

Honeywell
THE POWER OF **CONNECTED**

NEOM



Honeywell and NEOM

Creating the Land of the Future Together



INTRODUCTION

Honeywell applauds the unrivaled concept of NEOM, a new kind of tomorrow in the making. As a long-standing partner of the Kingdom of Saudi Arabia, Honeywell is honored and proud to present an introduction of its technologies and solutions, which we believe can play a key role in helping to write humanity's next chapter.

Our company has a rich history in providing technology solutions to nations and corporations around the world. For more than a century, Honeywell has been critically involved in enhancing local infrastructures—providing more efficient, sustainable living for the people of ambitious and rapidly developing localities.

Comprised of Connected Energy and Utilities, Building, Plant and City Solutions, Honeywell's suite of critically connected

solutions are uniquely positioned to help NEOM build the foundation for its groundbreaking ambition: creating a land of the future where the greatest minds and best talents are empowered to embody pioneering ideas and exceed boundaries in a world inspired by imagination.

Our ongoing commitment to innovation in forward-trending technologies, such as cloud and on-premises IoT infrastructures, sensor technology, artificial intelligence and virtual and augmented reality technologies, ensures that we continue to deliver on unmatched value through The Power of Connected.

We are looking forward to working with NEOM as we partner to turn this visionary concept into a new kind of tomorrow, ushering in the next era of human progress.

Operating in more than 70 countries, Honeywell is a Fortune 100 software-industrial company that delivers industry specific solutions that include aerospace and automotive products and services; control technologies for buildings, homes, and industry; and performance materials globally. Our technologies help everything from aircraft, cars, homes and buildings, manufacturing plants, supply chains, and workers become more connected to make our world smarter, safer, and more sustainable.

WHO WE ARE

Honeywell Solutions Enabling NEOM Priorities



Connected Energy and Utility
Advanced capabilities to help utilities transform operations, reliability and environmental sustainability.



Connected Building
Improved asset optimization and performance through Outcome Based Services for greater comfort, safety, and convenience.



Connected Plant
Augmented performance of process, people and assets for optimized throughput.



Connected Worker
Enhanced workflow and warehouse solutions for improved worker productivity, safety and compliance with regulations.



Connected Supply Chain
Improved process optimization and inventory tracking to reduce costs and increase sales.



Connected Vehicle
Optimized automotive cyber security for fleet protection and integrated health management to reduce unnecessary repairs and costs.



