

**Lifecycle Services
Catalog**

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Introduction

To complement our industry-leading technology, Honeywell Process Solutions offers services to optimize performance and efficiency in all phases of the automation lifecycle. We help customers improve business performance and protect their automation investment with one of the largest global service and support organizations in the industry. This expertise is supported by more than 30 years of process industry experience and thousands of customers worldwide.



Honeywell knows the importance of aligning your service strategy with your business strategy. Whatever your business strategy, we've developed services around a framework that can help you achieve your long term objectives, while improving performance. We take a holistic view of what you need to support your automation investment through its lifecycle and take the time to understand your business objectives so we can help you develop a tailored support strategy that fits the unique needs of your organization.

Lifecycle support strategies can vary from industry to industry. Our services can address your requirements whether your strategy is:

- To address equipment breakdowns after they occur and need a rapid repair of down equipment
- To use a schedule to maintain equipment before it fails
- To determine your equipment's health and act only when maintenance is actually necessary
- To share the risk and benefits in an agreement between you and your service provider

Our services help you:

- Maintain and execute day to day tasks
- Support your systems and assets with access to Honeywell technical resources, and hardware and software upgrades
- Optimize the performance, capacity and availability of your system
- Change your system to upgrade or migrate to newer technologies

Whether your business demands regularly scheduled maintenance, regulatory compliance, long-term product support or a technology upgrade, Honeywell can offer a customized solution that fits the needs of your business with flexible maintenance and support plans, software and hardware upgrades and access to onsite or remote Honeywell technical experts.

Service Plans

Honeywell offers service plans to keep your system running at peak performance. Whether your plant requires a preventive or corrective maintenance, parts management or technical support, we have a plan to fit your needs.



Preventive Maintenance

Preventive maintenance service plans offer coverage during the principal period of maintenance as detailed for each piece of equipment and application specified in the service contract and at the frequency specified for each piece of equipment. Preventative maintenance includes process shutdown, sensor calibration verification for the sensors specified in contract, carry out system software backups, software maintenance as specified in the contract and the reporting of the maintenance activities performed.

Performance reviews and maintenance tasks executed under this program are based on the equipment in use, manufacturer's recommendation and age of the equipment and local environmental conditions.

Corrective Maintenance

Corrective maintenance includes all unscheduled maintenance actions performed to restore the system to a specified condition after the occurrence of a failure. The service representative on duty will expedite a solution in order to minimize downtime.

Radiological Services (QCS) North America only

The radiological services plan provides scheduled Honeywell radiation safety testing that is required by the Nuclear Regulatory Commission (USA). The results of the tests are documented and provided for your on-site records. In addition, the plan provides limited telephone assistance and consultation, and other specified services purchased on a time and material scheduled basis. For these services outside of North America, please contact your local service representative.

Service Plans

(continued)



Results Plus (QCS)

Honeywell offers continuing services including preventive and emergency maintenance, management of spare parts inventory, technical support, operator training and system performance with a goal of optimum uptime for QCS systems. Available options under the Results Plus service plan are:

- Preventative maintenance
- Corrective maintenance
- System performance
- Parts management (extended parts warranty, customer parts purchase plan)
- Radiation safety and assistance in complying with regulations

Results ROI

Results ROI services are comprehensive, cost-effective, targeted and tailored specifically for Honeywell Da Vinci QCS and MXOpen system users. These services can enhance business results by optimizing the process, improving product quality and ensuring targeted throughput. Results ROI customers can realize gains of up to 2 percent in production efficiency.

This service includes the support of Honeywell Process Knowledge Experts (PKE) available to the customer for implementation of our proprietary, best-available Process Knowledge Toolkit (PKT) for troubleshooting and analysis, and creation of a paper machine signature to benchmark performance. This service can be delivered in addition to traditional support services provided by Honeywell technicians.

Parts Management



Honeywell’s Parts Management program is a comprehensive, cost-effective alternative to purchasing and inventorying spare parts. You can save substantially by cutting inventory and reducing exposure to risk because Honeywell owns the parts – you make no capital outlay for spares. Honeywell manages the spare parts so you do not bear the cost of obsolescence, damage or shrinkage, and Honeywell supports greater uptime for the control systems and plant.

The three programs available for Parts Management are:

- Site Stock/Priority 1: The spare parts covered by this category are listed in a schedule within your contract with Honeywell and are identified as Site Stock that will be stocked at your site.
- Bonded Stock/Priority 2: Honeywell-owned spare parts are listed in a schedule within your contract and identified as Bonded Stock or P2 Stock and will be stored in sealed packages in a Honeywell facility. Access to this stock will be restricted to those who have purchased the Bonded/P2 Stock option. Access for ordering parts from the Bonded/P2 Stock will be within 24 hours of the time the order is received.
- On-Site Hot Spares: Honeywell-owned, functional “hot” spare system(s) will be stocked at your site. These systems will be used to test suspected defective parts from your system. If the functional “hot” spare systems become incorporated into your control system, then you will be invoiced at the current list price as established in the published Honeywell price book.

