Business Justification: Why Migrate Legacy Control Systems?

Executive Summary

Every Distributed Control System (DCS) at some point requires upgrading to ensure reliable operation and to leverage the latest technology. However, justifying automation projects today is extraordinarily difficult—any system being replaced must provide a superior business value proposition.

A well-planned and executed migration to a modern control system not only improves plant availability and reliability, but can also provide a more flexible production platform. Flexibility is the key battleground on which companies seeking to make the most of business opportunities will thrive.

Honeywell offers a wide range of migration options and is the only vendor that continues to support 30+ year-old control systems. These migration solutions are designed to provide access to up-to-date technology without having to “rip and replace” the entire legacy hardware and software system.

With Honeywell’s investment protection strategy, plants continue to operate and be supported on their legacy equipment. The transition to new technology can be executed with practically no change to physical wiring and intellectual property. The availability of multiple controllers on a single network also provides freedom of choice for new installations or upgrades.

Whichever migration path is chosen, Honeywell’s migration solutions and world-class services organization support customers’ systems throughout their entire lifecycle, helping sustain the benefits of investing in Honeywell technology.
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Background

Today’s competitive marketplace demands automation solutions that increase plant efficiency and profitability. Control system performance can significantly impact a plant’s bottom line. Leveraging automation capabilities through simplified, cost-effective migration to new technology while optimizing current investments is key to business success.

In some cases, legacy Distributed Control Systems (DCSs) can no longer meet corporate objectives for enterprise-wide sharing of business information. Nor can they enlist advanced control capabilities enabling increased throughput, lower costs and improved regulatory compliance, while responding to customer demands for better product quality and faster delivery.

Before migration to a new automation system can take place, plant personnel must provide a financial justification, typically to their corporate offices. This justification compares the cost of continued operation with the DCS to the costs and benefits of migration to a modern control solution. Together, these factors comprise the Total Cost of Ownership (TCO).

For plant managers, there must be important grounds to replace a DCS. Such systems don’t have moving parts and aren’t subject to normal wear and tear, so reasons for migration must go beyond basic loss of functionality to other more complex areas.

Required maintenance and spare parts are significant considerations in any migration decision. Electronic components may be reaching the end of their useful life, or failing at an excessive rate. Plus, it may be very expensive to find suitable replacement parts. It can also be difficult to find personnel qualified to troubleshoot and repair an older system. As plant workers familiar with the existing DCS reach retirement age, outside support often becomes necessary.

In addition, poor process control with an outdated DCS may result in inadequate quality and excessive energy usage. When processes are controlled near set points, quality is maximized. Deviations from set points, particularly for extended periods of time, can directly impact quality in a negative way. Throughput can also be affected by control performance. Newer automation platforms allow more processes to be automated, and enable tighter control of existing processes.

Excessive failure rates, difficulty in procuring spare parts and lack of qualified maintenance personnel all add up to an increased risk of downtime—a significant expense for any manufacturing facility, but particularly for a process plant.

Reasons to Upgrade

Although a relatively small portion of the overall investment in processing plants, automation systems can have a large impact on the successful outcome of the project and return of the investment throughout the lifecycle of the facility.

In most cases, there are specific motivations for migrating or replacing an obsolete control system, as well as improving the security of the control network infrastructure. However, not all drivers will be applicable to all sites. In general, they include:
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- Obsolescence – cost of supporting older generations of system components and decommissioning withdrawn parts.
- End of service life – replacing equipment experiencing end-of-life issues due to corrosion or age.
- Future-proofing system components – need to lock-in vendor support for base hardware and software.
- New units or upgrades – adding or modernizing a unit to ensure it is a viable long-term solution.
- Loading issues – current systems nearing their performance capacities.
- Amalgamation of operating consoles – improving operator performance in the central control room.
- Cross-unit closed-loop control – ability to tie together multiple control networks and systems for cross-controller control.
- Cost reduction – reducing footprints and enhancing controller performance.
- New value-added features – includes improved alarm management, operator effectiveness and asset management solutions.
- Co-existence with multiple vendors and applications – may not be possible or easily done with older system components.
- System security – isolating the HMI and controller level from viruses found in upper level networks.
- Process data at the desktop – providing a secure path for required data that allows improved decision making at the business level—creating real operational agility.