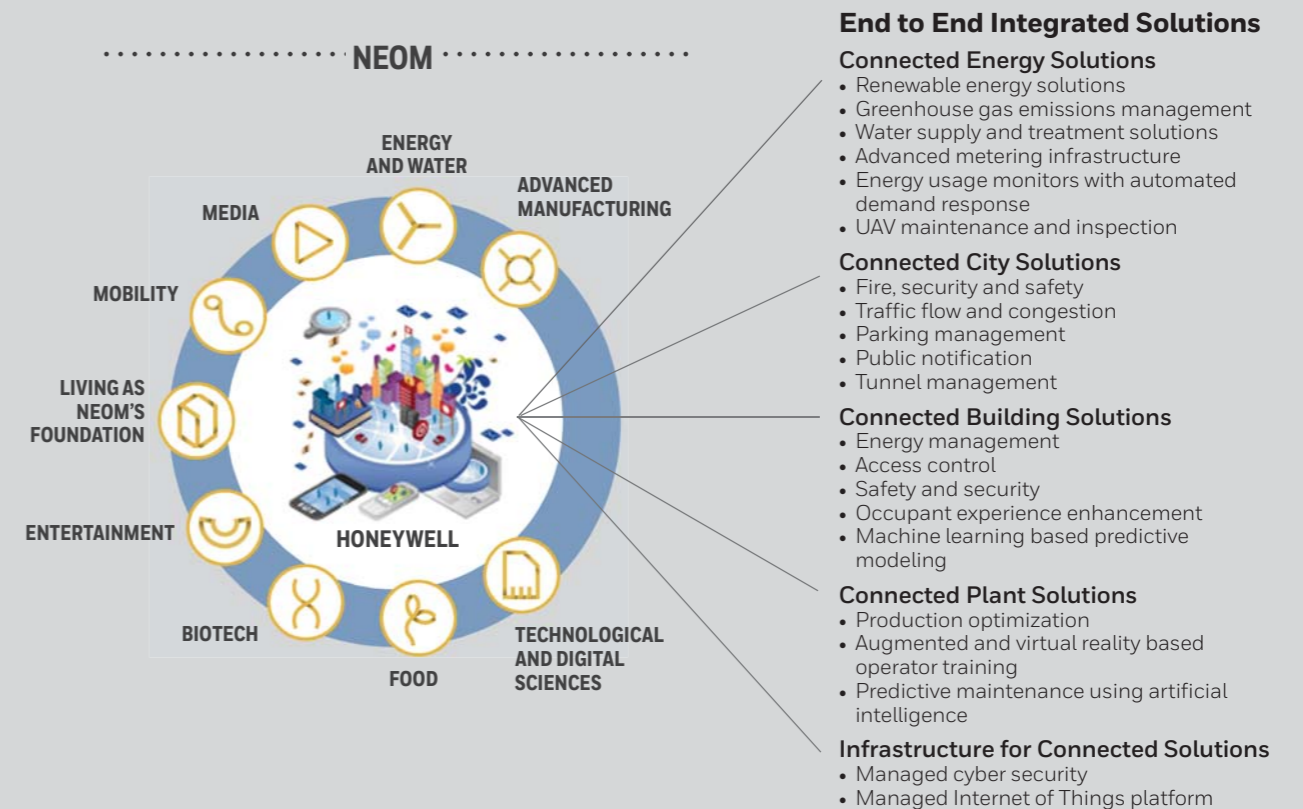
Connected Home
Increased peace of mind for home safety, security, comfort and savings.

NEOM: Where a New Way of Living Begins

NEOM, the world's most ambitious project, will change the way we live and work forever, with endless potential that fosters the exchange of ideas to get things done. This trailblazing initiative underscores Saudi Arabia's commitment to diversifying its economy and putting itself at the forefront of the world's technological advances.

Honeywell has been present in the Kingdom of Saudi Arabia for more than 50 years. We have a Saudi-led workforce of more than 600 employees in the Kingdom, operating from six principal bases across the country, including Riyadh, Jeddah, Yanbu, Jubail, Dammam and Dhahran. With an established local presence, the skills of our 130,000-strong global workforce and an unrivaled portfolio of innovative connected solutions, Honeywell is an optimal technology partner to help build the truly global culture that is NEOM.

Honeywell Connected Solutions Align With NEOM's Tenets





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CONNECTED CITY



Connected City Solutions

Living in NEOM means being a part of a forward-looking society that's built on a reliable foundation of safety. To that end, Honeywell offers a suite of robust end-to-end security solutions that will drive the strong sense of comfort and protection expected by its residents. Designed to enable citizen engagement in critical smart infrastructure projects—including surveillance, gas and electric management, water and waste management and worker safety—Honeywell's Connected City Solutions are well positioned to contribute to a superior quality of life for people living in NEOM.

Honeywell's award-winning Command and Control Suite coordinates enterprise-wide security and facilities management across city governance stakeholders. By managing incidents and measuring operational performance, this solution provides immediate support in case of emergency, improved means of communication and an overall improved city experience.