Extended Parts Warranty

Available for QCS parts only, Extended Parts Warranty is a fixed annual fee for replacement of parts determined to be defective as a result of normal usage or recommended for replacement by Honeywell during problem troubleshooting or preventive maintenance checks.

Parts Management

(continued)



Parts Exchange Service

Under the Parts Exchange Service, Honeywell will provide a discount off the spare part list price after a defective part is returned. This service applies only to Hiway parts.

Parts Management

Features	P1	P2	Extended Warranty (EPW)	Parts Exchange
Annual inventory assessment	✓	✓	–	–
Annual parts usage assessment	–	–	✓	–
Availability: 2 – 6 weeks	–	–	✓	✓
Availability: 24 hours	–	✓	–	–
Availability: on-site	✓	–	–	–
Replenishment: 2 – 6 weeks	✓	✓	–	–
Revision control	✓	✓	✓	–
Displaced hardware returned to Honeywell	–	–	✓	✓
Parts upgraded as system changes	✓	✓	–	–

Parts Replacement

Parts Replacement is optional to a Parts Management agreement or to an SESP agreement. With this service, Honeywell will provide all replacement parts used in preventive and corrective service at no additional charge. Unserviceable parts will be replaced, at Honeywell's option, by new parts or parts equivalent to new in performance. Replacement parts will be furnished on an exchange basis and replaced parts become the property of Honeywell.

Not included are parts used as a result of other than normal wear and tear, including, but not limited to, accidents, fire, water damage, negligence, misuse, or repairs, alternations, or modifications performed by persons not authorized by Honeywell. Upgrade kits are not included but are available at an additional charge.

Solutions Enhancement Support Program (SESP)



Services that focus on executing day to day tasks include Honeywell’s Solution Enhancement Support Program (SESP) for each of our major platforms: Experion, TPS, PlantScape and Quality Control System (QCS). SESP helps protect your intellectual and physical capital investments and offers flexibility and options that best match your site’s specific needs:

- Self maintainers who want to benefit from advanced technologies and functions of the latest software releases
- Mill/plant management who wish to migrate at their own pace
- Plants that place importance on keeping pace with the latest software functionality while having access to expert support
- Plants desiring to take advantage of remote connectivity to provide the fastest issue resolution possible

Following are the offerings available for SESP:

Value Support Flex

This package allows you to sustain the value of your Honeywell control system investment by offering telephone technical assistance and a subscription to software updates. This option allows you to purchase software upgrades and kits and enhancements at preferred customer pricing, letting you determine when to upgrade.

Value Software Flex

This option provides a subscription to software updates and upgrades to keep your system performing at its best. You may also purchase kits and enhancements at preferred customer pricing.

Value Plus

This package provides software upgrades and updates, telephone technical assistance, online support (web-based) and PID control loop diagnostics to boost productivity. Specialized annual customer reports and preferred pricing on kits and enhancements are also included.

Value Plus Connected

Value Plus Connected includes the benefits of Value Plus with the addition of a secure, remote connection to Honeywell’s global technical support team for faster and more accurate problem resolution. It also provides remote diagnostic analysis reports that can help identify opportunities for improving system performance.

Solutions Enhancement Support Program (SESP)

(continued)



The following options are available with SESP:

- **Training Match Fund:** This optional service is a fund that allows you to choose the method of training that is most beneficial for your employees' needs. You may elect this option by contributing up to an additional 10% on top of your SESP price. Honeywell will match the amount you contribute to give you a dedicated training fund. Training Match options consist of Honeywell Automation College training courses as well as Honeywell's advanced application training programs. For Automation College courses unrelated to advanced applications, Training Match funds can be applied to in-center regularly scheduled classes, open enrollment regional classes, self-study computer-based training and on-site standard courses (exclusions apply).
- **Hardware Refresh:** This optional service allows you to strategically plan your computer platform "refreshes" and finance the upgrade as part of your support program. You select your computer hardware upgrade from the kits and enhancements listing and determine when you want to perform the computer refresh during a prearranged timeframe within the terms of the contract, usually year two, three or four of a multi-year contract. The refresh is recommended to coincide with the computer warranty that you purchase (three-year extended warranty, the refresh is scheduled for the end of year three). Kits and enhancements must be identified by model number and must include an anticipated ship date (the anticipated refresh plan by year).
- **7/24 Emergency TAC Support:** This optional service allows access to the Technical Assistance Center 7 days a week, 24 hours a day for emergency situations only. Emergencies are defined as loss of view, loss of control or any situation that threatens the health or safety of the plant or personnel.
- **Global TAC Connected:** This optional service provides the ability to resolve problems faster and provides the foundation to allow remote diagnostics to help manage your plant or mill network and systems. If you choose this option, you may place a call to TAC and request remote connectivity for faster problem resolution.
- **System Performance Baseline and Customer Report:** This optional service (for TPS) will provide as part of this agreement one system performance baseline per LCN per year on your Honeywell connected system. The baseline provides an analysis demonstrating utilization and throughput of your system as well as providing recommendations for improvement.

