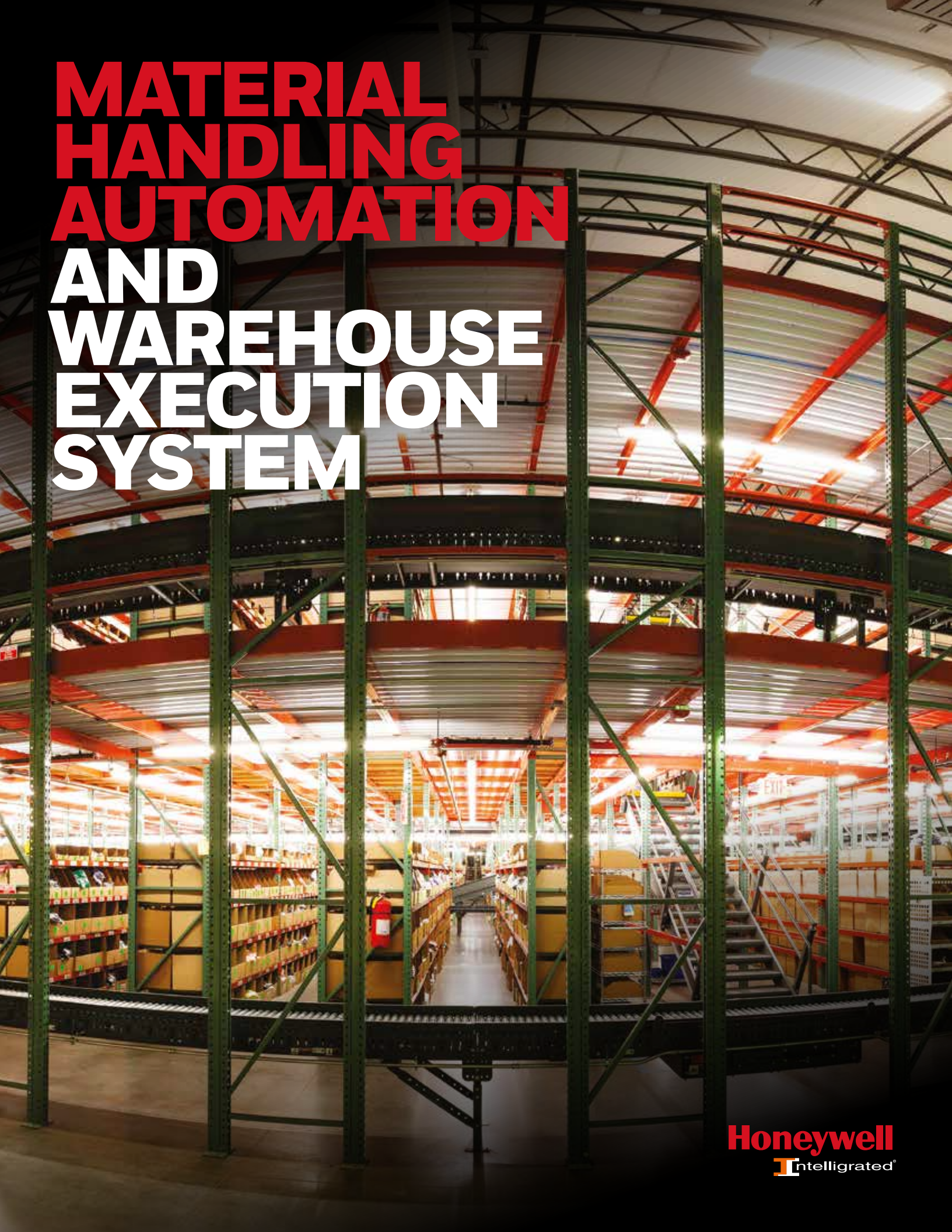

MATERIAL HANDLING AUTOMATION
AND WAREHOUSE EXECUTION SYSTEM
Honeywell
Intelligrated



THE CONNECTED DISTRIBUTION CENTER

The pace of change in modern commerce is putting tremendous pressure on fulfillment operations. To stay competitive and protect profits, companies need solutions that help them achieve maximum throughput, day-to-day flexibility, future-proof scalability and intelligence to make informed decisions.