Citywide surveillance protocols also serve as an important backbone to ensuring the comfort and security of any city's residents, and NEOM is no exception. Honeywell's city surveillance solutions safeguard a city and its inhabitants through sophisticated video management systems and intelligent analytics. Take Bhubaneswar in Odisha, India, for example. The smart city wanted to secure its residents and visitors through the best technical, financially viable surveillance systems available. Working with Honeywell, they implemented a suite

of modular, scalable solutions comprised of hundreds of closed-circuit television (CCTV) cameras and automatic number plate reading cameras, installed in strategic locations across the city—all operated from one command and control center. Helping the city forge a path toward a new era, Honeywell's surveillance solutions have enabled their police force to reimagine the way it uses technology for better security, crime prevention and traffic control.

Honeywell's Connected City Solutions also offer integrated security capabilities for ports, which include turnkey solutions for communication, navigation and surveillance, to ensure airport and seaport safety while minimizing cost. In fact, by leveraging Honeywell's security solutions, including the Honeywell New Airfield Guidance System, Dubai Airport reduced incursions by 70%, while lowering emissions by 7.5K tons for an annual cost savings of roughly \$800K. Meanwhile, Port of Wilmington, one of the busiest import/export seaports in the U.S., used Honeywell's MagnaView Camera Systems, which contributed to complete security of its perimeter and compliance with Department of Homeland Security standards.

Similarly, our tunnel control solutions offer traffic analytics and guidance, fire prevention, airflow management and lighting control for roadways, while our future-proof security management systems for stadiums protect hundreds of thousands of spectators each year.



1 CONNECTED ENERGY AND UTILITY

Connected Energy and Utility Solutions

As NEOM pioneers the future of energy production, use and storage, a program that leverages innovative technologies will be critical. Honeywell can help NEOM achieve a society fully powered by renewable energy and forward-looking energy storage with our Connected Energy and Utility Solutions. Honeywell's proven technologies harness the power of energy from renewable sources, such as wind, solar, wastewater, biofuel and more, to maximize usage and increase efficiency. Our integrative energy management solutions help utilities improve facility sustainability and provide reliable energy for a longer life with significant energy and cost savings.

Honeywell offers Smart Grid Solutions for wind and solar input, wastewater management, renewable energy farm maintenance and inspection to enable efficient, intelligent energy storage for improved power quality and greater renewable penetration. Our smart wireless control, monitoring and metering capabilities for lighting sources, and monitoring and metering for electric, water and gas, work together to ensure overall usage efficiency. By enabling automated demand response, these capabilities help companies use energy more efficiently, mitigate rate spikes and reduce their fallback on fossil fuel.

Honeywell's Connected Energy and Utility Solutions have made significant contributions to organizations around the world. In the U.S., a leading energy company turned to Honeywell for a proactive data-to-knowledge program for improved net income and infrastructure reliability in support of their renewable energy initiative. Honeywell implemented an end-to-end Connected Plant system, which optimized

their supply chain, reduced total cost of ownership and increased generation-to-distribution reliability. As a result, the energy giant now has an integrated renewable energy management system that offers predictive insights for cost-saving energy efficiencies and bottom line growth.

Meanwhile, in Germany, Honeywell's Experion® Process Knowledge System helped turn hazardous waste into clean energy at the world's largest chemical complex. Thanks to Honeywell, the chemical producer's waste incineration complex now has one of the most modern control rooms in the world—complete with plant-wide monitoring capabilities, better safety and fire protection protocols and more user-friendly lighting control for improved operator conditions.

The Honeywell Connected Energy and Utility program also includes Unmanned Autonomous Vehicle (UAV) Solutions, which support standardized, safer and more efficient inspections with deeper insights. For example, using our UAV inspection service, utilities can perform routine inspections of substations, transmission towers and power lines, so they can organize and create standards around routine and crisis-response inspections.





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CONNECTED BUILDING

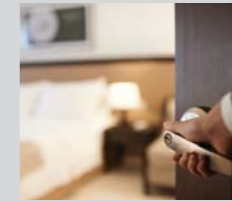
Connected Building Solutions

NEOM aspires to herald in the future of human civilization by providing its residents with an idyllic lifestyle unmatched by any other. Honeywell's Connected Building Solutions offer the systems, technology and services to help NEOM achieve that goal through smarter resource management and usage efficiency.

