



INNOVATION IN PRACTICE

Integrated Solutions for Connected Healthcare

For more information

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Honeywell

Your Challenges are Connected

Aging demographics. Chronic diseases. Limited resources. Stricter scrutiny and regulations. In the coming years and decades, healthcare faces a surge in demand coupled with more rigorous cost controls. These changes present both new **opportunities** and significant **challenges** to old processes and infrastructure.

With Honeywell, Your Solutions are Connected as Well

Honeywell can help: Institutions that effectively integrate their hospitals, clinicians, and patients for connected care will find that they're prepared to meet their challenges with leaner operations that deliver safer, more effective healthcare.

Honeywell is a Global Leader in Connected Healthcare

With more than 50 years' experience in hospital environments throughout the world, we understand the complex, competitive, and highly regulated world of healthcare. We design solutions to connect your hospitals, clinicians, and patients for greater integration now so you can ensure patients are healthier, today and tomorrow.



The Connected Hospital

The digital hospital automates and integrates infrastructure systems to ensure rapid information flow, comprehensive monitoring, and more agile operations, improving your organization's performance so you can deliver a smoother patient journey.



The Connected Clinician

Connected clinicians achieve higher productivity, fewer errors, and greater patient and staff satisfaction by using technology to automate clinicians' workflows and communications.



The Connected Patient

Connected patients receive clinician monitoring within the hospital and beyond, improving their health and independence while reducing costs and readmissions.

Care that Connects

Higher quality of patient care.

Lower operational costs.

Greater satisfaction and safety for patients and staff.

And new revenue streams.

A Safe and Easy Arrival

The Connected Hospital

Integrating building controls, security, alarm management, nurse-call, real-time location, and more enables intelligent monitoring for smoother patient flow and rapid responses.

Convergence:

Infrastructure integrates data from numerous inputs to enable real-time decision making.

Automation:

Automated workflows not only reduce labor – also increase speed, accuracy, and reliability.

Safety: Integrated solutions provide comfort, safety, and security with greater visibility and faster responses.

Control: Building management eases workload, reduces failures, minimizes maintenance and costs.

Eco-Friendly:

Greener energy, paperless operations, reduced energy consumption, and reduced waste.

Site-Wide Monitoring and Protection

Honeywell cameras and video analytics provide site-wide monitoring with proactive alerts about suspicious activity, and integrate with controls such as door locks, alarms, nurse call, and PA systems for rapid response. In emergencies, facilities can be locked down room by room and optimal staff can be alerted on actions to take.

Access Control

Maintain robust security even in complex, multiuse environments. Badge control can authorize multiple classes of people, and integrates with building controls and security monitoring to restrict access to critical areas. This also reinforces compliance (e.g., for clean-room access) and supports asset tracking to limit theft.

Parking Management

In addition to protecting people and property, Honeywell access control easily integrates with systems to manage parking lots and garages, streamlining vital functions such as parking fees, rapid staff access, and more.

How it All Connects

From the parking lot to the lobby, Honeywell solutions ensure patients and staff have safe, easy access to and from your facilities. We integrate building controls with security and communications to improve safety and patient flow, while automatic data-collection provides fast, accurate admissions.

Fast, Secure Admissions

Admissions and Positive Patient Identification

Positive patient identification starts at admissions. A patient's ID is read by a Honeywell scanner and then a durable wristband or tag is printed from a barcode or RFID printer. This is read by a Honeywell mobile computer or scanner at each interaction to ensure secure, precise verification.

Patient Notifications

After admissions, the queue-management system can update a patient's mobile device on wait times and when a nurse or physician is ready, giving patients greater transparency and freedom while waiting.

Pre-Registration

Honeywell solutions can further streamline admissions by giving patients the ability to pre-register from home and receive details on current wait times.

Patient Flow and Way Finding

Once admitted, Honeywell's integrated solutions can provide the capability for patients to get way-finding guidance via their smartphone or smart kiosks, which can track patient location and destination via a real-time location system integrated with building controls and monitoring systems.