Obsolescence concerns

Using obsolescence only to justify DCS migration isn’t easy. A control system can suffer from technical obsolescence (missing yield), functional obsolescence (missing opportunities) or supply obsolescence (risk for continued operation). While maintenance costs may be rising, with spare parts becoming scarce and expensive, true maintenance savings may not be large enough to justify the capital investment. Obsolescence is a viable reason for an upgrade only if there is an increasing risk of control equipment failure shutting down a critical process. However, management may not be convinced a system is about to fail if it has no history of incidents.

Figure 2. A legacy control system can suffer from technical, functional or supply obsolescence.

Other possible drivers for migration include limitations of the legacy system preventing the plant from taking advantage of an emerging business opportunity, or the inability to cost-effectively support today’s open networks, plant asset management applications and production management solutions.

Security issues are another critical concern. Some plants maintain their older DCS in hopes of avoiding cyber threats—thus gaining a false sense of security. However, legacy systems are subject to stresses they weren’t designed for, which creates significant security vulnerabilities. The presence of obsolete software products embedded in the system is another potential liability.
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Regardless of whether a DCS is state-of-the-art or vintage, sites must adopt a security strategy relying on “defense in depth.” This strategy is included in the IEC 61511 standard, which stipulates that every layer of protection, including both control and safety systems, should be unambiguously independent. Some of the reasons for this basic requirement are to avoid common cause faults, minimize systematic errors, and provide security against unintentional access.

Technology requirements

In the 1970s, the DCS revolutionized plant-wide operations, performance and asset utilization in the process industries. Three decades later, leading control system suppliers are once again redefining industrial automation with enterprise-wide solutions designed to unify people with process, business requirements and asset management.

For example, Honeywell Process Solutions developed the Experion® Process Knowledge System (PKS) to capture the knowledge of plant personnel and their workflows to deliver sustainable efficiencies to its customers’ businesses. The Experion solution is designed to merge traditionally disparate functions and systems across the manufacturing enterprise. This union streamlines information flow to the right place, at the right time — by the right people. It also eases configuration, visualization, maintenance and optimization of processes and critical plant equipment, enabling organizations to focus on productivity, innovation, globalization and sustainability.

Justification Process

Justifying control system projects today is extraordinarily challenging: any system being replaced must provide a superior business value proposition, which means lower installed cost, lower lifecycle cost, and increased agility to take advantage of new business opportunities. Without a way to accurately measure ROI, it is difficult to support automation technology investments when compared to other types of capital projects. This situation is even more constrained under the current economic conditions, requiring an even stronger rationale for investments than in the past.

Understand risks and rewards

For an industrial end user, the key question in justifying a migration project is, “What am I missing by continuing to utilize and support an outdated control system?” Failure to employ the latest technology can hinder improvements in process performance and operator effectiveness, as well as reductions in downtime and maintenance requirements—not to mention additional profitability. A well-planned and executed migration to a modern control system not only improves plant availability and reliability, but can also provide a more flexible production platform. Flexibility is the key battleground on which companies seeking to make the most of opportunities post-recession will thrive.

Having an old or outdated system installed can actually result in direct losses if the end user lacks the visibility into plant operations that enables abnormal situation prevention and avoidance of supply chain disruptions. An inflexible system restricts your ability to react quickly to shifts in market demand. Ineffective automation also poses a real business risk as it undermines the ability to produce a consistent, quality product.
As with most plant assets, as control systems age the risk of failure grows exponentially. What might be working one year can fail catastrophically the next, with dire consequences for order fulfillment, cash flow and customer retention.