From large commercial buildings to university campuses to hospitals and more, Honeywell's Connected Building Solutions help transform and protect infrastructures around the world while minimizing energy costs and environmental footprints. In the United Arab Emirates, for example, a large-scale skyscraper turned to Honeywell for an innovative technology solution that could help them balance superior occupant experience with resource usage efficiency. After implementing Honeywell's Outcome Based Service (OBS), the iconic building now benefits from a 99.95% resource availability rate, while unplanned maintenance has dropped by 80%.

Honeywell has also been a long-standing partner to the healthcare industry. Our energy management and airflow solutions for hospitals deliver substantial energy savings while ensuring patient comfort—across the globe. In Riyadh, for example, Honeywell is working with King Fahad Medical City, while in the U.S., Honeywell subsidiary Phoenix Controls retrofitted 23 operating rooms at Florida's UF Health with full automation using venturi valves, resulting in improved airflow and a 32% energy reduction.

Our guest experience and energy management capabilities help the hospitality industry balance a superior guest experience with usage efficiency. After implementing Honeywell's collaborative room automation platform, INNCOM, Fairmont Group's hotel in China reported an 80% positive guest review rate and a 38.8% energy savings, while Crowne Plaza Abu Dhabi-Yas Island achieved a



Reducing Hotel Energy Use

Honeywell's INNCOM systems have been installed in more than 1.5 million hotel rooms worldwide. INNCOM systems reduce energy consumption by using sensors, switches, and intelligent servers to determine which rooms are in use or vacant and automatically adjusting temperature settings. We have fire, security, and building technologies in use today throughout Makkah's expanding hotel sector.

three-fold ROI and a 25% improvement to their sustainability metric using Honeywell's Attune Advisory Services operations awareness solution.

Honeywell's Connected Building Solutions also serve convention centers by offering energy management capabilities, future-proof technology and energy efficient AV systems, while colleges and universities rely on Honeywell to conserve energy, leverage renewable energy sources and optimize building operations. Our proven track record has been noted by a number of educational institutions, including Colby Community College, who realized \$1M in operational and energy savings from Honeywell's renewable energy technologies and infrastructure upgrades, and Eastern Illinois University who cut energy use by 6.2M kilowatt hours by way of its new Honeywell-led Renewable Energy Center. Locally, both Prince Mohammad University and Princess Nourah University have also turned to Honeywell for Connected Building expertise.





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CONNECTED PLANT



Connected Plant Solutions

The future of manufacturing includes new materials in composites and metals, 3D printing, robotics, vehicle manufacturing and more. Honeywell provides innovative Connected Plant Solutions to enable NEOM to realize that future.

Offering enhanced connectivity solutions that combine innovation, experience and technology, our Connected Plant Solutions help businesses solve their most complex manufacturing challenges by improving productivity and operational efficiencies for greater throughput and reduced costs. In fact, one Asia-based oil refinery used Honeywell solutions to optimize performance through analytics and operational recommendations and saw an 8% increase in naphtha capacity, while Al Waha Petrochemical benefitted from more than a \$2M profit increase using similar Honeywell capabilities.

We also offer connected maintenance solutions with artificial intelligence data processing to help plants improve maintenance cycle time, reduce misdiagnostics and eliminate unscheduled downtime. Our Operator Training Solutions,

on the other hand, support safe, reliable and profitable process operations using augmented and virtual reality and computer-based training simulators to train operators. Using Honeywell's ConnectedPlant UniSim® Competency Suite, Shanghai SECCO Petrochemical Company expects up to a 75% improvement in operations knowledge retention compared to other learning methods.