Solutions Enhancement Support Program (SESP)

(continued)



SESP Utilization Report

One of the tools available with SESP is the SESP Utilization Report. This report provides the various categories of spending by your facility and provides the savings amount experienced as a result of the SESP agreement. The report addresses TAC calls, software upgrades, kits and enhancement discounts, Training Match funds and other services provided under the scope of the SESP contract.

Support Choice for QCS

An additional element of SESP is a support program for customers with Quality Control Systems. The program provides for ongoing server and workstation hardware and operating system upgrades while maintaining the existing application software. Support Choice for QCS offers continuous system improvement while ensuring better reliability and the lowest cost of ownership over the life of the system.

Remote Services

Honeywell can provide many of the skills and services necessary to maintain, upgrade and improve a process control system through a suite of secure remote services. The Honeywell Remote Network Service Center (RNSC) delivers services that ensure the optimal performance and administration of your process control network. Honeywell's Technical Assistance Center (TAC) provides remote troubleshooting of your process control system when difficulties arise and also offers remote support for loop management, advanced process control, QCS system support for paper machines and remote performance management of UOP operations on site.



Key benefits of remote services include:

- Increased availability through decreased unplanned downtime and faster resolution of problems
- Improved performance and proactive management of impending issues
- Reductions in human error through automation of routine administrative functions
- Heightened security profile, providing a defense against security breaches
- Informed, simplified trend analysis and planning for capacity improvements
- Easier access to expert analysis without added travel costs or delays
- The ability to provide cross-functional experts when required

Remote Connectivity

This service provides a secure connection for data transmission between the customer site and a secure Honeywell data warehouse for authenticated access only for remote analysis of data. This service can provide access to customer resources or other vendors as required by the customer.

IT System Administration Management

This service provides ongoing management of process control network (PCN) components such as routers, bridges and switches. Honeywell functions as a single responsible party for remote management functions related to active network components. Additionally, network infrastructure management addresses increasingly complex server administration within the PCN environment, including maintaining domain controllers and Microsoft system administration. Included is administration of local server user accounts, adds/changes/deletes of user accounts and password changes.

Remote Services

(continued)



Perimeter Management

Explicitly targets the management of firewalls and intrusion detection systems on the perimeter of a process control network infrastructure. Perimeter Management provides a single point of contact to implement rule modifications that are authorized by the customer. Also included are proactive maintenance and remote troubleshooting of the firewall infrastructure.

Operating System (OS) and Honeywell Patch Management

Process control vendors should verify that OS patches will not affect the functionality of the process control applications before implementing the patches. Because direct communication between the process control network and the enterprise network is not considered a best practice, it is preferable for the process control network to have its own OS patch management system. This service also includes providing guidance on installation of which Honeywell patches should be installed on which systems.

Virus Protection Management

Honeywell's Virus Protection Management keeps the process control network (PCN) systems up-to-date with antivirus definition, using an automated yet controlled process. Based on best practices, it is desirable for the PCN to have its own antivirus update server located on a PCN Demilitarized Zone (DMZ).

System Performance Monitoring

Tracks and analyzes network infrastructure component performance over extended periods of time before downtime or serious response time issues occur. Regular analysis of network performance data helps to identify and profile network capacity, network configuration, overall network health, and to define the network workload profile, such as peak usage times and days, utilization and response times. The service provides recommendations to help with long-term planning (forecasting), network redesign and situations that may affect the performance or availability of the network.

Application Hosting

Where a customer does not want to have to manage the software licenses, updates and overall system management of lower priority applications, Honeywell can host these applications and manage them remotely providing secure access for dedicated customer only use.

Remote Services

(continued)



Remote TAC Support

This offering provides the customer with remote support from the Technical Assistance Center (TAC) for troubleshooting, providing faster resolution time with immediate access to process control systems through a secure connection.

Advanced Applications Performance Management

This service tracks the operation of advanced applications to ensure these are operating and providing ongoing value.