Industrial sites need to identify the right window of opportunity for undertaking a control system migration based on how the plant runs. Migration projects require careful preparation and implementation to ensure success. Although changeovers on site sometimes can be reduced to a matter of days, the work before this can take many months. Factors in planning a migration may include scheduled turnarounds, asset end-of-life issues, spare parts availability, etc. In many cases, the best time to implement a control system migration is during a plant expansion or new unit construction. This approach eliminates many of the justification issues that are typical of standalone modernization projects.

**Develop a project vision**

The first step in justifying a control system migration is developing a vision for the project. This involves working with all stakeholders—including operations, engineering, and plant management—to align on scope, risk assessment and the overall project roadmap. Project participants should evaluate and prioritize what is important from their individual perspectives. This helps to create a shared vision throughout the organization.

It is a good idea to involve senior management early in the justification process. From there, sustain channels of communications throughout planning and vendor selection to ensure expectations are clear. In most companies there are many projects vying for the same capital dollars. When migration projects do get funding approval, they must be executed successfully to gain justification for other automation investments.

**Migration Strategy**

Properly planned and implemented, control system migrations enable industrial organizations to migrate legacy control platforms at their own pace, allowing new controllers to be added at any time and integrated with existing equipment. They also permit the upgrade of subsystems and function blocks to new controllers whenever the user decides.

Once a migration project is identified, several critical areas commonly define whether or not the work is successfully completed relative to scope, schedule and budget. Success typically depends on an optimal migration strategy. A structured, organized approach to upgrades enhances the benefits of new technology and preserves the rich intellectual property contained in legacy systems. Regardless of vendor support, plant personnel should play an integral part in the effort, reviewing its progress every step of the way.

**Do your homework**

As with any large, complex project, it is important to do your homework before, during and after the work. The key parts of a migration plan are the process definition and functional specification documents, defined at the start of the work. When detailed planning is not completed prior to beginning the project, everything takes longer than expected.

To ensure a successful migration effort, plant management should plan for the change, identify a critical timeline, conduct regular (perhaps daily) meetings, engage those who will be affected by the change, identify all available resources, and plan for contingency resources or vendor staff, if needed.

A formal migration plan identifies migration and support strategies for existing control system nodes, such as controllers, HMI, supervisory computing nodes, etc. It also includes proposals for consolidating existing control systems in order to reduce costs and enhance safety. Additionally, the plan provides recommendations for ensuring the reliability, robustness, security, expandability and ease of diagnosis of process control networks.

As part of good engineering and project management practices, plants should take the following steps during migration planning:

1. Determine the best time to migrate
2. Determine the best migration path associated with clearly defined goals
3. Define the project through front-end engineering
4. Use a proven approach with comprehensive checklists
5. Develop detailed cutover plans
6. Define intermediate operability and training plans

A key element of the migration process is a modernization assessment for the current DCS installation. The goal is to help maintain a control system that is stable, well supported, allows for future expansion and improves robustness. This assessment will enable the plant to create a migration plan that minimizes impact on operations (i.e., no production outages required) while upgrading aging control system components (i.e., HMI) in order to reduce operational reliability risk due to obsolescence and provide future expansion capability with state-of-the-art technology.

Choose the best methodology

There are many possible approaches to DCS migration, ranging from replacement of specific parts of the old system, to the installation of a complete new automation platform. Some implementation issues can be daunting and likely contribute to the reluctance of many sites to face up to the need to migrate.

Industrial facilities should take care to choose the migration methodology best suited to their specific needs. No single approach is appropriate for all operations. Typical migration options include:

• Phased migration – Allows system modernization in gradual steps, replacing the HMI or a particular unit first. Once this is completed, the end user can take advantage of solutions improving operations and safety. The rest of the system can be replaced over several years.

• Complete replacement – Allows the entire system to be replaced all at once during a planned outage. In some cases, hot cutover can be used to minimize downtime and ensure seamless integration of current control assets.

