision making on informed deviations
- Losses and claims reduction through improved quality management and optimization
- Reduced bottlenecks in production assets
- Optimized inventory and warehouse management
- On-time delivery by optimizing load, vehicle, route and carrier planning

OptiVision Business Process Capabilities: Customer & Order Management, Production Planning & Scheduling, Production & Quality Tracking, Inventory & Warehouse Management, Load & Shipment, Invoicing & Credit Handling, Shop Floor Integration, ERP Integration

Extended Modules and Functions: Actual Costing, Quality OptiMiser, Web Order Services, Logistics Services & E-Terminal, Golden Run, Fiber & Recipe management
Process Information & Asset Management | Honeywell’s Uniformance Suite provides real-time digital intelligence through advanced process and event data collection, asset-centric analytics and powerful visualization technology, turning plant data into actionable information to enable smart operations. This solution becomes the backbone for the “Internet of Things” (IoT) for your organization and puts “data” in Big Data. With the Uniformance Suite, industrial organizations can maintain safe production with higher uptime, minimize operating costs, reduce risks, and ensure regulatory compliance.

Through its Uniformance Suite, Honeywell offers integrated, best-in-class data, analytics and visualization products built on a common platform to meet complex customer challenges, deliver significant business value, and reduce total cost of ownership.

Uniformance PHD: Capture and Store Real-time Process and Event Data Across the Enterprise
- Robust data collection, distributed architecture across sites, and scalability from single unit to enterprise, plus system monitoring ensuring high availability
- Consolidated Event Journal provides a history of operational alarms, events, and process changes for incident reporting and investigation
- Integrated calculations apply engineering knowledge to raw data

Uniformance Asset Sentinel: Monitor Plant Performance and Equipment Health
- Real-time, asset-centric analytics for engineering, maintenance, and operations
- Continuously monitor equipment health and process performance
- Predict and prevent asset failures and poor operational performance

Uniformance KPI: Define, Track, Analyze and Improve KPIs for Performance Management
- Calculate, present and store KPIs for organizational awareness of operating performance
- Modern web interface with support for mobile devices
- Secure access to KPI data for employees at different levels

Uniformance Insight: Visualize Process Conditions and Investigate Events from Any Web Browser
- Ad-hoc process and event visualization
- Powerful trending and display environment
- Supports third-party historians and data sources

The Uniformance Asset Sentinel, KPI, and Insight solutions are tightly integrated with our Uniformance Process History Database (PHD), but also flexible enough to work with third-party historians and data sources.
Operator Effectiveness | Honeywell’s DynAMo® Alarm & Operations Management software family delivers advanced capabilities for alarm system compliance, monitoring and rationalization. It brings automated enforcement of alarm policies, measurement and reporting of alarm system performance, notification and alerting of operational problems, and best practice workflows for the communication and visualization of operational objectives – all in a single unified platform. This comprehensive set of software enables best-in-class operational management, with rigorous compliance to API, EEMUA, ISA and IEC global standards for alarm management and integrity operating windows. In addition, it is vendor-neutral and can be used with any control system.

Fully scalable to all the sites in your enterprise you can opt to install modules individually or choose a comprehensive unified solution from the outset. Situational awareness, with Honeywell Pulse™ Mobility platform every critical alarm, limit deviation, abnormal situation is made available to smart phones and tablets, not only for greater awareness of events to outside of the control room, but to drive true collaboration throughout your enterprise, at any level of your organization, getting the right information to the right people all of the time. Keeping you compliant, DynAMo fully aligns with all major global standards for alarm management and integrity operating windows including API RP 584, API RP 1167, EEMUA 191, ISA 18.2 and IEC 62682.

Mobility | Honeywell Pulse™ remotely connects plant managers, supervisors and engineering staff using a mobile application to customized, real-time plant performance notifications sent from Honeywell Process Solutions’ industrial automation software. It enables users to stay connected to their enterprise – wherever they are by extending Honeywell software’s functionality to bring forward condition-based metrics directly to their mobile device.