Remote Loop Management

Provides loop and alarm analysis and guidance remotely using Loop Scout and a secure remote connection to make this data available for expert analysis in a secure environment.

Remote Performance Management

This service allows UOP experts to determine if the process objectives and constraints are correct and economically optimal for the customer to maximize throughput and yield from the catalysts and processes employed.

Certified Recycled Parts

Certified recycled parts are not new, but parts that go through a certification process to validate functionality. In most cases, the equipment has been previously used and decommissioned.

You can benefit from the availability of hard-to-find parts needed to maintain systems and productivity for legacy DCS or QCS systems, such as TDC 2000, TDC 3000 and TPS parts or sensors and MXOpen parts no longer in production. In addition to parts, assemblies such as consoles and complete nodes may be obtained. Honeywell can help recycle used equipment and possibly buy it back. A prorated warranty matching the warranty period of new build spare parts orders is provided on all certified recycled parts. Honeywell reserves the right to replace the product or credit the prorated value of the product.



Industrial Security Services



Security support services are designed to test, maintain and update your security systems. Local support response coupled with global industrial experience provides the necessary support to address the unique needs of process industries. Honeywell offers three levels of security support programs. Each level is designed to deliver maximum value for your site’s needs. Whether the desire is a program with flexibility or a complete support package, these services have been designed to be modular yet flexible. The three levels of security support programs are:

Secure Flex

A flexible, entry-level and expandable program that provides essential maintenance and inspection services. Secure Flex is designed for sites that may be a single site, few points of vulnerability, medium risk assets and low risk adverse.

Secure Care

A complete service platform to ensure sound and reasonable support of your critical security components. Designed for sites that may be a single site, resource constrained, multiple points of vulnerability, medium to high risk assets and are either moving toward or are in the process of moving to an integrated security system.

Secure Performance

All-inclusive service program that includes parts, labor and tools to ensure the very best support and tracking services. Designed for sites that may be single or multiple sites, resource constrained, multiple points of vulnerability, high risk assets and moving to an integrated security system.

Entitlement Description	Secure Flex	Secure Care	Secure Performance
Call center response	Entitlement	Entitlement	Included
On-site repair, adds, moves and parts changes	Entitlement	Entitlement	Included
Local technical response that can be followed with central TAC	Entitlement	Entitlement	Included
Scheduled test and inspection routes	Entitlement	Entitlement	Included
Scheduled preventative maintenance routes		Entitlement	Included
Software updates and patches	Entitlement	Entitlement	Included
Software upgrades	NA	Entitlement	Included
Bonded parts management	NA	Included	NA
On-site parts management	NA	NA	Included
Parts covered under contract	Billed as needed	Billed as needed	Billed as needed
Labor covered under contract	Billed as needed	Billed as needed	Included

Site Support Specialist/Labor Services



Honeywell's Site Support Specialists are highly trained and certified technicians. Certification requires special training and passing a high competency test structured around your Honeywell system configuration. The Site Support Specialists are up-to-date on current system technology, future roadmaps, interaction/interoperability with older systems/software, remote service capabilities and the value of advanced control software.

You can schedule a Honeywell technician to visit your site as a one-time event, or plan for monthly or quarterly visits. It will be more cost effective to purchase a block of hours. Technicians can provide daily support, augment local service projects or assist with coverage when employees take vacation time or have unexpected absences. If you have aging workforce issues or need to develop a new skill in open systems, you can use your local technician for operator training—just ask your local field service leader for a proposal.

Our site support capabilities include:

- Software maintenance, software enhancement and performance management services
- Hardware maintenance, asset management and modernization programs
- Network monitoring and management and resident support
- Compliance management and services application support services

Benefits Guardianship

Benefits Guardianship helps sustain the value of your advanced solution investments by offering telephone technical assistance and access to software updates and upgrades to keep your technology current. A monthly newsletter, online support, monthly usage reports, documentation updates and preferred pricing on selected services are also included.



