Offshore Oil and Gas Solutions
Reduce Risk. Optimize ROI.
Solving the Greatest Challenges

Changes in oil demand and commodity pricing, scarce availability of new resources, and enhancing recovery are some of the factors compelling producers to look for better capital investment efficiency. Backed by Honeywell experience across the entire oil and gas supply chain, offshore producers are reducing their risks and optimizing their ROI with Honeywell solutions and expertise. Discover how Honeywell technology, equipment, systems, and process licenses can enable your assets to thrive despite high-impact business dynamics.

Lower Capital and Operating Costs

Today’s environment demands that you optimize offshore assets, decrease production deferrals, and maximize recovery and productivity while keeping costs under control. Remote operations and engineering can help you monitor and manage operational activities in real-time, regardless of your location.

Honeywell’s Experion® Process Knowledge System (PKS) with unique distributed system architecture and digital video management enables real-time remote monitoring, maintenance and operation of offshore facilities from a centralized onshore control center. With this solution, you can leverage expertise across remote sites, make faster and more effective decisions, and achieve greater productivity. Additionally, you can reduce helicopter flights, ship movements and supply of material to your offshore platform, and above all, improve safety in hazardous environments by removing personnel from remote locations.

Safe, Reliable and Efficient Operations

Honeywell extends safety beyond the conventional process safety systems to meet the ever-changing compliance needs of our customers and to mitigate safety threats facing the industry. From our SIL3 emergency shutdown system and hardened networks with protection against cyber attacks, to surveillance and physical security systems, we not only protect your processes, but also provide critical infrastructure protection for your people, equipment and facilities.

With the drive for increased safety and reduced costs, leaner offshore staffing levels are becoming the new norm. Honeywell’s UniSim® Operations Suite helps train process operators before they step foot in the control room, accelerating knowledge transfer and increasing competency levels.

Honeywell’s integrated control and safety system is approved by all major marine classification agencies for duty on floating production storage and offloading (FPSO); floating, storage and offloading (FSO); tanker ships; drill-ships; liquefied natural gas (LNG) and liquefied petroleum gas (LPG) carriers; and other floating and semisubmersible assets.
Discover Your Complete Offshore Provider

Honeywell’s solutions for offshore oil and gas extend beyond the control room. We offer solutions and services for all aspects of your offshore business, including high daily production rates through reduced unscheduled downtime and maximized performance of installed assets. In addition, our solutions help you adapt to production and process changes, and reduce the risks associated with offshore environments. We will also support you throughout the entire lifecycle of your assets.
Discover Effective Asset Management and Improved Performance

Honeywell can extend the service of its products and systems long into the future. On our older products, we’ve maintained backwards compatibility, parts and service for more than 30 years and have a migration path for all of our customers to protect their investments.

Manage Assets Effectively
The development of enhanced oil recovery (EOR) technology and subsea tiebacks has resulted in offshore platforms remaining in service far beyond their intended life spans. The ability to extend the life of equipment and platforms to recover new sources of oil and gas is critical. Assets that were once expected to last 20 years must remain in service for up to twice their original lifespan.

With our complete portfolio of wireless, asset management, smart instrumentation, and production surveillance solutions, Honeywell can extend the service of its products and systems long into the future.

Improve Overall Performance
Honeywell offers advanced instrumentation and a comprehensive portfolio of inventory management, custody transfer, production excellence, and operational performance software that enhance data visualization, exception-based monitoring (EBM) and remote maintenance. These solutions enable oil and gas firms to gain a competitive edge through greater productivity of assets and personnel.

Better Performance Through Digital Intelligence
Offshore operations are often faced with complex process decisions, requiring hours or days to measure the results. Honeywell’s Digital Suites for Oil and Gas combines Honeywell expertise in upstream production with our leadership in safety and performance. With Digital Suites technology, you can increase production performance and plant availability up to 5%. Upstream producers can achieve higher uptime and improved productivity through better operating decisions with six software suites based on proven and successful technology.

Operational Data
- Data integration, recording and visualization solutions to safeguard and analyze data, serve data to applications, and replay historical and real-time data at the production level and enterprise-wide to make your next decision a better informed decision.