Available in the Apple app store, Honeywell Pulse enables users to:

- Visualize data and information in near-real time
- Proactively seek and tag trends and upset conditions
- Respond faster to conditions and leverage situational awareness
- Connect with – and utilize – remote expertise.

Honeywell Pulse is designed to provide notifications related to Honeywell's Advanced Solutions portfolio of software applications. By driving accountability, enabling collaboration and visualizing historical data, the app facilitates timely and efficient resolutions that positively impact plant productivity.
DCS (Distributed Control System) | Honeywell has integrated Experion® PMD, its automation system for controlling processes, machinery and drives (PMD), with Experion Process Knowledge System (PKS) to provide a single, comprehensive automation solution. Benefits include reduced database maintenance, easier training, increased access to diagnostic information, single alarm and event logging, and faster control responses.

Since release R800, Experion PMD has been integrated with native peer-to-peer connectivity with Safety Manager, Experion MX, the Experion PKS controller family and SCADA systems through parameter connection and a single point-of-data entry. It also integrates with Experion Alarm Management, Experion Integrated Historian, OneWireless™ and Digital Video Manager solutions.

Experion PMD adds support for deployment on Experion virtual platform, and a new FCE controller with Profinet interface. Experion PMD Field Controller Express (FCE) controllers are easily configurable and make maintenance easy and cost effective. It comes with a wide range of plant control methods and high control capacity to meet the diverse needs of various industries, including pulp and paper, metals, chemicals, pharmaceuticals and food and beverage. The new release is fully scalable and continues to support migration from Honeywell’s TotalPlant Alcont (TPA) systems. The FCE is now available in both Profinet and Profibus configurations, with integrated TPA UPLINE/IOLINE highway interface. This enables control over continuous and batch processes, and high speed rotating machines, and standalone and coordinated line drives. Fault Tolerant Ethernet (FTE) in Experion PKS control network provides fault tolerance for better performance and security of industrial control applications. In addition, integrated Human Machine Interfaces (HMI) allow for alarm and history data process, production and business data integration.

For users migrating to Experion PMD, the existing TPA applications can be converted to Experion using existing cabinets, I/O and wiring so that the costs of implementation are reduced while significantly extending the life of assets.

QCS (Quality Control System) | Profitable papermaking depends on stable production, compliance with paper quality specifications and elimination of waste. Aimed at paper manufacturers, Honeywell’s Experion® MX quality control system (QCS) with scanner and sensors provides superior visibility into the papermaking process while simplifying operational efforts, and reducing maintenance and service costs. Honeywell’s MXProLine™ quality control system (QCS) offers a broad range of online scanners and sensors to help users select the measurement system best suited to their continue web applications including the revolutionary new concept of ZipLine measurement device.
Secure & robust Wireless Mesh Network | The Honeywell OneWireless™ Solutions help sites tackle critical industrial challenges in the areas of reliability, safety and process efficiency. The solutions comprise Honeywell’s distributed control system, wireless field instruments, mobile computing devices, wireless networks, advanced applications and facility management applications. The solutions also include Honeywell’s engineering services such as consulting, design, installation, commissioning and support that play a key role in ensuring a turnkey experience that protects users’ wireless investment. If users have a problem, Honeywell has the solution.

OneWireless™ Network is a multi-application, multi-standard industrial wireless network that extends the process control network into the field. Native integration with Experion allows you to easily exchange data between your Experion control system and ISA100 Wireless, Wi-Fi and IP devices.

OneWireless™ Network offers the following features:

- Flexibility and scalability: Honeywell meets a site’s specific wireless network needs with a rich portfolio of industrial access points and wireless field instruments
- Wired-like performance with 250 ms latency
- Best-in-class data availability with wall-to-wall dual paths between ISA100 Wireless field instruments and host applications
- Superior wireless security with end-to-end AES-128-bit encryption, unique join keys and rotating session keys
- Great user experience with no software to install, an intuitive user interface, and over-the-air firmware upgrade and provisioning
- Easy integration with the richest portfolio of interfaces, including Modbus, OPC, HART, Experion®, CDA, GCI and Honeywell Enraf
- Lowest cost of ownership with savings of up to $3,000 per access point and annual savings of $10,000 in maintenance costs
**Field Instruments** | Cross-Direction (CD) control for paper machines is aimed at reducing the CD variation of the paper web as it is being made. Honeywell offers both the custom [CD Actuator](#) System hardware and interface and advanced software control components as part of the Experion MX system. Users benefit from improved paper quality, low raw material and energy consumption and high productivity. Honeywell’s CD Actuator Systems are custom-designed for each application, while the supervisory controls employ the latest in multivariable control technology.