The following advanced solutions are included in Benefits Guardianship:

- Uniformance – Plant history and information management
- Profit Suite – Advanced control and optimization
- Asset management and IntelaTrac
- Advanced alarm management
- UniSim – Engineering design and process modeling, operator training and simulation
- Loop Scout – Regulatory loop management
- Workcenter – Enterprise-wide data visualization and analysis
- Business FLEX – Production management and operations management, advanced planning and scheduling, blending and movement automation
- TotalPlant Batch – Batch automation and analysis

Benefits Guardianship

(continued)



Benefits Guardianship Options

The following options are available with Benefits Guardianship:

- **Training Match Fund:** This optional service is a fund that allows you to choose the method of training that is most beneficial for your employees' needs. For advanced applications courses, Training Match funds are restricted to training center based, computer based, and Internet based training courses. You cannot purchase third-party developed training courses, resold by Honeywell or otherwise, using your Training Match Fund. Other exclusions may apply.
- **7/24 Emergency TAC Support:** Depending on your site's needs, you may elect to purchase optional emergency assistance available 7 days a week, 24 hours a day for select advanced solutions.
- **System Performance Baseline and Customer Report:** This option offers one system performance baseline per LCN per year on your Honeywell connected system. The baseline provides an analysis demonstrating utilization and throughput of your system as well as providing recommendations for improvement.
- **Loop Scout/Alarm Scout Overview** — Select advanced solutions allow customers to submit plant data once a year to evaluate and benchmark overall performance in control loop and alarm management. The results compare your overall plant performance against performance rankings and industry benchmarks.
- **Annual Performance Assessment Audit** — Select advanced solutions allow for an annual audit to evaluate application performance. Assessment audits are typically performed remotely but may be performed via onsite visit depending on the support contract scope. Results are then reviewed with you to discuss current application status and improvement recommendations.

Global Technical Assistance Center (TAC)

Global Technical Assistance Centers (TAC) are the centers of expertise for Honeywell systems. TAC support helps resolve incidents, problems and requests quickly and is included in service offerings, such as SESP, or can be utilized and billed separately.



Global TAC Support Services

- Telephone support for Honeywell Process Solutions software and hardware installed on your systems
- Warranty support for all products under warranty, including introductory SESP for 90 days
- Control workarounds for critical problems that cannot be immediately solved
- Configuration support for users adding hardware or software functionality to their systems
- Product support for those users who need answers regarding Honeywell products
- Upgrade and installation support for customers enhancing their hardware or software
- Defect/PAR management to document and report defects to the Honeywell Engineering organization for resolution

Customer Communication

- Honeywell Information & News Tips (HINTS) sent to all SESP customers monthly
- Critical Problem Notification (CPN) sent to all affected customers
- Retrofit Announcement Letter (RAL) sent to all customers
- Be Aware Advisories sent to all SESP customers
- P3/CWS TAC Alerts sent to P3/CWS Field Service organization

Global Technical Assistance Center (TAC)

(continued)



Hardware support that TAC will provide:

- Assistance in diagnosing problems
- Parts assistance (identifying parts numbers, etc.)
- Report the need for Engineering Change Request (ECR) and at times provide prototypes
- Advice for seeking assistance from the referring customer to third-party suppliers

Software support that TAC will provide:

- Assistance in diagnosing problems
- System setup advice
- Disaster recovery advice
- Reporting of issues via the Software Change Request (SCR) system
- Software compatibility advice
- Advice for seeking assistance from and referring customer to third-party suppliers

Asia Pacific TAC

Established in 1993, Asia Pacific TAC serves Pacific, Southeast Asia, China, Taiwan, Japan, Korea and India with regional Global TAC centers in Singapore, Australia, China, Taiwan, Japan, Korea and India.

- Staffed with experienced engineers
- Available during normal hours (may vary by location)

Global Technical Assistance Center (TAC)

(continued)



Americas TAC

Established in 1973, the Phoenix TAC within the Solution Support Center (SSC) directly supports U.S. and Canada customers. In Latin America, regional customer care centers act as the first line of response.

- Staffed with experienced engineers, available during normal hours
- Emergency after-hours support

Established in 1999, the P3/CWS TAC provides technical and parts assistance to the P3/CWS customers worldwide. Engineers are located in Cincinnati, San Jose, Reno and Vancouver.

- Staffed by experienced engineers, available during normal hours
- Emergency after-hours support

Europe Middle East Africa (EMEA) TAC

Established in 1975, Brussels TAC offers second line response for the regional customer care centers, which are the first line of response for customers.

- Staffed by experienced engineers
- Available during normal hours
- Established in 1990, Kuopio DCS TAC in Finland provides technical assistance on TotalPlant Alcont/Printa and Experion with PMD controller products worldwide. Kuopio QCS TAC provides technical assistance on WIS, WMS and sensor products worldwide.
- Staffed by experienced engineers in each location
- Available during normal hours
- Emergency after-hours support for DCS, WIS and WMS

Continuous Web Solutions Support Program

The Continuous Web Solutions Support Program provides services that sustain and enhance the value of Honeywell Continuous Web Solutions systems. Honeywell will provide telephone technical assistance and access to Online Support that includes software hotfixes and communication tools.