Process Safety
- Unique solutions for effective alarm management, and continuous monitoring and validation of shutdown systems and elements aimed to ensure process safety, safe shutdowns and safe operation, and provide the means to prove systematic assurance of safe processes.

Equipment Effectiveness
- Solutions enabling continuous condition monitoring of various elements in the production chain that can compromise production uptime, including various types of equipment, control loops and instruments, and providing early indications to take prompt actions to minimize maintenance costs, maximize uptime and minimize deferrals.

Production Surveillance
- Includes applications that enable continuous monitoring of production at well, field and facility levels, quickly identifying underperformance to proactively ensure production targets are met and delivering accurate production data for allocation, accounting and reporting.

Operational Performance
- Enterprise information management and collaboration solution to make sense of information from operating facilities and across the enterprise, and provide better visibility into data when needed—in the proper context—to discover risks, opportunities and better collaborate and share knowledge to amplify scarce experienced resources.
Discover Lean Capital Projects

We know that you are challenged with complex projects that are increasingly risky, so Honeywell has revolutionized oil and gas automation and safety projects.

Integrating Subsea Controls and Equipment
Honeywell is at the forefront of new improvements in automation and topside integration of subsea equipment. We are a strong contributor to the MCS-to-DCS Integration Standard JIP (MDIS) and an early adopter of the new OPCUA-based Standard. In addition, FMC Technologies* has certified our Experion PKS TPU722 integration with their equipment, and we have completed dozens of projects not only with FMC, but also with many others. Honeywell can provide standardized human-machine interface (HHMI) and controls for both topsides and subsea, thereby reducing operator workloads, rounds, alarms, and topside footprints.

Integrating Contracting for Telecommunications Equipment
Honeywell takes on both the smallest and largest of telecommunications and telemetry contracts, either as part of the integrated control and safety system contract or in parallel with it. We maintain specialist engineers and centers of excellence for telecommunications and security to ensure the least-risk project execution and full life-of-asset support. Honeywell both manufactures communications equipment and is an integrator of other manufacturers’ telecoms equipment.

Standardized Enclosures and Optimized Control Rooms
Honeywell provides a range of services for design and construction of fixed and demountable control rooms and equipment enclosures. Design services include consulting on ergonomics and operator workload, and job design and compliance checking. We also handle contracts for full control room and equipment enclosure construction, and have developed standardized designs for popular equipment room and demountable control rooms.

Integrated Electrical Controls and Contracting
Offshore assets are large producers and consumers of electrical power and benefit from tight integration of electrification with the main operations. Honeywell provides electrical monitoring and control systems (EMCS) either in stand-alone form, or integrated or even embedded into the control and safety system. Our solutions control and optimize baseload and emergency generation, load-shedding and electrical distribution. Popular standards such as IEC 61850/ 60870 and PROBRUS® are used to integrate Honeywell’s SCADA/ECMS with intelligent electronic devices (IEDs), switchgear, and other electrical equipment. Our high-speed controllers are also enabled with the same integration standards to perform control of generation, load and distribution. Honeywell handles contracting for electrical, instrument, controls, and telecommunications (ICT) contracts, including those with e-house enclosures.

Integrated Compressor Controls
Honeywell is a specialist manufacturer of controls for compressors, turbines and other spinning and reciprocating equipment. We provide compressor controls using the high-speed modules from our Experion Controller family or work with your preferred compressor controls manufacturer. In any case, compressor controls can be tightly coupled with the main station controllers in compressor stations, including emergency shutdown (ESD), fire and gas detection, and security systems.

Compressor or pumping fuel costs are amongst the largest operating costs for upstream assets. Honeywell provides several solutions to optimize compressor and pump operations in real-time to extend equipment life and reduce fuel costs.

Gas Treatment Equipment
Honeywell UOP is a specialist licensor and manufacturer of gas treating and gas flare process topside equipment. Processes include bulk and ppm removal of acid gases and other contaminants, dehydration as well as heavy removal and natural gas liquids (NGL) fractionation. Honeywell’s technology uses a smaller footprint and fewer consumables than other solutions and is more resilient to floating marine movements. Honeywell can help expand the business model for your offshore assets by providing greater processing flexibility.

