5 WAYS TO SQUEEZE MORE EFFICIENCY FROM YOUR CURRENT FULFILLMENT FACILITY

Partnering With Honeywell & Hai Robotics

Honeywell

HAI ROBOTICS

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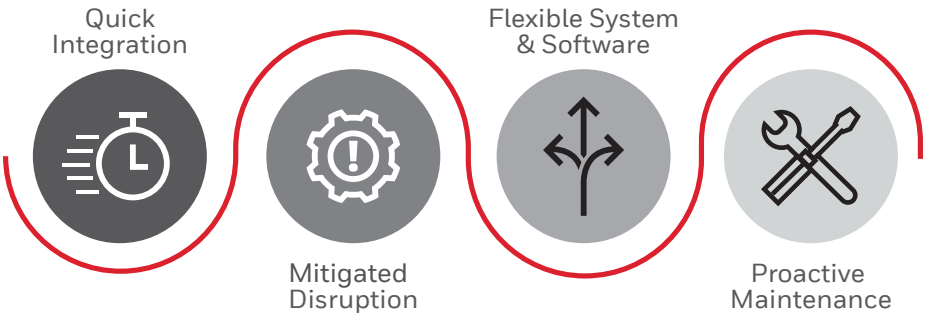
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MANAGEMENT SUMMARY

Unlock your warehouse's full potential with highly flexible advanced automation solutions that enhance storage capacity, operational efficiency, and productivity without the need for expansion, relocation, or hefty capital investments.



FIT MORE IN YOUR FOOTPRINT

1

Enhance your facility's space utilization by working up — not out.

In today's warehouse real estate market, not only is every square foot a precious asset, but the cubic volume of the space you are leasing is often overlooked and undervalued.



Growing businesses like yours often face tough decisions: Should you move to a larger facility, or can you optimize your current one? The smart choice in Automated Storage and Retrieval Systems (ASRS) can offer your business a cost-effective solution to help you get the most out of your existing facility.

THE VERTICAL ADVANTAGE

One of the most advanced ASRS solutions can store and retrieve inventory up to 39+ feet (12 meters) high using industry-standard racking. This means you can store a lot more inventory, condensing your storage footprint by up to 75%.

Here's how it works: Within the ASRS' secured footprint, Automated Case-handling Mobile Robots (ACRs) navigate narrow aisles picking totes and cases — batch delivering up to 9 containers in 1 run to a workstation for increased efficiency and minimized travel.

BOOSTING THROUGHPUT AND EFFICIENCY

Making the most of your facility isn't just about stacking items higher and more densely; it's about making every aspect of the fulfillment process faster and more efficient.

Traditional fulfillment methods are often time-consuming and error-prone, with warehouse workers walking as many as 10 miles per shift to pick items for orders. Co-bot solutions for picking in aisles can help improve a fully manual picking process by improving labor efficiency, but the downside is you are typically limited in the height of the racks from which your team can pick items, and you have to retain and manage this team with all associated and rising labor costs. With an ASRS, items are delivered directly to centrally located manual pickers, or specialized item-picking robots, fully automating and speeding up the picking and order fulfillment process and virtually eliminating human error while also freeing up your smaller workforce for more valuable tasks.

Companies that use ACR-driven ASRS in their facilities see up to:

67% reduced labor costs, with 4x operational efficiency gain, and 3x daily order throughput improvement, while driving order picking accuracy to 99.99%

In a nutshell, using an ASRS in your warehouse helps you maximize space utilization, boost storage density, and save on real estate costs. Plus, it improves throughput and cuts labor expenses — allowing you to squeeze more from your existing operations, reduce major capital investments, reduce disruption to existing business-critical operations, and ultimately extend the lifespan of your current facility.

HAIPICK SYSTEM

39+ ft*

VERTICAL STORAGE
*12 m

75%

REDUCED STORAGE FOOTPRINT*
*Compared to a manual system

3x

MORE DAILY ORDER THROUGHPUT*
*Compared to a manual system

SCALE ALONGSIDE DEMAND

2

When you're experiencing or preparing for demand fluctuations, you may be exploring consolidation, relocation, or expansion of your distribution network.

An ASRS will help you condense the storage footprint within your facility while simultaneously growing your fulfillment capabilities — for example, increasing the number or type of SKUs or boosting your daily throughput.