Telephone assistance may include reviewing operational procedures, analyzing software and memory dumps, and recommending what diagnostics to use. TAC engineers may also request configuration and software data in order to determine if the problem is reproducible. Trained, experienced TAC engineers will provide troubleshooting telephone support and may request the remote connection to speed resolution. TAC will also provide prompt answers to questions regarding procedures, documentation, operation, service, training and system enhancements.

Profile Optimization Service

Profile Optimization service is focused on process improvements and optimization of cross directional (CD) controls.

The key element of this program is a specially trained, qualified technical expert in the application of CD controls and the various actuators for profile controls including the use of the IntelliMap tools. The plan includes standard services such as a technical expert, auditing and tuning of the CD controls, performance reporting and customer service documentation of the results of the services provided.



Loop Management

This periodic service identifies opportunity for capacity improvement and better efficiency through selective improvement of control loops. Control loop performance analysis is time consuming and requires higher level skills to interpret. This is an analysis service that provides those resources remotely and cost effectively. By analyzing and providing consultation on captured loop performance, you will increase plant throughput and reduce unnecessary product reprocessing and energy waste.



Honeywell uses the Loop Attainment benchmarks already performed at over 700 sites around the world. The offering entails:

- Two days of on-site review and prioritization of improvements—tools will be installed to support ongoing services
- One week of on-site loop improvement by Honeywell expert per quarter
- Monthly reports which include repair actions, Loop Attainment and estimated benefits

Conformance Management Services

Conformance Management Services help achieve compliance with the lowest total cost. These services reduce the total cost base by converting fixed cost to controllable variable cost, while improving your ability to meet the external (or internal) requirements placed on your manufacturing process by the U.S. Federal Drug Administration (FDA) and other regulatory authorities.



Conformance Management services can be customized with services from our industry-leading portfolio of offerings, including:

- Consulting
- Validation: Helps customers document that their automation systems perform as expected, in compliance with Current Good Manufacturing Practices (cGMP) including Title 21 Code of Federal Regulations part 11.
- Calibration: Specifically developed to help design, implement and maintain a cost-effective calibration quality system. The result will be reduced compliance risk with improved cost efficiency and competitiveness of your plant and mill.
- Compliance: Assists in attaining certification to ISO-9000 series standards or other compliance requirements by providing services that ensure proper calibration and traceability of instrumentation used to control and monitor processes and alarm operators.
- Inventory management
- Uniformity studies
- Certifications
- Metrology lab
- DocuMint software for calibration and documentation management
- Instrumentation and system modernization
- Standard operating procedures development service
- Audit support
- Software maintenance
- Emissions reporting

Kits and Enhancements

Kits and enhancement offerings provide a cost effective and low risk path forward to current technology, extending the life of Honeywell systems. Kits and enhancements include specialized pricing for packaged upgrade offerings for Honeywell systems. Running current hardware and software allows for better support of the system and increased performance and capabilities.



These kits allow upgrades to current platforms across many of the Honeywell product lines. Kits are available for the following:

- Station and Server upgrades (LCN connected)
- Controller upgrades (HPM and Universal)
- Processor boards
- Monitor upgrades (Flat Panel Display only)
- History Module upgrade (Single Board History Module)
- Legacy Input Output Module (LIOM)
- Quality Control Systems (QCS)

Document Management



DOC 4000

DOC4000 enables you to improve management of your automation systems by bringing together configuration data from automation hardware and software applications into a centralized database. By properly managing automation information and engineering configuration data contained in all levels of automation, DOC4000 is able to offer:

- Instant architecture diagrams
- Comprehensive documentation
- Integrated change tracking
- System-wide data audits
- Lifecycle automation management
- Integrity issue identification
- Support for OSHA 1910.119 and FDA 21 CFR Part 11

A rich web-based environment provides users with consistent tools and views to manage complex automation systems comprised of equipment and advanced solutions from multiple suppliers. DOC4000 greatly reduces engineering effort for support and maintenance while increasing data access and integrity for improved decision-making at all levels across the manufacturing facility.

DOC4000 supports a wide range of automation components spanning distributed controlsystems, programmable logic controllers, safety systems, advanced process control, data historians, instrumentation databases and more.

- Honeywell Experion, TPS, TDC 3000
- FSC, Profit Controller, PHD
- Emerson DeltaV, RS3, AMS
- Invensys Foxboro IA, Triconex Tristation, Triconex TS1131
- Yokogawa CS, CS3000
- GE Fanuc 90
- AspenTech DMCPlus, IP, IP21
- Bentley-Rebis
- Intergraph INtools
- OSI PI
- Rockwell SLC150, SLC500, PLC2, PLC3, PLC5

Lifecycle Management

Lifecycle Management (LCM) enables continuous evolution of technology while protecting your automation investment. LCM is a multi-year service agreement that guarantees asset support for Honeywell hardware and software products until they are modernized or retired based on your site strategy.