The Connected Distribution Center helps companies make the digital transformation necessary to increase reliability, improve utilization and maximize productivity through:

- Intelligent, data-driven, high-speed execution
- Automated, adaptable processes for machines and workers
- Optimized utilization with the ability to seamlessly adapt and expand
- Insights and predictive analytics, from sensors to the cloud

360° Customer Centric

ABOUT HONEYWELL INTELLIGRATED

Honeywell Intelligrated is a leading single-source provider of intelligent automated material handling solutions that drive fulfillment productivity for retailers, manufacturers and logistics providers around the world. Through a broad portfolio of automation equipment, software, service and support, Honeywell Intelligrated solutions give businesses a competitive edge and optimize operational performance through increased flexibility, efficiency and accuracy.

Honeywell Intelligrated designs, manufactures, integrates and installs complete material handling automation solutions, including conveyor, IntelliSort® sortation, Honeywell Robotics, Alvey® palletizers, Honeywell Voice, and automated storage and retrieval systems — all empowered by Momentum™, our robust software suite of products. Our Connected Distribution Center helps companies make the digital transformation necessary to maximize efficiencies and inform decision making via real-time visibility to assets, automated systems and workers across the enterprise.

From concept to integration to lifecycle management, Honeywell Intelligrated delivers dependable, sustained distribution and fulfillment success, and maximum return on investment. Honeywell Intelligrated backs every project with 24X7 multilingual technical support and access to lifecycle services through a network of national, regional and local service centers.



CUSTOMER-CENTRIC SOLUTIONS

From initial concepting through ongoing service and troubleshooting, Honeywell Intelligrated provides total lifecycle support for each system to maximize performance and return on investment.

- Operational support services
- Upgrades and modifications
- System assessments
- Field service
- Maintenance
- OnTimeParts™
- IN-24X7® Technical Support
- Training
- Design and build
- Solutions development
- Project management
- Systems integration
- Engineering
- Manufacturing
- Software and controls
- Installation
- Commissioning

Through a broad portfolio of automation equipment, software, service and support, Honeywell Intelligrated solutions optimize distribution and fulfillment processes, increase efficiency, and give businesses a competitive edge.

CUSTOMERS

Retail







Experience with more than 60 of the top 100 global retailers

Food









Beverage









Wholesale







Honeywell Intelligrated develops, integrates and supports material handling solutions that meet specific business requirements across multiple industries .