Additionally, as we usher in an era of automation and data exchange in manufacturing technologies, Industry 4.0 will play a key role in advanced manufacturing. One of the main tenets of Industry 4.0 is the Industrial Internet of Things (IIoT)—or the ability to get greater visibility of, and value from, operations by connecting the large number of hardware systems that exist within typical industrial operations. Honeywell's manufacturing plants are implementing Industry 4.0 best practices, including additive/3D printing, assembly and robotics and digitization to deliver faster time-to market, improved productivity and cost reduction.



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INFRASTRUCTURE FOR CONNECTED SOLUTIONS



Infrastructure for Connected Solutions

NEOM's vision of a complex multi-functional, self-sustaining, futuristic city enabled with the Internet of Things (IoT), advanced digital capabilities and autonomous, self-restoring infrastructure will require strong cyber security and infrastructure capabilities. Honeywell Digital Solutions, including Managed Cyber Security and developer eco-system-enabled IoT platform, can provide key infrastructure capabilities for digitizing NEOM, end to end.

Honeywell IoT Edge technology helps connect devices collect data, bring the power of analytics to onsite locations and manage the transfer of data to the cloud in a fast and secure manner. Our Edge platform enables devices at scale with mass asset management services, providing the ability to create a digital twin while also offering augmented reality (AR) or virtual reality (VR) visualization tools. Used by Honeywell developers, strategic partners and eco-system developers alike, Honeywell IoT Edge provides device management capabilities, such as firmware updates, device authentication and connectivity—from simple singular devices to very complex multi-tiered on premises hierarchy

to support the development of cloud-connected solutions.

Our IoT Data platform enables data collection from IoT devices, client business systems, third party data and public data sources, and provides tools to ensure data governance with data rights and usage, as well as long- and short-term storage with streaming data management and data monetization. Our IoT Analytics Platform uses Machine Learning and AI capabilities to analyze the data and generates actionable insights, which can be used for predictive maintenance, asset tracking, disaster prevention or even supply chain planning.

Through Honeywell Secure Connection, we also provide encrypted communication capabilities, which protect data even through the network. These cyber security management solutions provide customers with unparalleled visibility into, and control of, the system as well as the cyber security conditions of their control network infrastructure, while our award-winning Secure Media Exchange provides control and visibility of removable media use.



CONNECTED CITY



CONNECTED ENERGY AND UTILITIES



CONNECTED BUILDING



CONNECTED PLANT



INFRASTRUCTURE FOR CONNECTED SOLUTIONS



Honeywell and NEOM

Stepping Into Tomorrow, Together

Through renewable energy, building, security and technology capabilities, Honeywell's Smart City Solutions are poised to drive NEOM's priorities. A global company in operation for more than a century, Honeywell is an established thought leader with a dedicated team of subject matter experts who continuously share best practices on what can and will enable smart cities of the future.

By adding elements of 'smartness' to our industry-leading expertise in hardware, firmware and software, Honeywell is building future-ready infrastructures and services that improve the quality of life for people around the world.

As NEOM becomes a leading global hub that exemplifies the future of human civilization, it will offer its inhabitants an idyllic lifestyle with exceptional economic prospects. An aspirational society that will demonstrate the future of humanity, NEOM is set to attract top talent from around the world to innovate like never before and drive the growth of this zone and its residents.

A departure from traditional urban planning, the new technology of NEOM serves as the blueprint of its infrastructure framework—and Honeywell is the ideal partner to help transform that blueprint into reality. What's more, Saudi Arabia's

Vision 2030 hails the ambition of its people and the potential of the younger generation, and Honeywell's strong employee presence in Saudi Arabia pairs well with the Kingdom's aspirations for its workforce.

Just as NEOM is pushing the boundaries in human civilization, Honeywell is pushing the boundaries in smart technology that transforms the way people live and work. Honeywell is honored to offer the technological expertise and groundbreaking innovation that will support the city of NEOM, and ultimately contribute to GDP growth in the Kingdom.

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