With LCM, you can begin an incremental journey to modernization, based on the needs of your plant or mill, budget and schedule. LCM offers flexibility in how you manage plant assets and predictability in how the choices are financed.

You choose when to modernize, which components of the solution to upgrade and how to fund the transition. LCM effectively extends equipment life while providing a cost-effective path forward to the latest technology and advanced control functionality. A complete LCM solution includes offerings from the extensive lifecycle services portfolio that best support your long-term strategies. These services are bundled into a single support agreement that ensures you achieve your automation goals.

Migration and Upgrades

Today's competitive environment 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 success. For industrial plants, migration challenges include selecting the right technology, ensuring operator acceptance, replacing HMIs, creating third-party interfaces, scheduling migration work and preparing for a system cutover. Now, more than ever, industrial operations need an easy, low-risk transition path to a modern control system architecture.



Unified Architecture

Unifying people with process variables, business requirements and asset management allows automation end-users to transform process control beyond traditional DCS functionality. By upgrading to a "process knowledge system," end-users can achieve improved operations, increased incident avoidance, better decision-making and enhanced workflows. Automation systems employing best-in-class technology built on a secure DCS architecture, integrate the entire scope of production, equally addressing the needs of operations, maintenance, engineering and business. In addition, these systems provide integrated physical security, emergency shutdown and failsafe controls.

Seamless Integration

With integration of new and legacy systems, controller data has the same look and feel regardless of where the data originates. Operator effectiveness is improved by merging multiple platforms. Plant personnel have seamless access to points, alarms, operator messages and history between servers. Moreover, they can access a single virtual database without duplicate configuration.

Migration and Upgrades

(continued)



Continuous Evolution

Effective 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. Continuous control technology evolution is the goal of lifecycle management 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 and progress incrementally as needs and schedules dictate.

Lifecycle Management

Honeywell's Lifecycle Management programs 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, 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. Honeywell offers 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:

- Locked-in pricing on spare parts, support contracts & migration/upgrade kits
- Reduced risk and increased reliability via guaranteed maintenance
- Long-term protection from equipment obsolescence

Migration Strategy

Properly planned and implemented, control system migrations enable end-users to migrate legacy control platforms at their own pace, allowing new controllers to be added at any time and integrated with existing controllers. It also permits migration of subsystems and function blocks to new controllers whenever the user decides. As part of good engineering and project management practices, plants should take the following steps during migration planning:

- Determine the best time to migrate
- Determine the best migration path
- Define the project through front-end engineering
- Use a proven approach with comprehensive checklists
- Develop detailed cutover plans
- Define intermediate operability and training plans

Migration and Upgrades

(continued)



Assess your current system. A system assessment is essential for determining currently installed assets, as well as identifying current maintenance costs. The assessment outlines areas for improvements, the anticipated value of those activities and specifies actions that will achieve improvements. The system assessment typically includes:

- Audit of the current system and process
- Recommendations for HMI migration and effective operator displays
- Recommendations for base regulatory and advanced control improvements
- Strategies for migrating hardware and software, and protecting current installation investments
- Plans for personnel training and implementation
- Recommendations for optimization and integration

Perform front-end engineering. As migration projects can be more complex than they appear at first glance, front-end engineering is critical before moving to the engineering phase. Issues such as space allocation, HVAC and power considerations can have significant impact when not identified early in the project. Upfront engineering defines the detailed migration work scope and estimates the overall cost of upgrades. Front End Loading (FEL) can identify potential difficulties with a migration project and provide plans to mitigate risks. An FEL study analyzes all aspects of the project, including mechanical, civil/structural, instrument, electrical and controls. The result of FEL is an overall design specification, outlining the strategy and schedule for migration activities.

Migration and Upgrades

(continued)



Optional Migration Methodologies

Industrial facilities should 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 system 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 main automation contractor must be committed to retaining the value of existing systems and continuing to offer parts and support for the legacy platform.

HMI migration. 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.