• System upgrade – Allows an upgrade of critical system components at the end user’s own pace. The control system vendor must be committed to retaining the value of existing systems and continuing to offer parts and support for the legacy platform.

HMI migration is one of the most important aspects of control system modernization. Upgrading legacy DCS operator stations to the latest HMI technology allows plants to provide a common user interface to the integrated control architecture—reducing training and maintenance requirements by keeping existing graphics, networks, controllers and I/O in place. It also provides direct access to the control network with read/write data access and integrated alarms and events.
Frequently, when a control system requires change, replacing existing controllers also makes economic sense. For migration, two critical functions are required: the existing field signals must be easily and quickly moved to the new control system, and the existing control schemes must be migrated (and preferably improved).

For a large-scale retrofit, it is often best to use a phased migration. This approach eliminates risk by incrementally narrowing the focus, while providing a fallback position to the old system. It requires communication with the existing system for interim phase-in, physical co-existence with the old equipment to enable a hot cutover, and the ability to switch seamlessly between old and new signals for testing/tuning purposes.

Phased migration does have its drawbacks, but it is a lower risk approach with less downtime. Further risk and downtime reduction can be achieved by simulating the new system prior to installation. With phased migration, the control system is in a transition state. This means the appropriate scope must be selected for each phase so that the end user can stop at any point in the migration and still have a supportable system.

Select the right partner

Successful control system migration does not end with a single modernization project. Industrial plants need a cost-effective approach for maintaining up-to-date process automation functionality and minimizing risks associated with system upgrades. Scalability is also important.

Continuous control technology evolution is the goal of a lifecycle management program—accomplished by establishing a committed automation roadmap that leads to either electronic refresh or complete migration. Lifecycle support allows plants to start down the path to modernization today, and progress incrementally as needs and schedules dictate.

A lifecycle management solution should offer flexibility in how companies manage their plant assets and predictability in how their choices are financed, including the freedom to choose when to modernize and improve upon their control system, how to fund the transition, and how long to maintain current capabilities. In this way, companies can effectively extend equipment life while providing a secure path forward to the latest advanced control technology and functionality.

End-users should partner with an automation vendor offering multiyear support agreements that guarantee parts availability and support until a modernization occurs according to site operating plans.

Such agreements result in predictability by providing:

- Predictable costs for spare parts, support contracts and migration/upgrade kits
- Reduced risk and increased reliability via guaranteed maintenance
- Long-term protection from equipment obsolescence
In addition, suppliers should provide easy-to-implement migration tools that can save time and money. This includes tools assisting database migration and HMI integration, as well as wiring kits to reduce downtime while migrating legacy installations.

**Honeywell’s Approach**

As one of the industry’s leading automation equipment suppliers, Honeywell has an unsurpassed record in supporting its control system installed base worldwide. After its introduction of the first generation DCS in the 1970s, the company has followed a consistent support strategy, which includes integration of its older generation control system functions within the more recent ones.

Honeywell has a strong commitment to protecting its customers’ automation investments while they take advantage of the latest innovations. Many users today have multiple generations of Honeywell technology working seamlessly side-by-side at a single site, spanning controllers and other Data Hiway equipment dating from 1974 to the latest Experion operator stations.

Because of Honeywell’s open system approach, third-party legacy systems also can be upgraded and integrated affordably with a modern control platform. Alternatives for these migrations range from full migration of existing installations to varying options for incremental migration, which enable technology upgrade without any loss of production. Migrations solutions are available for: Bailey/ABB, Fisher PROVOX/Emerson, Foxboro/Invensys, Moore APAC/Siemens, Rockwell-ProcessLogix, Rosemount RS3/Emerson, Siemens-Teleperm M, and Yokogawa systems.