Integrated Inventory Management, Custody Transfer and Hydrocarbons Accounting
Improve the accuracy of your inventory export custody transfer and back-casting of production volumes to individual wells. Honeywell provides a range of solutions from tank gauging, instrumentation and inventory management software, custody meters and metering systems, to Digital Suites software that manages detailed hydrocarbons accounting across the full asset base, including full energy and mass balances. Improve asset performance with better accuracy and detailed knowledge of all your assets’ hydrocarbon movements.

Honeywell takes on both the smallest and largest of telecommunications and telemetry contracts, either as part of the integrated control and safety system contract or in parallel with it. We maintain specialist engineers and centers of excellence for telecommunications and security to ensure the least-risk project execution and full life-of-asset support. Honeywell both manufactures communications equipment and is an integrator of other manufacturers’ telecoms equipment.

Standardized Enclosures and Optimized Control Rooms
Honeywell provides a range of services for design and construction of fixed and demountable control rooms and equipment enclosures. Design services include consulting on ergonomics and operator workload, and job design and compliance checking. We also handle contracts for full control room and equipment enclosure construction, and have developed standardized designs for popular equipment room and demountable control rooms.

Integrated Electrical Controls and Contracting
Offshore assets are large producers and consumers of electrical power and benefit from tight integration of electrification with the main operations. Honeywell provides electrical monitoring and control systems (EMCS) either in stand-alone form, or integrated or even embedded into the control and safety system. Our solutions control and optimize baseload and emergency generation, load-shedding and electrical distribution. Popular standards such as IEC 61850/ 60870 and PROBRUS® are used to integrate Honeywell’s SCADA/ECMS with intelligent electronic devices (IEDs), switchgear, and other electrical equipment. Our high-speed controllers are also enabled with the same integration standards to perform control of generation, load and distribution. Honeywell handles contracting for electrical, instrument, controls, and telecommunications (ICT) contracts, including those with e-house enclosures.

Integrated Compressor Controls
Honeywell is a specialist manufacturer of controls for compressors, turbines and other spinning and reciprocating equipment. We provide compressor controls using the high-speed modules from our Experion Controller family or work with your preferred compressor controls manufacturer. In any case, compressor controls can be tightly coupled with the main station controllers in compressor stations, including emergency shutdown (ESD), fire and gas detection, and security systems.

Compressor or pumping fuel costs are amongst the largest operating costs for upstream assets. Honeywell provides several solutions to optimize compressor and pump operations in real-time to extend equipment life and reduce fuel costs.

Gas Treatment Equipment
Honeywell UOP is a specialist licensor and manufacturer of gas treating and gas flare process topside equipment. Processes include bulk and ppm removal of acid gases and other contaminants, dehydration as well as heavy removal and natural gas liquids (NGL) fractionation. Honeywell’s technology uses a smaller footprint and fewer consumables than other solutions and is more resilient to floating marine movements. Honeywell can help expand the business model for your offshore assets by providing greater processing flexibility.

Integrated Inventory Management, Custody Transfer and Hydrocarbons Accounting
Improve the accuracy of your inventory export custody transfer and back-casting of production volumes to individual wells. Honeywell provides a range of solutions from tank gauging, instrumentation and inventory management software, custody meters and metering systems, to Digital Suites software that manages detailed hydrocarbons accounting across the full asset base, including full energy and mass balances. Improve asset performance with better accuracy and detailed knowledge of all your assets’ hydrocarbon movements.

Honeywell helps offshore customers achieve capital savings by as much as 30% by taking automation off the critical project path. Parallel engineering and standard cabinet design, along with three enabling technologies—Cloud Engineering, Universal Channel Technology and Virtualization—are key elements of Honeywell’s lean automation engineering methodology, LEAP™.

Lean Capital Projects
Honeywell helps offshore customers achieve capital savings by as much as 30% by taking automation off the critical project path. Parallel engineering and standard cabinet design, along with three enabling technologies—Cloud Engineering, Universal Channel Technology and Virtualization—are key elements of Honeywell’s lean automation engineering methodology, LEAP™.