E-commerce

chico's

RadioShack

Zappos.com

Experience with more than 50 of the top 100 internet retailers

Consumer Packaged Goods

AVON

KELLY-MOORE PAINTS

Lorillard

P&G

Third Party Logistics

ANDERSON MERCHANDISERS

McLane

NORTHROP GRUMMAN

PREFERRED FREEZER SERVICES

Pharmaceutical and Medical Supply

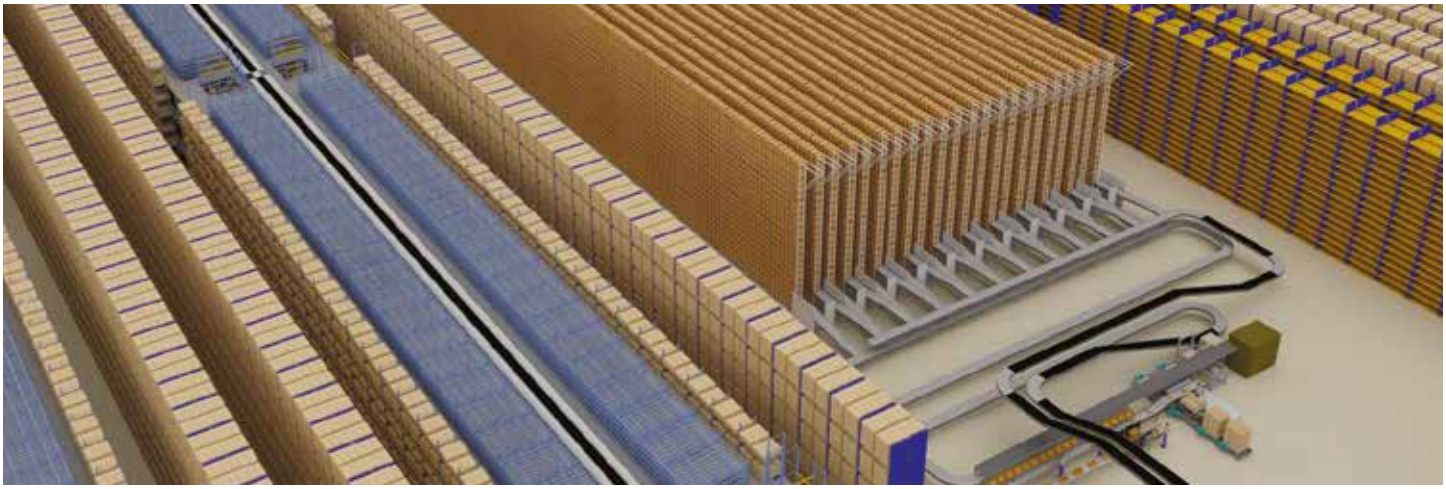
McKESSON

CooperVision

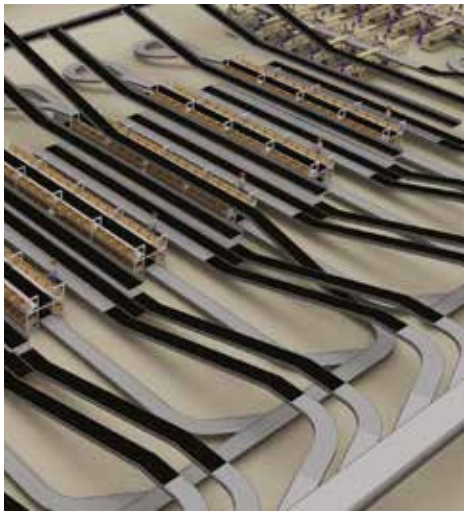
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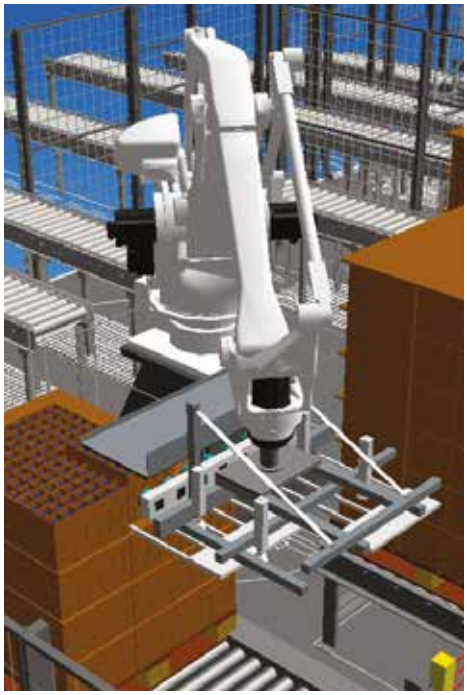
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UNITED STATES POSTAL SERVICE



OPERATIONS AND SOLUTIONS DEVELOPMENT SERVICES





The Operations & Solutions Development (OSD) team from Honeywell Intelligrated is comprised of experienced distribution and fulfillment engineers dedicated to making lasting improvements to material handling system efficiencies. Our manufacturing and distribution industry experts evaluate existing systems and conceptualize designs that maximize the effectiveness of distribution and order fulfillment operations.

OSD offers collaborative system design services for single- or multi-site distribution networks. Each solution is tailored to our customers' unique requirements — according to their specific manufacturing, wholesale, retail and e-commerce challenges — with the goal of equipping operations to address future marketplace demands, including design and build services as well as operational support services:

- Conceptual designs
- Operational and data analysis
- Material, process and data flows
- Technology assessments
- Labor models
- Conceptual models
- System simulation models
- Investment models
- Business case development
- Implementation and execution plans
- Software functionality evaluations
- Controls architectures
- Integration plans
- Post-implementation and startup support services
- Peak season support
- Operational assessments
- Operational consulting
- Operational and solution effectiveness evaluations



SYSTEMS INTEGRATION

Honeywell Intelligrated designs, manufactures, integrates and installs complete material handling solutions using the right mix of automation, software and labor for optimized productivity. Honeywell Intelligrated engineering and project management teams understand the demands placed upon distribution and fulfillment operations and work with each customer to develop implementation, milestones and collaboration plans focused on timely, on-budget, successful implementations. With more than 15 engineering locations, 850,000 square feet of manufacturing space and a reputation for excellent project execution, Honeywell Intelligrated offers end-to-end system integration services from initial project design and management through installation, commissioning and training.