- **AutoSlice**: Controls headbox slice lip opening to regulate CD weight profile
- **ProFlow**: Controls headbox dilution profiling
- **Devronizer**: Reliable XP10 air-actuated valves regulate steam flow to individual profiling zones
- **AquaTrol**: Hydraulic-atomized rewet shower regulates CD moisture profile
- **Aqualizer**: Air-atomized rewet shower for CD moisture profiling plus mass-remoisturization for over-dried sheets
- **Calcoil**: Induction heating system provides efficient roll surface heating for CD profile control and advanced sheet processing
- **Calendizer**: Dry end steam shower optimizes the finishing process through temperature and moisture gradient calendering
- **ProCoat**: Motorized actuators for blade or roll coaters to adjust the CD coat weight profile

Honeywell’s [SmartLine Multivariable Transmitters](#) (SMV800) extend its proven smart technology to the simultaneous measurement of three separate process variables according to standard industry methods for air, gases, steam and liquids. They also offer the ability to calculate compensated mass or volume flow rate as a fourth process variable. In addition, meter body-only components are also available to support third party and OEM metering solutions.

SmartLine Multivariable Transmitters can measure:

- Differential pressure across a primary flow element such as an averaging pitot tube, venturi, flow nozzle, orifice plate, V-Cone®, wafer cone, wedge, etc.
- Static process pressure from a single sensor
- Process temperature from thermocouple or Resistance Temperature Detector (RTD) inputs.
These Levels of Digital Transformation Systems are also support by:

**LEAP™ |** Honeywell’s approach to automation project execution reduces risk by enabling late project binding, flexible procurement, improved flexibility and enhanced design options. A paradigm shift in the way automation projects are implemented. Honeywell enhances its project implementation services with its three innovative, enabling technologies – Virtualization, Universal Channel Technology and Cloud Engineering – to revolutionize project execution.

Lean execution already entails removing waste, including redundant tasks and rework. LEAP further removes the traditional dependencies that used to force project flows to be sequential in nature, drastically improving the overall project schedule and keeping automation systems off the critical path. The methodology relies on separating physical from functional design, breaking down task dependencies, using standardized designs, and enabling engineering to be done from anywhere in the world.

Honeywell estimates that LEAP can result in 30% capital savings on the total installed cost of a project as its benefits go beyond the automation scope across the entire project, including:

- Reduced project schedule risk
- Predictable construction costs
- More efficient CAPEX
- Earlier production dates.

**Virtualization |** Honeywell offers the industry’s most complete portfolio of turnkey virtualization solutions for process automation. Experion® virtualization solutions offer significant benefits when implemented at new as well as existing plants and help users reduce the lifecycle management costs of their automation systems.

Experion virtualization solutions include:

- Virtual Infrastructure: It comprises the software and hardware needed to run virtual machines, including software from VMware and hardware offerings from a range of manufacturers.
- Virtualization-ready Applications: These include applications tested and certified for virtual environments across the entire control, optimization and business layers of Honeywell’s software portfolio.
- Virtualization Solutions: Honeywell is creating a range of virtualization-enabled solutions that solve new problems or existing problems in a superior way. This includes the Experion Backup Control Center solution and Off-Process Development solution.
- Virtualization Support Services: These include pre-sales to after-market services support to help users assess, design, implement and manage their virtualized systems.
Honeywell now offers a Premium Platform for Experion virtualization solutions that uses blade server technology to deliver advanced capabilities, including automatic host recovery and upgrades with zero operational disruption. In addition, the platform provides a longer lifecycle, reduced facility footprint and remote management capabilities in a pre-configured package, saving users time to deploy.