Bedside Safety and Comfort

Bedside Communications and Controls

Clino Systevo is a powerful solution for integrating nurse call, alarms, infotainment, phones, and controls for lighting, room, TV, and radio into a single hygienic bedside controller or terminal. Intelligent communications routing ensures nurses only receive calls and alarms meant for them, while other staff respond to non-clinical requests.

Patient Care and Education

Via an interactive Clino Systevo terminal, patients and families can also navigate information to better understand their condition and treatment. This care plan can later be transitioned to home via integration with Honeywell remote-monitoring solutions. This enables nurses to efficiently monitor and assist patients both in the hospital and at home, improving patient outcomes while reducing costs and readmissions.

Error Prevention at the Point of Care



Preventable medical errors claim thousands of lives per year – yet the right solutions can dramatically reduce errors at the point of care. Honeywell scanners and mobile computers enable clinicians to confirm and track procedures and medications with immediate updates to EHR records, and barcode printers enable on-the-spot labeling to track samples and documents through other departments.

Improved Hygiene and Reduced Risk of Infection

Beyond improving clinician productivity, paperless data collection improves hygiene and reduces the risk of infection for both patients and staff by limiting the surfaces that must be contacted. Honeywell healthcare devices such as scanners, printers, and computers are designed to withstand regular cleaning with tough hospital disinfectants.

How it All Connects

Integrating monitors and bedside terminals with communications and building systems gives both patients and clinicians more information and greater control. For clinicians, this means faster responses and more accurate bedside care, and for patients, increased safety and comfort.

Dallas Drives Down Errors with Medication Tracking

Dallas Children's Medical, one of the largest pediatric hospitals in the U.S., sees about 300,000 children per year. They came to Honeywell in search of safer medication administration that would reduce their rate of 280 errors per million doses. Using mobile computers and barcodes for precise tracking, the new solution enabled 900 clinicians to administer 80,000 doses per month with fewer than 40 errors per million. The solution proved such a success that the hospital demos it for care professionals from around the country.

Productivity Throughout the Ward

Clinician Mobility



In many hospitals, nurses devote as much as 30% of their time to non-patient tasks. To alleviate this, Honeywell mobile computers and devices help automate tasks and workflows, freeing up more time for nurses to respond to patient needs.

For instance, by integrating a full range of functions such as calls, messaging, alerts, scanning, tracking, and EHR access into

a single hygienic “clinical smartphone,” nurses dispense with excess devices for greater mobility and fast, accurate task management.

Site-Wide Communications and Alarm Management

With many alarms proving clinically insignificant, alarm fatigue risks distracting nurses from those that are vital. Integrating technologies such as nurse-call systems and mobile devices helps intelligently triage and manage alarms to ensure they’re only sent to the correct clinicians or other support staff.

This can also be integrated with building controls and security systems to route alarms to staff based on real-time events.

Managing Resources and Support Staff

From scheduling orderlies, porters, cleaning, and work orders, to tracking beds, rooms, and equipment, Honeywell integrates asset tracking and real-time location systems (RTLS) with building controls and business systems. This enterprise-view of staff and resources helps hospitals streamline requests, optimizing the availability and productivity of limited assets and personnel.

Documentation, Compliance, and Data Security

Honeywell offers many ways to optimize records and data, from mobile EHR access to logging tasks and documents via scanning. Encrypted paperless data collection improves security, compliance, privacy, and billing accuracy.

How it All Connects

No matter where your clinicians are, they’re connected to what’s going on with Honeywell’s integrated solutions for managing data, automating tracking, and intelligently routing calls and alarms to the optimal staff.

The Connected Clinician

Ensure greater job satisfaction with automated workflows that provide fast, precise, safer care. Honeywell integrates communications and data with connected hygienic devices such as mobile computers, scanners, and barcode printers.

Care: Improved quality of patient care and satisfaction, plus hygienic devices that reduce risk of infection.

Accuracy: Positive-patient identification and medication tracking via scanning reduce costly and dangerous errors.

Mobility: Mobile devices enable more responsive workflows, increasing clinician productivity and availability.

Communications: Integrating mobile devices with nurse call and alarm systems streamlines communications.

Records: Automated documentation and mobile EHR access improves records, compliance, and billing.