> "The professional design and implementation skills demonstrated by Honeywell Intelligrated were critical to the overall success of the project."
>
> *— Dave Wolfe,*
> *Senior Vice President,*
> *TransTech Consulting, Inc.*





AUTOMATION SOLUTIONS

CASE, TOTE AND POLYBAG CONVEYOR

Honeywell Intelligrated solves the most demanding material handling throughput challenges with an extensive variety of conveyor equipment, software and controls ready for integration in today's most sophisticated automated material handling systems.

Accumulating, transporting, diverting, metering and merging solutions from Honeywell Intelligrated offer flexible options for case, tote and polybag handling.

Forward-thinking designs and quality manufacturing meet industry demand for high throughput, ease of maintenance and reliable operation to ensure maximum ROI on each equipment investment.

PALLET CONVEYOR SYSTEMS

Honeywell Intelligrated offers a full line of standard and custom-designed pallet conveyor systems to meet the transportation and accumulation needs of manufacturing, warehousing and distribution operations. Turntables and transfers ensure proper load orientation and smooth, stable redirection of pallet flow.

Available as stand-alone equipment or in fully integrated material handling systems, pallet conveyor systems deliver performance, durability and reliability while handling a wide range of conventional and specialty pallets.

Compact designs, efficient timing belt technology and optimized cycle times enable maximum throughput and years of reliable, low-maintenance operation.

VERTICAL CONVEYOR

Honeywell Intelligrated offers single-direction indexing and multi-directional reciprocating vertical conveyor equipment to transport totes and cartons in a compact footprint. Vertical solutions offer the flexibility to accommodate operational requirements through a range of configurations with varying input and discharge heights.

CONVEYOR AND SORTATION CONTROL

InControlWare® software blends conveyor and sortation machine control, operator interface, system diagnostics, maintenance tools and host interfaces into a single system. The control system delivers user tools organized in three functional capabilities to monitor, control and support systems for peak operational performance.



"The sorter is so quiet that I can stand next to it and still have a cell phone conversation."

— Doug Pace, General Manager, McKesson

SORTATION SYSTEMS

With more than 100 years of experience and thousands of installations, industry-leading IntelliSort sortation systems are mission-critical components of today's most efficient automated material handling systems.

Honeywell Intelligrated sortation technology can accommodate virtually any product size, shape and capacity requirement with high-throughput, low-maintenance sortation. Experienced engineering teams analyze each application to develop a best-fit sortation solution.



Sliding shoe



Tilt-tray



Cross-belt



Strip belt



Wheel divert



Right-angle transfers



Sweeper sorter





PALLETIZERS AND DEPALLETIZERS

Honeywell Intelligrated's Alvey palletizers and depalletizers are vital components of thousands of automated receiving and end-of-line packaging operations for manufacturers and distributors.

Honeywell Intelligrated has more than 60 years of experience providing palletizing solutions with industry-leading speed, flexibility and dependability for 24X7 operations.



Low- and mid-speed palletizers



Mid- and high-speed, high-level and floor-level hybrid palletizers



High- and very high-speed palletizers



Semi-automatic depalletizers

ROBOTIC SOLUTIONS

Scalable robotic solutions increasingly deliver significant competitive advantages to modern distribution centers. By leveraging advanced robotic technology with extensive material handling experience, warehouse automation solutions from Honeywell Robotics provide the speed, accuracy and efficiency to satisfy a broad and growing range of operational requirements.

Innovative designs, application expertise and committed support ensure maximum dependability and round-the-clock productivity. Robotic solutions also relieve workers of some of the most arduous, repetitive and injury-prone tasks, freeing up limited labor for more rewarding, higher-value jobs.

Honeywell Intelligrated is recognized by the Robotic Industries Association (RIA) as a Certified Robot Integrator, with more than a quarter-century of experience providing single-source robotic solutions for high-performance distribution and manufacturing operations. From system concepting, simulation, fabrication and integration to installation and commissioning, training and ongoing support, each solution is approached with a comprehensive lifecycle view to maximize the value of your system.