**OPC UA | OPC UA (Unified Architecture)** is one of the most important modern standards for industrial facilities and many further scenarios in an intelligent and connected world. OPC UA is considered a central building block on the way towards Industrie 4.0. It is the first unified, worldwide recognized industrial protocol for a secure smart factory. (MatrikonOPC is part of Honeywell Process Solutions)

Interoperability and Standardization are what OPC is all about. While conventional OPC solved the device interoperability problem at the Control level, the demand for that same level of standardization was required for the Enterprise layer. Classic OPC is based on the Microsoft DCOM which can introduce vulnerabilities at these layers. Urgency to find simplicity, maximum interoperability, and security drove the OPC foundation into creating a unified method of data communication for parts of the existing OPC specifications for DA, HDA, A&E, and Security.

OPC Unified Architecture extends the highly successful OPC communication protocol, enabling data acquisition and information modeling and communication between the plant floor and the enterprise reliably and securely.

The key features and benefits for OPC UA are:

- Platform neutrality to run on any operating system
- Future-ready and Legacy-friendly
- Easy configuration and maintenance
- Service-based technology
- Increased visibility
- Broader scope of connectivity
- Higher Performance
**Collaboration** | **Experion® Collaboration Station** displays control system and business network information for faster resolution of routine and abnormal situations at a site. It helps users establish communication rapidly for improved collaboration between operations, maintenance and other specialists based in different locations. By providing access to all relevant information in a common view, it enables more efficient operations and better decision-making.

**Operator HMI** | The **Experion® Orion Console** is part of Honeywell’s initiative to shape control rooms of the future. The console increases operator effectiveness over a greater scope of responsibility by providing faster response, reducing fatigue, and increasing situational awareness. Experion Orion Console has been selected by automation professionals as the winner of the Control Engineering 2015 Engineers’ Choice award in the Hardware — HMI, Operator Interface, Thin-client category.
UniSim® | Honeywell UniSim® Competency Suite enables industrial companies to plan, deploy and manage a structured program for operator competency. It offers robust solutions to train plant personnel for safe, incident-free and efficient startups to achieve operational excellence. With comprehensive field and console operator training, plant operators can gain the knowledge and skills to be the Ultimate Operator.

The UniSim Competency Suite is made up of the following components:

- **UniSim Curriculum**: Customizable framework for a structured operator competency management program to ensure trainees demonstrate and perfect critical skills and behaviors
- **UniSim Tutor**: Knowledge capture and propagation tool, which provides a repository for domain knowledge and experiences to teach and evaluate 'what if' reflexes and diagnostic abilities for improved decision-making
- **UniSim Operations**: Dynamic plant operator training simulation system that accelerates knowledge transfer by consolidating a range of typical and emergency training experiences into a concise curriculum
- **UniSim Field View**: An interactive, navigable, panoramic 2D field operator training environment that is based on high-resolution photographs of the facility and fully integrated with UniSim Operations training simulator
- **UniSim 3D Connect**: Interface technology and tools to provide UniSim Operations training simulator connectivity and integration to 3D immersive virtual field operator training and visualization environments.

**Integrated Fire and Gas** | Honeywell’s [integrated fire and gas](#) solution includes fire detectors, fire alarm panels, fire suppression systems, gas detectors, sounders, beacons and other safety systems. Along with Experion PKS, Safety Manager and related services such as consulting, training and global execution support, the solution ensures lifecycle protection, incorporating both safety and security to minimize the impact of any abnormal situations. Honeywell draws on its position as an Integrated Main Automation Contractor (I-MAC) to ensure users meet both their business and safety objectives.

The integrated fire and gas solution is based on Honeywell’s layered approach to safety that encompasses process and system technology, and the people who interact with that technology. It monitors areas where hazardous levels of explosive or toxic gas may become present and provides early warning of the build-up of gas or fire before it becomes a hazard to people, infrastructure and the environment. In case of an incident, automated emergency actions with Honeywell’s Experion PKS and Safety Manager systems are initiated to mitigate further escalation.