Security and Efficiency in Every Department

Operating Room Preparation

The operating room is one example of how Honeywell building controls can simplify management of critical areas. Integrating environmental controls with OR schedules helps automate prep by implementing standardized settings for temperature, lighting, airflow, and other conditions based on upcoming procedures. This reduces energy consumption as well – when not in use, the OR can revert to energy-saving settings.

Neo-Natal Tracking and Infant-Abduction Prevention

Honeywell solutions to prevent infant abduction integrate infant RFID tags with cameras, door locks, and nurse alarms for holistic tracking and alerts.

Tracking Specimens from Bed to Lab

Accelerate lab requests by barcoding and connecting specimens to patient records right at the point of care, then log each step with a scan. Honeywell mobile computers, printers, and scanners make this fast and accurate. **The result?** Sharp reductions in errors, costs, staff time, and above all, greater safety for patients.

Pharmacy Labeling and Medication Tracking

Ensuring all medications are accurately labeled is vital to patient safety. Hospital medications generally include a barcode, yet bulk supplies may need to be split into smaller packs, each with a new label. Honeywell simplifies this with compact, high-speed printers to produce pharmacy labels, and handsfree scanners that rapidly verify medications and prescriptions, both in the pharmacy and at the point of care.

Stockroom Management and Asset Security

Ensure your hospital supply chain is transparent and productive: Leveraging solutions developed for the warehouse, Honeywell healthcare tools such as mobile computers, scanners, and printers simplify tracking and PAR management throughout the hospital. Tracking supplies, inventory, equipment, and valuable assets is essential for effective care, from scheduling to billing. Asset tracking can also be integrated with access control and video monitoring to verify authorized access and reduce theft.

How it All Connects

Solutions that integrate building controls, business systems, hospital records and mobile devices don't just aid clinicians at the point of care. These same technologies also offer a wide range of benefits in other departments.



Site-Wide Safety and Control

Building Management and Automation

Enterprise Buildings Integrator (EBI) is an intelligent platform that integrates building and energy controls, communications, safety, security, IT, business systems, and analytics software into a web-based interface. This creates a powerful yet easily managed IP network that helps hospitals run more effectively, from day-to-day operations to faster crisis response.

Life-Safety Alarms and FFAST Fire Detection

Honeywell provides a full range of life-safety systems to detect smoke, fire, water-flow, and more, to help hospitals protect people and mitigate damage. This includes Fire Alarm Aspiration Sensing Technology™ (FFAST), designed for areas where standard smoke detection fails or is prone to false alarm.

Smart Digital Security and Multi-Site Surveillance

Networked surveillance and video analytics monitor a building or multiple sites for smart incident detection and alerts. This can integrate with alarms, building controls, asset tracking, locks, and more for fast, adaptive real-time response.

Public Address / Voice Alarm (PA/VA) System

Honeywell systems enable hospitals to issue critical announcements to specific wards or areas of the hospital, including evacuation guidance if needed. Automatic volume correction adjusts to background noise.

How it All Connects

From HVAC, energy, and cost controls to real-time security and response, Honeywell helps hospitals efficiently monitor and optimize sites of any size or complexity by integrating diverse systems into one powerful network.

Australia's Flagship Digital Hospital is Connected For More Effective Care

At Fiona Stanley, Western Australia's flagship hospital, digital integration is vital for consistent quality of care and cost control – 9 buildings span 200,000 square meters, hosting 5,000 people a day and 150,000 access points from extra-low voltage systems.

Using Enterprise Buildings Integrator as the platform, Honeywell unified diverse systems including communications, IT, security, and building and energy controls, providing an enterprise view via an IP network with one common interface. This powerful solution enables precise, flexible control of operations and costs.



Healthier Environmental Quality

Eco-Friendly Energy Management

Our energy management solutions integrate greener energy sources and energy-management tools with extra-low voltage (ELV) systems from multiple vendors, enabling hospitals to optimize consumption and costs.

Waste Management and Reduced Consumption

Honeywell solutions also help monitor and reduce other forms of waste. For instance, supply tracking helps optimize and reduce usage, while integrating on-demand meal orders with patient-care plans enables staff to ensure meals fit a patient's specific needs. This helps limit waste by promoting more precise procurement and distribution.