> "The benefits we've received from the new Alvey palletizer have been remarkable. Honeywell Intelligrated's Alvey palletizer truly is a stout machine that will carry Boulevard into the next 20 years of our business, and beyond."
>
> *— Mike Utz, Plant Engineer, Boulevard Brewing*



Robotic unloading



Each picking



Robotic sorter induction



Mobile robotics



AUTOMATED STORAGE AND RETRIEVAL SYSTEMS (AS/RS)

The highly flexible and efficient Honeywell Intelligrated one-level shuttle (OLS) system provides quick access to cartons, totes and trays. Ideal for high-volume distribution, fulfillment and manufacturing operations with high turn inventory storage and short order cycle times, the Honeywell Intelligrated OLS system handles the widest variety of product types and largest carton sizes.

Typical applications include goods-to-operator order fulfillment, just-in-time inventory management, as well as product sequencing and buffering to support mixed unit load, full-case and break-pack order fulfillment, order consolidation and route-based delivery.

VOICE PICKING SYSTEMS

Whether picking products, repairing equipment, or learning a new job, associates often have their hands full of scanners, devices, checklists, procedures and other impediments to look at — instead of focusing on the task at hand. With Honeywell Voice, their hands and eyes are freed, letting them work more safely, efficiently and accurately. The results? More than 30 percent productivity gains, accuracy rates up to 99.99 percent, and a safer, more satisfied workforce with higher retention rates.

Completely flexible for operations large and small, Honeywell Voice software integrates with host systems of all types — from legacy 'home-grown' systems, major warehouse execution systems (WES) and warehouse management software platforms to large enterprise resource planning (ERP) solutions such as SAP S/4HANA® and SAP Business One or Microsoft Dynamics 365 for small to medium enterprises. This seamless integration allows Honeywell Voice to assume management of existing processes and introduce new, optimized workflows — all of which are captured in real time with your business systems.

> "The new system from Honeywell Intelligrated really cut down cycle time. We can drop an order down to the floor, have it processed and into the truck in minutes."
>
> *— Mike Utz, Plant Engineer, Boulevard Brewing*

Regardless of your operation's size, fulfillment requirements or business objectives, Honeywell Voice adapts to deliver the many benefits of voice-guided workflows and mobile process automation. There's a reason it's the most-used voice solution in the industry — in the most countries, most languages and most extreme conditions. Simply put: our voice solutions just work.

FULFILLMENT TECHNOLOGIES

Whether shipping direct-to-consumer, replenishing stores, or some combination of the two, Honeywell Intelligrated offers an ideal mix of material flow and picking technologies for each fulfillment scenario.

Adaptive systems combine warehouse control and fulfillment methodologies to increase operational efficiency, labor productivity and customer satisfaction. Honeywell Intelligrated couples intelligent software and robust hardware to enable a broad range of order fulfillment technologies.



RF picking systems



Pick-to-light systems



Put systems



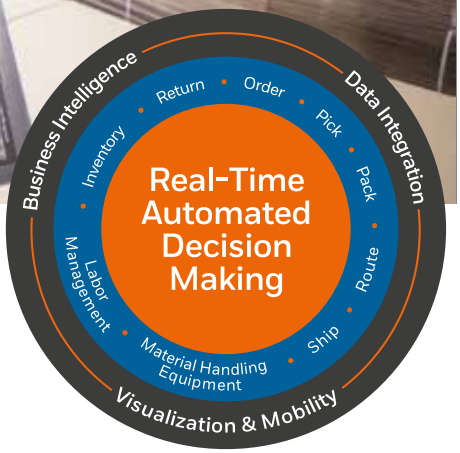
Mobile cart picking systems





Voice picking systems





SOFTWARE SOLUTIONS

MOMENTUM WAREHOUSE EXECUTION SYSTEM

Momentum is a feature-rich warehouse execution system (WES) designed to greatly simplify e-commerce fulfillment, store replenishment and wholesale distribution center operations. The growing complexities of modern fulfillment requirements are placing continuous pressure on retailers to maintain customer service levels and protect profit margins. As delivery expectations rise and fulfillment windows get shorter, businesses must look for ways to improve efficiencies, automate manual processes, and optimize fulfillment operations.