Artificial islands are an effective solution for shallow offshore fields.

Large Gas Condensate Field and Pipeline in Kazakhstan
Honeywell is providing sustainable development, extending new applications that span from the wellheads to oil car and loading rigs, and improving control performance by introducing advanced control algorithms.

Honeywell’s Experion PKS simplifies all automation functions to reduce operating and maintenance complexity.
Discover the Highest Accuracy in Measurement and Sensing Instrumentation

Honeywell offers a comprehensive portfolio of process instrumentation that enables your operators to better manage and optimize their offshore assets.

Robust and Accurate Instrumentation Portfolio
Honeywell’s portfolio includes pressure and temperature sensors, flow meters, level transmitters, panel-mounted controllers, analytical equipment and control valves, combined with software solutions and open interfaces for easy data access. Honeywell’s integrated control and safety system can provide complete instrument asset management via HART®, PROFIBUS, PROFINET®, FOUNDATION Fieldbus, and other standards. Honeywell can remove project risk by expert handling of MCC and MV contracting for offshore assets.

Driving New Technology
In addition to Honeywell’s leadership in process automation, we have extensive experience on platforms, FPSO facilities projects and subsea integration. Our technology provides simplified project implementation and higher reliability through direct, automated interfaces that reduce engineering effort and have a smaller physical footprint and weight on platforms—resulting in lower capital and maintenance costs. Honeywell’s IEC61850-based power management system allows all onboard power generation, switchgear and motor controls to be managed and controlled from the same system that controls wellheads and topside processing.

Global Experience Delivered Locally
Honeywell’s people and global process methodology are unsurpassed. Our connected, global team of experts brings advanced technology to the industry and has the know-how to apply it reliably and consistently, wherever you need it around the world. Honeywell has personnel ready to address all your oil and gas needs, from project scoping and implementation to round-the-clock local service and support. With more than 5,000 engineers and scientists in research, customer consulting, product and software development; 2,800 R&D employees; 400 researchers with PhDs; and 3,915 active patents; Honeywell provides innovative solutions to meet your most challenging problems.

Why Honeywell?
At Honeywell, we believe your success is our success. We are focused on your offshore oil and gas production needs with customers guiding the development of our applications and solutions. Honeywell’s global presence allows us to consistently deliver and support offshore assets, whether they are in the North Sea, Gulf of Mexico, Africa, Middle East, or Asia. With one of the most comprehensive portfolios of advanced products, solutions and services in the industry, Honeywell is your long-term lifecycle partner. Honeywell Process Solutions has successfully delivered numerous main automation contract (MAC) projects on time and on budget. We have a proven track record of supporting your installed products and systems.

Offshore Oil Platforms in the South China Sea
Honeywell has been recognized for outstanding performance in the delivery of a full automation system along with integrated solutions for control and safety using Experion PKS and Safety Manager.

Offshore Platforms in the Gulf of Bahrain
Honeywell designed and implemented the integrated process automation and control system for one of the world’s largest gas-to-liquids plants.

Offshore Oil Platforms in the North Sea
Adding Experion PKS and remote operations capabilities to existing control and safety systems optimizes performance.

Oil Production in Sakhalin Shelf, Russia
Honeywell was asked to upgrade the first Ice-Class Offshore Stationary Platform to Experion PKS and improve safety by installing DynAMo® Alarm Suite.
Reduce Risk. Optimize ROI.

For More Information
To learn more about Honeywell's Offshore Oil & Gas Solutions, visit www.honeywellprocess.com/oilandgas or contact your Honeywell account manager.

Honeywell Process Solutions
Honeywell
1250 West Sam Houston Parkway South
Houston, TX 77042
Honeywell House, Arlington Business Park
Bracknell, Berkshire, England RG12 1EB
Shanghai City Centre, 100 Zunyi Road
Shanghai, China 200051
www.honeywellprocess.com

Experion®, UniSim® and DynAMo® are registered trademarks, and LEAP™ is a trademark of Honeywell International, Inc.

*All other trademarks are the property of their respective owners.