Precise Airflow Control

Honeywell Phoenix Controls systems enable precise directional airflow for patient rooms, surgical suites, and other critical areas, improving control of hygiene, safety, and energy usage.

Air Filtration and Cleaning

Our rigorous air filtration systems integrate with HVAC and building controls, and can provide monitoring of air quality room by room, with automated cleaning as needed.

How it All Connects

Honeywell helps hospitals reduce the environmental cost and impact of their operations by integrating building and energy controls for a holistic view of facility traffic, air quality, energy use, and other forms of consumption. This integrated monitoring helps optimize usage with automated responses to real-time conditions.

China Showcases Comfort and Energy Efficiency

Qingdao East Hospital is a showcase facility in China's growing Shandong province, and was the 2008 Olympic Games hospital. Its versatile Honeywell solution integrates HVAC, air filtering, lighting, security, and analysis into one system, providing 24/7 control of comfort, energy, and safety, with cleaner air and automated responses to current needs throughout the facility.

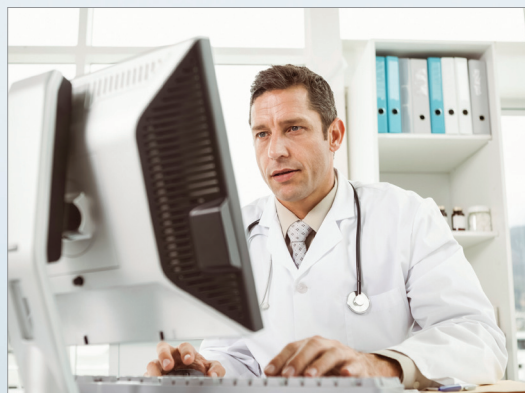
For example, access-control data helps predict temperature and lighting needs, and can verify traffic in the facility to optimize cleaning and maintenance. Likewise, the system monitors the many distinct environments to ensure air is cleaned as needed. This sophisticated automation helps staff concentrate on their top priorities – patient care and a successful business strategy.

Headed Home but Still Connected

Remote Monitoring and Connected Care at Home



Honeywell's Life Care Solutions have led telehealth for more than 15 years, helping clinicians track patient care in the hospital and beyond. Our solutions enable clinicians to remotely monitor chronic patients, tracking both standard vital signs and custom parameters to develop customized care plans and guidance.



The patient's take-home monitor also integrates video and patient interaction. This enhances patient education by providing details of their condition and care plan as well as informative videos that help patients understand and better contribute to their own care.

For clinicians, Honeywell's LifeStream™ Management suite makes it easy to import

both existing standards and customized ranges, creating a truly customized patient experience. With this system, nurses can securely monitor and manage a very large number of patients at one time through a single dashboard.

These home-care solutions enable hospitals to make informed decisions and earlier interventions, resulting in better patient outcomes and fewer costly readmissions.

How it All Connects

Honeywell helps hospitals seamlessly transition clinician monitoring and patient care plans from hospital to home. This enables nurses to more effectively support patients throughout their recovery while also reducing costs and readmission rates.

The Connected Patient

Clinicians and patients stay in touch and coordinated in the hospital and beyond. This enhances the patient experience, improves care management, and reduces "frequent fliers."

Cost Controls:

Monitoring and care plans transition easily from hospital to home, reducing unneeded readmission.

Care Management:

Better compliance with treatment, especially when individual tailoring is needed.

Education: Interactive patient terminal provides clearer education on condition and care plan.

Independence:

By staying engaged in their care plan, patients maintain greater independence.

Patient Experience:

Patients appreciate an increased sense of understanding and involvement in their care.

Effective Connected Care from Hospital to Home

Healthcare is your calling.

You've dedicated yourself to a public service – one that improves life for the fellow members of your community. From skinned knees to delivering newborns and aiding the critically ill, we know how hard every member of your organization works to keep patients safe and make their recovery as effective as possible.

And we're committed to helping you in that mission.

Honeywell's vision is to help every care provider **integrate smarter technologies** that deliver **safer**, more **effective** outcomes for patients, clinicians, hospitals, and communities.