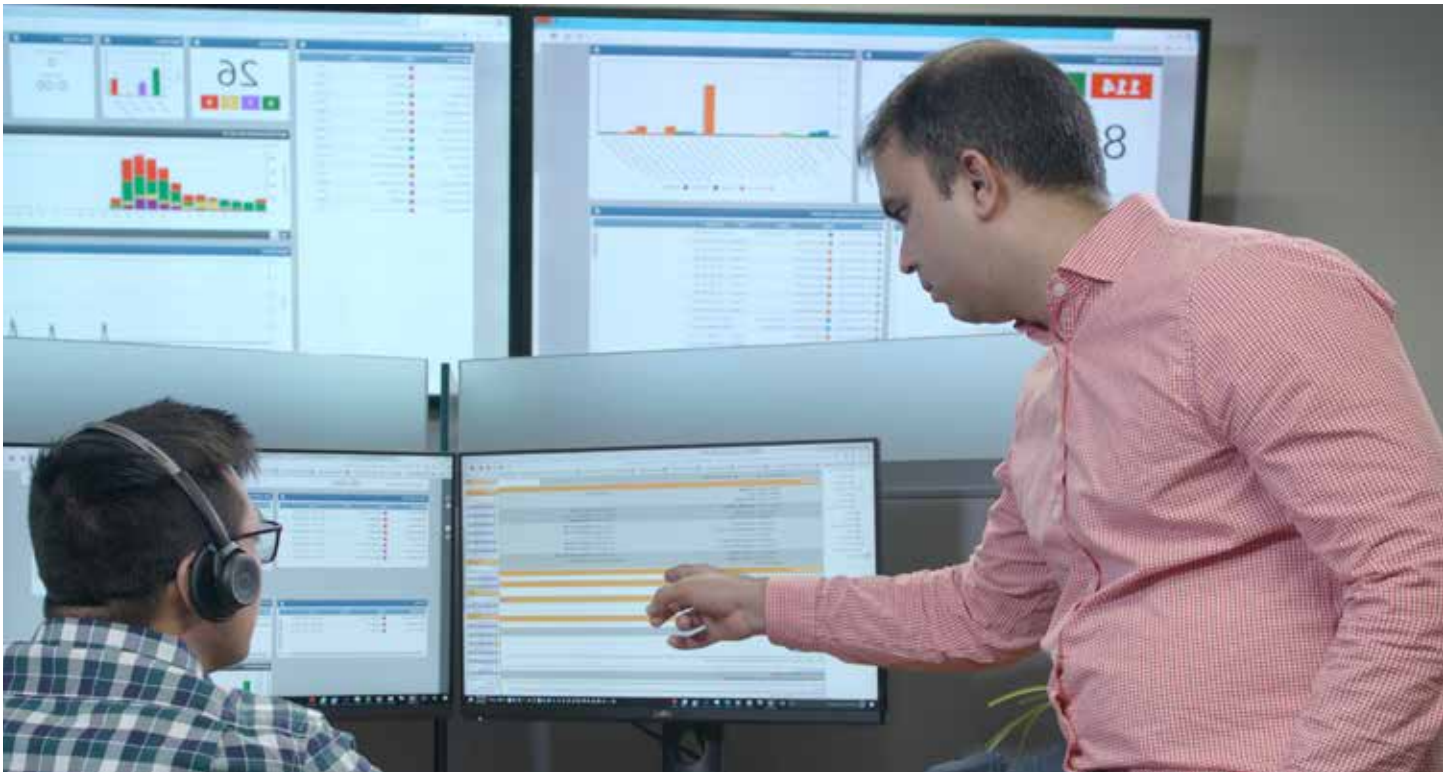
That's why Honeywell Intelligrated took a clean-sheet approach to the development of Momentum. Purpose-built to realize the full promise of a WES, Momentum is based on a unified, single-software platform that incorporates an ever-expanding list of functional modules into a common code base. With Momentum, the days of unsupportable, one-off customizations are replaced by scalable configurations and predictable upgrade paths.

Through the seamless integration of sensors, controls, automation, orders and labor, Momentum connects DC workflows to provide operators real-time order fulfillment status and visibility to in-process work. Not only can Momentum run, coordinate and manage fulfillment operations, it also equips businesses with the intelligence to make informed decisions based on historic and real-time data.

Momentum benefits:

- Increased fulfillment flexibility
- Improved equipment and space utilization
- Increased throughput and labor productivity
- On-time shipments with improved order accuracy
- Reduced labor costs and requirements
- Shortened cycle times and faster deliveries
- Fewer customer returns and complaints





LIFECYCLE SUPPORT SERVICES

Honeywell Intelligrated provides its customers with connected and outcome-based services that can be deployed for a single asset or scaled across the enterprise. The comprehensive lineup of maintenance services and software aims to maximize system utilization, reduce overall cost of maintenance, and extend equipment life.