Honeywell’s migration solutions are specifically designed to provide industrial organizations with access to up-to-date automation technology without having to “rip and replace” their entire legacy hardware and software system (this process is often too time-consuming and impractical). Honeywell also provides guidance for both short- and long-term projects. Its migration specialists work with the end user to develop a comprehensive automation vision to keep pace with future needs, including:

- Strategies for migrating and supporting existing control system nodes
- Proposals for consolidating legacy control systems to drive down costs and enhance safety
- Recommendations for ensuring the reliability, robustness, security and future expandability of process control networks

**Technology evolution**

The next step in Honeywell’s support evolution is comprehensive integration of its legacy TDC 2000/3000 and TotalPlant™ Solution (TPS) systems with the state-of-the-art Experion® Process Knowledge System (PKS) control architecture. Experion PKS provides an open migration path allowing legacy systems to be modernized with new functionality that is standards-based and regulatory-supportive. Its embedded collaborative software technologies enable interoperability with a multitude of third-party products, and support an integrated collaborative operation from the field through the plant to the enterprise resource planning (ERP) business system level.

**Control-level integration**

A proof point for Honeywell’s philosophy of continuous technology evolution is its continuing integration of 30+ year-old TDC Data Hiway controllers, as well as TPS Process Managers (PMs) and High-performance Process Managers (HPMs)—the industry’s most widely implemented process controller first introduced in 1988. As part of the evolution, the HPM has been modernized to new Fault Tolerant Ethernet (FTE) technology and carries the name Enhanced High-performance Manager (EHPM).

With Honeywell’s approach, the control environment of new and legacy control systems can be integrated within a single, unified physical network for safety and control devices. This solution also offers a peer-to-peer communications capability for plant automation and safety system platforms. Legacy TDC/TPS installations are easily migrated to an Experion infrastructure while ensuring investment protection. Users can hot-swap their legacy controllers one at a time while maintaining existing connections to the Local Control Network (LCN) and DCS—all without disrupting normal operations.
In addition, control-level integration is supported on a single Fault Tolerant Ethernet (FTE) network. Controllers can be connected to a common network supporting both the Universal Control Network (UCN) protocol for the TPS control network and the Control Data Access (CDA) protocol for the Experion control network. Devices connected to the Ethernet network can use one or both protocols.

![Diagram of control environment integration](image1)

Figure 6. Honeywell integrates the control environment of new and legacy systems within a single, unified physical network.

Switchover of the UCN to the Enhanced Universal Control Network (EUCN) environment is simple and can be executed without field wiring connection or application changes. Once completed, the classic Honeywell UCN will be upgraded to EUCN, and the EHPM is connected via the FTE network with the other family of controllers.

**HMI replacement**

HMI replacement can be a technical challenge within any migration project, but with Honeywell’s approach, it has a number of advantages:

- Replacement can be done without taking the process off line or as a “hot cutover” to minimize disruption of the process.
- Plants can take advantage of operator effectiveness tools, such as those developed by the Abnormal Situation Management (ASM®) Consortium, which have immediate impact on safety and reliability by allowing the operator to better detect and mitigate the effects of incidents.

Based on Honeywell’s approach, an HMI migration involves testing to ensure the optimal redundant and non-redundant architecture, testing and documentation of performance limits, creation of faceplate and detail displays, and development of bulk build utilities to facilitate engineering.

![HMI display](image2)

Figure 7. Migration to Experion PKS allows for custom graphic displays based on ASM standards.
If done successfully, an HMI migration provides new “eyes” or improved vision into the process. That is because the HMI is usually the first place where a DCS ages.

HMI upgrades also open up the control infrastructure to a number of integration opportunities. For end users seeking to continue with their existing Honeywell Global User Station (GUS) graphics and functionality, and extend the life of their GUS nodes beyond the timeline of Microsoft Windows™ XP support, upgrading to Experion Station TPS (ES-T) / Experion Server TPS (ESVT) provides the benefit of continued GUS functionality on current Microsoft operating systems. This positions the node for both long-term support and an option to leverage additional functionality in the future. Within the ES-T / ESVT solution, an operator may utilize new Honeywell HMIWeb graphics or continue to use any GUS or Native Window graphics they have already built.