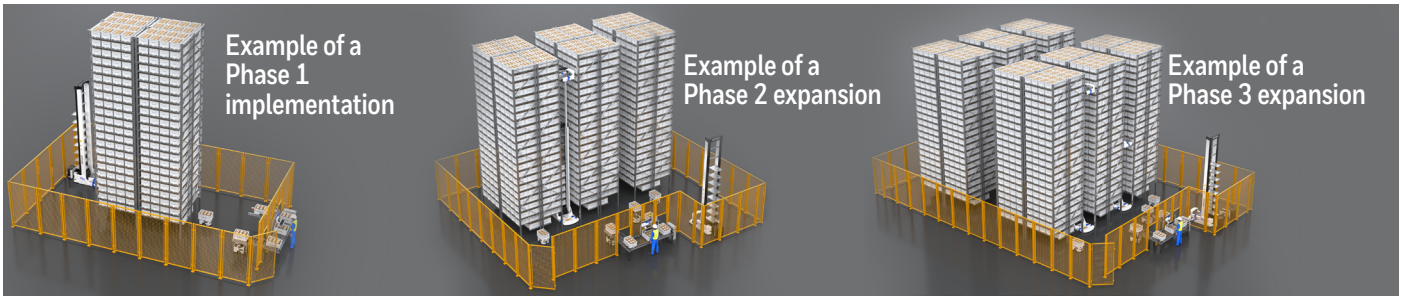
Look for a modular, scalable solution, such as an ACR-driven ASRS, that allows you to start with the right capacity for your operations and effortlessly scale as demand increases.

Unlike traditional, grid-based ASRS, which often require a large buildout for each expansion, today's more flexible ASRS solutions allow you to easily change or add elements to the system over time. You can often add ports or workstations, totes and cases, robots, and racking/storage locations individually in stages, allowing for sustained growth over time with minimal disruption to ongoing operations.

The ability to add and move robots to a system or expand a system altogether while continuing to run operations can make adapting operations to surges in demand or longer-term shifts in market behavior easier and less costly to manage.

This flexibility has a direct positive impact on cash flow. By scaling your infrastructure incrementally, you avoid the significant upfront capital investment required for a full buildout on day one. Instead, you can spread out these costs over time, aligning expenses more closely with revenue growth. This means you only invest in additional capacity as needed, freeing up capital for other strategic initiatives and reducing financial risk.

On the other hand, if your infrastructure is rigidly built out, perhaps through substantial investments in the facility's fixed assets or automation that requires a high-precision environment to operate, your ability to pivot becomes severely limited.



Robotic equipment	1 HaiPick ACR & 3 HaiPick Companion Bots
Storage locations	704 totes/ containers
System throughput	~60 totes per hour
Human workstation operators	1

Robotic equipment	2 HaiPick ACRs & 6 HaiPick Companion Bots
Storage locations	2112 totes/ containers
System throughput	~120 totes per hour
Human workstation operators	1

Robotic equipment	3 HaiPick ACRs & 9 HaiPick Companion Bots
Storage locations	4224 totes/ containers
System throughput	~180 totes per hour
Human workstation operators	1

LEVERAGE FLEXIBLE TECHNOLOGY THAT WORKS WITH WHAT YOU HAVE

3

Flexible Automated Storage and Retrieval Systems (ASRS) can often "plug and play" into your existing infrastructure and boost operational efficiencies using the totes, containers, racking, and WES/WMS technology you may already have.

Look for an automated solution designed to adapt to your facility's unique needs. Flexible automation typically has the ability to:

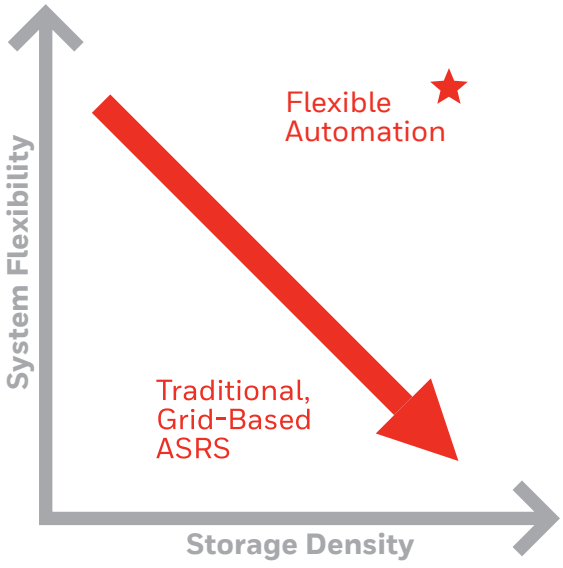
- Utilize facility verticality for storage, from low-level to heights up to 39+ feet.
- Manage a variety of container sizes and types in 1 system, including cardboard boxes, totes, cases, and trays.
- Operate with industry-standard racking, without requiring a high-precision environment.
- Accommodate varying levels of existing facility software requirements.

Automated solutions that are rugged and adaptable enough to meld with a facility's many varying needs allow for a less disruptive implementation, provide long-term security that will continue to support the facility's future needs, and allow you to avoid the problems and costs of adapting your operations to accommodate a technology.