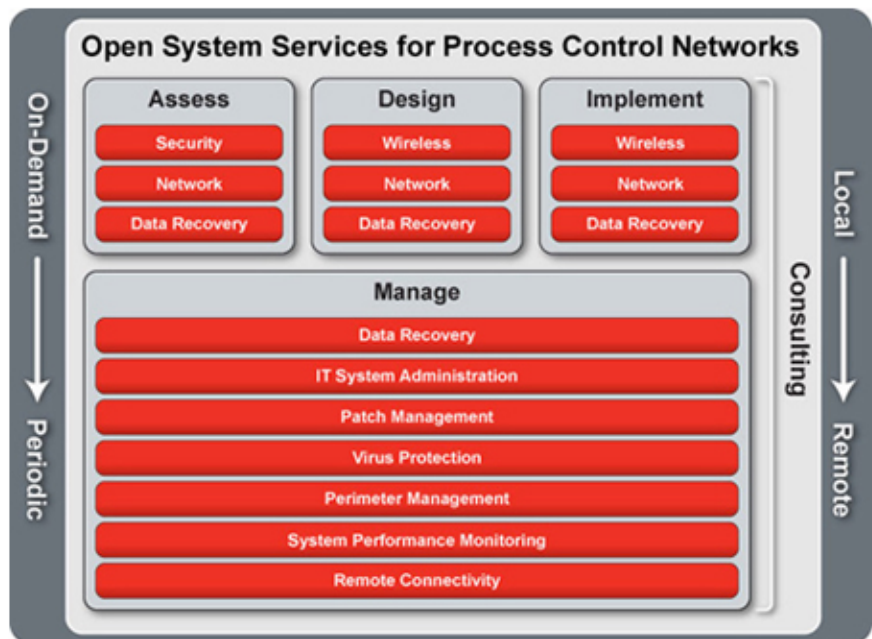
Console migration. Console migration focuses on the upgrade of the HMI. Upgrading HMI allows you to make use of existing LCN graphics while developing and implementing newer HMIWeb graphics. It also allows installation and use of multivariable controllers and other advanced application software and greater flexibility through open system platforms. ROI on advanced solutions can provide financial justification for hardware upgrades and allows access to advanced alarm management tools.

Open System Services

Open systems present the process automation industries with many benefits, including lower entry price, greater access to skills, wider technology selection and the ability to address broader business needs. Open systems allow for greater flexibility in hardware and software, but with that flexibility and the use of open system technology, the need to manage software releases, hardware compatibility and system integration have increased proportionally to the number of new releases of both hardware and software.



Honeywell has services to manage an open system environment. These services include assessment services that provide an evaluation of the current state of the process control network compared to industry standards and best practice recommendations to improve security and system performance. Design and implementation services give clear direction for how various components of the system are best installed to achieve the desired and intended results. Management services provide the resources to ensure that open systems perform at their optimum.



Training

Honeywell offers a variety of training courses to help customers maximize their investment in Honeywell systems. Classes are taught in training centers around the world or can be held at the customer site.



Automation College

Honeywell's Automation College offers courses to help operators, maintenance technicians, implementation engineers, system administrators and plant management leverage the capabilities of their Honeywell systems to maximize productivity and improve performance. Choose the training option that best suits your needs.

Flex Training

- Individuals learn at their own pace
- Learning modules teach specific tasks/functions
- Courses are easily modified to meet your exact job functions/expectations
- Individuals learn through hands-on participation
- Variable course length

e-Learning

- Web-based learning
- Brings the instruction to you without the cost of an instructor
- Economical - saves on travel and living expenses
- Can be integrated with your work environment
- Ideal as refresher training to maintain your knowledge and skills
- Cost-effective for individuals or groups
- Computer-based learning (CD-ROM)

Customer Site Training

- Emphasis on your site-specific equipment configuration
- Focuses on your points of emphasis
- Uses site procedures and terminology
- Supports site schedules, employee availability and experience levels
- Limited training systems available to ship to your site

Training

(continued)



Regional Training

- Brings the training to your area
- Saves training cost and travel time
- Flexible schedules

Seminars

- Conducted by subject matter experts
- Held at your site or our facility

Instructor-Based Courses

- Lecture based
- Interact with other students
- Extensive student lab time
- One to one student-equipment ratio

Train-the-Trainer Program

- Qualifies your staff to teach Automation College courses
- Provides qualified instructors with training materials
- Offers assistance with initial classes
- Provides access to Automation College training consultants

Refresher Training

- Maintains and enhances job skills
- Provides an effective method of staying current with new releases
- Offers regular and periodic programs for operators, technicians and engineers
- Can be incorporated into job assignment

Training

(continued)



Personalized

- Modification of existing courses
- Addresses special training needs

Training Needs Assessment

- Based on personnel interviews
- Includes review of equipment/technology
- Identifies primary job skills
- Provides training recommendations

Customized Training Solutions

- Provide tailored course offerings
- Develop customized training programs to support your installed Honeywell systems
- Tailored training solutions are available in a self-paced format or classroom style
- Delivered at one of our training centers or at your site

For More Information

To learn more about how Honeywell's lifecycle services can improve business performance, visit www.honeywell.com/ps or contact your Honeywell account manager.

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