**Integrated Video Management** | [Digital Video Manager](#) (DVM) is Honeywell’s unique digital video solution that seamlessly integrates with Experion® PKS and Experion Industrial Security platforms, delivering enterprise-wide access to process and security video. It is based on more than a decade of experience with digital video and is used extensively in a wide range of industries, including marine, nuclear, chemicals, metals, minerals and mining, oil and gas, power generation, pulp and paper, and refining.

DVM is the most trusted solution in the industry to increase safety, security and process performance.
Cyber security | Honeywell’s industrial cyber security know-how encompasses automation assets and their integrated communication networks—a distinct advantage in control system security. The Honeywell Cyber Security Architecture and methodology support IEC 62443 concepts, continually addressing cyber security throughout the IACS lifecycle—from design and implementation to commissioning—with vendor-agnostic solutions that include security assessments and audits, architecture and design, network security, endpoint protection, situational awareness, and response and recovery.

Honeywell offers Industrial Cyber Security Risk Manager, the first solution to proactively monitor, measure and manage cyber security risks for control systems. It provides users across the plant with real-time visibility, understanding and decision support to tackle potential threats and vulnerabilities.
Assurance 360 | Honeywell’s Assurance 360 services are multi-year cooperative service arrangements to maintain, support and optimize the performance of Honeywell control systems regardless of the industry or size of operations. These services transform how plant assets are managed, focusing on system performance and outcomes, while allowing users to focus on operations.

Assurance 360 is an innovative approach to service management that offers two levels of support to meet different user needs:

- **Assurance 360 Optima** offers dedicated resources for preventive and corrective maintenance, replacement parts in the event of a failure, system updates, cyber security tools and servers, and pre-defined risk sharing if the site experiences either a loss of control or loss of view due to covered system failures.

- **Assurance 360 Performa** provides oversight on all aspects of system management with a focus on meeting or exceeding performance metrics through visualization, planning and targeted support when needed. Honeywell performance experts help and guide site personnel in preventive and corrective maintenance tasks as well as hardware and software upgrades.

Assurance 360 starts with a comprehensive plant assessment that is used as a blueprint to develop a proactive maintenance path with defined metrics and reporting to demonstrate performance.

Assurance 360 provides access to experts and performance specialists that help make sure crucial tasks such as equipment and software monitoring and maintenance, change management, troubleshooting, upgrade installation and project implementation are done accurately and on time. In addition, it offers flexible programming for industrial users to customize the level of service they need or want, based on their requirements.

Honeywell’s Assurance 360 services helps users get the most out of their process control investments through:

- Outcome-based services
- Implementation of best practices
- Comprehensive coverage throughout the product lifecycle
- Risk and change management
- Optimized system performance and maximized uptime
- Active program management
- A clear contract with defined metrics.

Please find more details on each topic by follow the link or in general on [www.honeywellprocess.com](http://www.honeywellprocess.com).
**Example: Montes del Plata - Greenfield pulp mill**

Stora Enso’s and Arauco’s joint-venture project Montes del Plata has build a new state-of-the-art 1.3M tons per year pulp mill in Uruguay with the start-up in 2014.

Honeywell Experion PKS covers entire pulp mill:
- 20 + 4 Operator stations
- 3 system clusters
- 44 Process Controllers
- 3,500 Instrument loops (Hart)
- 2,100 Profibus motor controllers
- 100+ remote cabinets

Mill’s MES OptiVision System by Honeywell including:
- Production Management for Bale Tracking
- Planning & Scheduling
- Warehouse Management & Container Loading
- Quality OptiMiser

Mill’s Process Information System by Honeywell:
- Alarm Management
- Operations Logbook
- Operations Monitoring
- Unif ormance Process Studio
- BizCalc Manager

Drying machines equipped with Honeywell’s Experion MX QCS, profiling actuators Devronizer XP10 and ProFlow, and web monitoring system ProWeb 4G.