Honeywell Intelligrated Lifecycle Support Services (LSS) are organized around reliability, safety and efficiency, with all the services, parts and support necessary for peak efficiency and maximum return on system investments. An ongoing, consultative approach drives comprehensive lifecycle management solutions, covering equipment condition, obsolescence, safety, technician capability and maintenance programs. The organization uses system-level data to analyze trends and guide a variety of proactive asset management and maintenance solutions, including technology upgrades, system assessments and modifications, spare parts and parts inventory strategies.

Comprised of a dedicated LSS team of more than 500 employees deployed in a national service network, we're equipped to provide 24/7/365 support and make strategic recommendations that help you achieve your operational objectives. LSS ensures the optimal performance of automated systems and software through the following services:

Asset Management and Assessments

Maintaining material handling equipment uptime is imperative to operational success in the competitive worlds of



omnichannel fulfillment, distribution and manufacturing. This is especially true when you consider that most downtime is preventable. The Lifecycle Services team at Honeywell Intelligrated helps customers with their asset management

and CAPEX planning. We offer a complete assessment portfolio designed to clearly evaluate asset, maintenance and functional opportunities. We mitigate risks before they affect operations. Our expert team follows a systematic process to deliver insightful recommendations and operational observations while uncovering opportunities to increase throughput and capacity. With Honeywell Intelligrated assessments, accurate capital and operational budgetary plans can be developed to manage equipment obsolescence and replacement — in advance of catastrophic failure.

Assurance 360

In today's competitive landscape, businesses are moving beyond transactional approaches to lifecycle management and seeking partnerships with full-service providers. By entering into these contractual service models, they transfer the ownership of performance outcomes to their service providers, which allows them to focus more fully on their operations. Assurance 360 was created with these customers in mind.

Assurance 360 delivers contract services based on agreed-upon service levels, rather than prescribed quantities of materials and labor. We take a holistic, strategic view to improve business performance and minimize the total cost of ownership (TCO) with complete lifecycle management services. Assurance 360 is a flexible, outcome-based service solution designed to help customers achieve continual performance optimization of their material handling and warehouse automation systems.

Field Service

The field service team is built to provide fast, effective responses to a wide spectrum of customer concerns — from system startups, assessments and equipment servicing to emergency responses, predictive maintenance and in-house staff support. Field service ensures maximum system utilization, extended life of equipment and minimized maintenance costs through a robust support infrastructure, including: multiple regional locations, centralized control and dispatch, and 500 OEM-trained staff members.

Modifications and Upgrades

We work with our customers to provide a variety of cost-effective modifications and upgrades. These critical projects are managed by our team of expert engineers and project managers who make recommendations based on each customer's operational objectives. Modification and upgrade projects help companies reconcile obsolescence and provide modern enhancements to deliver increased system capacity, flexibility and longevity.



Parts

Our customers have access to the material handling industry's most robust parts warehouse and distribution network. We also provide live parts support from experienced field specialists — for everything from building a spare parts inventory to expediting critical spares for emergency repair.

Technical Support

Regardless of your specific organizational needs, we offer a full spectrum of technical support tiers to protect your infrastructure and provide the desired level of issue escalation. Our premium tier services are designed for customers who require 24/7/365 operational support assurance and the highest prioritization of issue resolution. This program gives remote access to a dedicated, U.S.-based team of expert service engineers who troubleshoot issues and prioritize resolution schedules for maximum system uptime and reliability. For assistance, call 877.315.3400.



TechSight

TechSight is a robust augmented reality solution that uses smart glasses to enable remote video collaboration between your technicians and our expert service team for fast diagnosis and troubleshooting of critical issues. With TechSight, our support team can see exactly what your maintenance crews are dealing with in real time, eliminating both the communication limitations of a standard telephone call and the safety concerns with handheld devices.

Training

From on-site instruction to our state-of-the-art, in-house and online learning centers, we provide an abundance of training options from OSHA-authorized and PMMI-certified instructors designed to equip your operations and maintenance crews with safety, system operation, maintenance and troubleshooting expertise. The reporting function of the ICampus online portal helps managers ensure that employees have completed the required training and will dispatch the appropriate staff member to work on specific issues.

Honeywell Intelligrated
+1 866.936.7300
info@intelligrated.com
www.intelligrated.com

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THE FUTURE IS WHAT WE MAKE IT

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