**Supervisory control migration**

Honeywell’s Application Control Environment, or ACE node, is an Experion node ideally suited for supervisory control applications and integration with third-party control systems. The Experion ACE software is based on Honeywell Control Execution Environment (CEE), the same environment used in the C200 and C300 embedded controllers. The ACE node is a full peer with any Honeywell C200/C200E/C300 controller, Fieldbus Interface Module (FIM)-connected device, or other ACE node on the network, which enables peer-to-peer access—not just supervisory access.

The TPS integration (ACE-T) solution extends the lifecycle of installed TDC components. The ACE-T can be easily integrated with a TotalPlant Network (TPN) system via a dedicated LCN connection and exchange control data with TPN-resident controllers, including 30 year-old Basic Controllers. End users are able run existing LCN points and Control Language (CL) program unchanged.

**Virtualization**

Experion PKS incorporates virtualization solutions to reduce costs by consolidating systems onto fewer physical computers, minimizing the number of PCs required for Level 3 and Level 4 applications. With virtualization, advanced control applications can be virtualized and run on a “virtual machine.” Plants may replace or upgrade physical machines without requiring operator system reinstallation or without any disruption to the operation of the virtual machine. This allows hardware and performance issues to be addressed in less time and with less plant disruption.

**Migration kits**

Honeywell’s Kits & Enhancements offering provides packaged solutions to enhance installed Honeywell equipment at specialized pricing. Users benefit from a cost-effective, low-risk upgrade path that allows for better long-term support for the system, along with increased performance and added functionality.

For example, migration kits exist to upgrade the Universal Station (US) to Experion. This extends the life of legacy investments and allows users not only to run on modern platforms that are fully-supportable with readily-available, field-replaceable spares, but also take advantage of the increased capabilities Experion provides over the previous generation controllers. In addition, Honeywell provides controller migration kits for Data Hiway devices to Experion controllers. These kits allow a user to take advantage of powerful C300 functions to improve their control as well as retain field wiring.

**Expected Benefits**

A well-executed migration plan delivers significant operational and business benefits through seamless integration of new and existing plant automation assets. By incorporating existing data, events and operator messages into the control architecture, and establishing a common operator interface, the legacy system appears as an extension of the new system.

For Honeywell customers, there is a logical path for migration of legacy Data Hiway and UCN installations with minimal investment cost, process disruption and changes to intellectual property. For third-party installations, migrations help end users move to Experion PKS seamlessly and enjoy proven support services.
With new automation technology, the remaining economic life of control and safety equipment can often be extended by 30-50 percent. Replications of controller software and common displays may reduce the engineering effort for control system expansion by up to 50 percent. In addition, improved reliability with modernization, better diagnostic features and the use of common network technology can enable significant maintenance cost reductions.

**Success Stories**

**Chevron Oronite, United States**

Chevron Oronite's Blending and Shipping (B&S) upgrade project at its Oak Point plant in Belle Chasse, LA, replaced an obsolete DCS with a state-of-the-art plant automation solution in line with today's technology. Key metrics for the additives facility depend on on-time shipments and on-spec blends. The new, reliable Experion PKS control system meets Chevron's automation requirements and corporate Information Protection (IP) compliance standards, and provides a proven road map to the future. Operators can now implement precise ratio control on a large continuous blending application.

**Borregaard, Norway**

Borregaard operates one of the world's most advanced and sustainable biorefineries in Sarpsbord, Norway. The facility migrated its legacy Foxboro IA, Rosemount RS3, Delta V, PLC, and Hiway assets to Experion PKS. This project provided a flexible, reliable and efficient automation platform. The biorefinery now has a centralized control room with a common operator interface for improved effectiveness and operator confidence. Personnel have access to more accurate information for faster decision-making, and an integrated HMI helps operators perform their jobs more efficiently and effectively.