Entire Mill covered by Honeywell Fire Protection System with EBI and XLS3000.

“This mill will have a significant impact not only on the region’s pulp production capabilities, but also on the local economy. It will employ 6,000 construction and 500 once in operation,” said Carlos Pastrana, Project Director at Montes del Plata. “It’s important that this state-of-the-art mill be outfitted with the best process and quality control systems supported by experienced organization, and Honeywell’s track record of implementing mega-projects speaks for itself.”
Example:  Stora Enso Varkaus - Paper mill

Stora Enso Oyj is implementing Honeywell’s technologies as part of a modernization and optimization effort at their paper mill in Varkaus, Finland. Headquartered in Helsinki, Stora Enso is the largest pulp, board and paper producer in Europe, and one of the largest in the world.

The Stora Enso project coincides with conversion of the facility to produce kraftliner, a virgin-fiber-based containerboard. Globally, the company produces a number of products, including about 5.6 million tons of chemical pulp, 10.9 million tons of paper and board, and 14 billion square feet of corrugated packaging.

Upgrades to the Varkaus mill include:

- OptiVision® Manufacturing Execution System (MES), an advanced order-to-cash solution designed to help pulp and paper companies and flat sheet manufacturers address critical issues determining profitability.
- Uniformance® Process History Database (PHD), which helps users make better and faster decisions with superior data management, higher data security and reliability, and lower total cost of ownership.
- Migrating the plant from its previous control system to Honeywell’s Experion® PKS (Process Knowledge System), which unifies people, processes, assets and business needs by having one unified architecture for process control, safety systems and automation software.
- Experion Process, Machinery and Drives (PMD) controllers, which use a single, consistent set of engineering tools for lower capital costs and more cost-effective execution of production line and plant-wide control.
- Safety Manager, which integrates process safety data, applications, system diagnostics and critical control strategies, and executes defined safety applications in a fully redundant architecture.

“Stora Enso’s business objective is to produce and deliver the highest quality paper and board products in the world, and Honeywell’s portfolio of technologies will help them reach this goal safely, reliably and efficiently,” said Ali Raza, vice president, HPS. “We have worked with Stora Enso for about 40 years and I am pleased that Honeywell can help them modernize this facility.”
Example: Sappi Gratkorn

Increases Process Visibility and Operator Efficiency with Experion®

The main reason for this project was quality improvements and reduction of off-spec production. In addition, plant management needed to improve operator effectiveness with a modernized automation platform and still while continuing to communicate with other legacy Honeywell products in the same production line.

The migration of the legacy Honeywell DCS, with over 12,000 IO points, was required to complete in a very short time frame in order to minimize shutdown time and support functions for further rebuilds.

As legacy DCS and QCS systems become more difficult and costly to support, Honeywell’s Experion Upgrades enable a step by-step transition for the most critical components. The upgrade options allow users to take advantage of the latest technological innovations in a simple, cost-effective manner.

Selected capabilities for Sappi Gratkorn include:
- Uniformance™ PHD,
- Experion MX,
- Experion with PMD controller and
- Safety Manager

Upgrading Sappi’s systems will increase process visibility and provide better operator efficiency, leading to higher product quality at lower production cost.

Experion PMD and MX provide the full advantages of a single automation platform for Paper Machine 11 with less hardware, cost savings on spares, and reduced maintenance services.

The new Experion platform delivers new tools and diagnostic functions for comprehensive remote support.

Using the Honeywell TPA-PMD Migration tools, it was possible to upgrade all applications and displays 100% error free, resulting in immense time savings.

The large legacy DCS application migration at PM11 was accomplished in just three days.

Sappi reports that the Gratkorn DCS and QCS upgrade investment has achieved the scheduled targets in time and within planned production capacity.

“Honeywell as the base supplier for automation systems at Sappi Gratkorn has offered us a customer-oriented solution that reuses installed equipment combined with the newest DCS and QCS functions and technology.” – Karl Weiss, Sappi Gratkorn
For More Information

about Honeywell Process Solution

visit our website www.honeywellprocess.com

or contact your Honeywell account manager.