**Kirishi, Russia**

The Kirishi refinery in Russia modernized its process automation infrastructure thanks to the migration of its Bailey and Foxboro HMI. In addition to enabling improved decision-making with better and faster access to process information, the technology upgrade simplified work processes through a single, common user interface and graphical displays between different process units. The migration also elevated performance levels through enhanced process reliability and stability—while retaining Kirishi’s investment in legacy Bailey controllers.

**Valero, United States**

The Valero refinery in Wilmington, CA, decided to upgrade its legacy Honeywell Universal Stations to Experion Stations. The facility hoped that moving from a traditional TPS system to a universal style of HMI would allow its operators to see more of the process. The upgraded station technology provides control room personnel with a view of alarm summaries, message summaries, and trends. This benefits the refinery not only in controlling processes for profitability, but also for safety.
IRPC Rayong, Thailand

IRPC Rayong, a large petrochemical processing operation located in Thailand, migrated to Experion PKS and Safety Manager from Siemens and Rosemount systems. Their old systems had exceeded their optimum usage, so in a steady push to maintain the most modern and efficient technology processes, IRPC turned to Honeywell to not only deliver a state-of-the-art replacement, but also accomplish the changeover under a tight schedule with minimal disruption to operations. IRPC increased safety, reliability and maximum operability by seamlessly integrating Experion with Safety Manager. The company also improved its ability to gather and share business-critical information.

Honeywell’s best-in-class technology and elite team of experts have helped IRPC to continuously benefit from overall improved operations. The integrated Experion-Safety Manager solution has proven to be highly robust and reliable.

Total, United States

Total’s refinery in Texas upgraded its legacy TDC 2000/3000 DCS to a full Experion PKS HMI, allowing the site to install new units with minimal operator impact. By implementing the Experion HMI, Total was able to integrate its TDC 2000 and TDC 3000 control assets to Experion with a single interface to operator consoles. This means operations can run the older units and the new units with different versions of Honeywell instrumentation. The migration solution has also increased the refinery’s capability in calculations, function blocks, and controls—providing increased efficiency—and ensures better support of advanced control and advanced regulatory control.

Konya Sugar, Turkey

Konya Sugar produces beet sugar for Turkish consumers and other regional markets. With Honeywell’s assistance, it updated an outdated Siemens Teleperm M control system to modern automation technology. This effort resulted in more than a 15 percent increase in sugar production. Konya realized a return on investment in less than one year, saving more than €300,000 through significant product quality improvements and increased sales.

Conclusion

Control system migration projects, although challenging, have the potential to deliver great value to industrial operations. The process used to arrive at migration timing and scope has considerable influence on whether that value is actually achieved. The most critical consideration is planning: the more upfront detailed planning performed, the lower the risks in the execution phase of a project.

A well-planned and executed automation migration ensures seamless integration of new technology and continuous lifecycle support for legacy systems. It also puts the end user in control of the plant modernization strategy, allowing them to determine component investments and how much longer to maintain current capabilities.

Honeywell offers a wide range of migration options and is the only vendor that continues to support 30+ year-old control systems. With its investment protection strategy, plants continue to operate and be supported on their existing equipment. Transition to new technology can be executed with practically no change to physical wiring and intellectual property. The availability of multiple controllers on a single network also provides freedom of choice for new installations or upgrades.

Honeywell can help industrial operations establish a secure path forward to current technology via its knowledgeable and experienced global resources. It employs flexible and comprehensive migration methods, planning, implementation and support. These solutions enable end users to document, replicate, enhance and extend the life of automation systems. Plus, Honeywell puts the end user’s needs and objectives ahead of a particular platform or modernization approach.

Whichever migration option is chosen, Honeywell’s world-class services organization stands ready to support customers’ systems throughout their entire lifecycle, helping sustain the benefits of investing in Honeywell technology.

References


For More Information
Learn more about how Honeywell’s migration solutions can protect investments, improve business results and reduce risks, visit our website www.honeywellprocess.com or contact your Honeywell account manager.

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