Traditional ASRS vs. Flexible Systems

Traditional ASRS solutions excel in storage density **but lack the flexibility to adapt and scale with your business.**

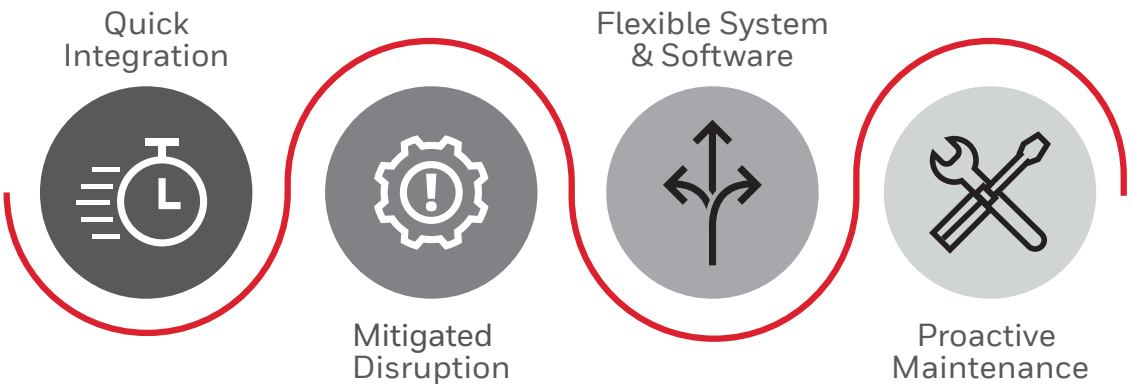
Today's more flexible systems are designed to achieve both high storage density and adaptability — **enabling high throughput and fast order fulfillment while supporting evolving operational demands and business growth.**



PRIORITIZE TIME-TO-VALUE

4

In today's competitive landscape, achieving a high return on investment (ROI) with a rapid payback period is crucial when considering warehouse automation.



Seamless integration is key. Disrupting day-to-day workflows during the implementation phase can lead to costly downtime and productivity losses. Look for a solution that can be quickly and effectively integrated into your existing hardware and software infrastructure.

Modular ASRS solutions can be implemented in stages, allowing your original operations to continue running during the initial build. As the ASRS is built out, operations can gradually transition to the new system, mitigating disruption and ensuring a smoother integration into your WMS / WES for effective use.

RISKS IMPEDE ROI TIMELINES

Underestimating implementation complexity and integration challenges can lead to delays. Choosing an automation partner with experience and comprehensive support and training ensures a smooth transition, accelerating time-to-value and enhancing ROI.

Neglecting ongoing maintenance and support needs can result in downtime and reduced productivity, too. Clear maintenance schedules and contingency plans address this concern. It's crucial to have specific expertise to support advanced automation. Partnering with a provider that offers comprehensive training, extensive experience, and readily available parts facilitates uptime for your business-critical operations. Fully understand solution providers' training offerings and seek partners with robust ongoing aftermarket support and maintenance services. This ensures the continued efficiency and reliability of your automated systems, safeguarding your productivity and profitability.

Select a solution that facilitates quick integration, minimizes disruption to existing operations, offers software and system flexibility, and addresses maintenance needs proactively to expedite ROI and ensure long-term success.

TAKE ADVANTAGE OF FLEXIBLE PAYMENT OPTIONS

5

When financing warehouse automation, managers generally have three primary payment options to consider:

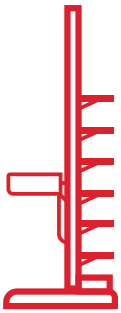
CAPITAL EXPENSE (CAPEX) PAYMENTS:



With this option, you pay the entire cost of the automated warehouse system upfront. Although this requires a significant initial investment, it provides the advantage of full ownership with no ongoing payments beyond maintenance and support services. For businesses with available capital and a long-term perspective, this can be a financially prudent choice. There are two variations within CAPEX:

- Full CAPEX: Purchase the complete system at once.
- Phased CAPEX: Acquire the system in stages, purchasing only what you need as you need it, allowing for more flexibility in managing cash flow.

OPERATING EXPENSE (OPEX) THROUGH ROBOTS AS A SERVICE (RAAS):



RaaS offers an alternative by converting your capital investment into a recurring subscription fee. This model not only covers the rental of the robotic equipment but also includes ongoing maintenance, parts, and support throughout the contract period. This approach minimizes upfront costs and shifts expenses to a predictable, periodic fee, making it easier to manage cash flow and scale operations as needed. RaaS allows you to access advanced automation technology without the burden of ownership, ensuring the system remains functional and up-to-date.

FLEXIBLE PURCHASING MODELS



Some providers offer highly flexible purchasing models that allow for phased implementation of automation. This option enables businesses to break down the investment into smaller, manageable amounts over time, aligning expenses with cash flow and gradually transitioning to automation. This approach is particularly useful for companies with budget constraints or those looking to ease into advanced automation.

When exploring automated warehouse solutions, it's crucial to select a provider that offers a purchasing model tailored to your business needs. The right choice can significantly impact your bottom line and ensure a successful integration into your warehouse operations. By aligning your financial goals with the appropriate purchasing model, you can optimize the value of your investment in automated warehouse technology.

IMPROVING YOUR EXISTING OPERATIONS WITH HONEYWELL AND HAI ROBOTICS

Honeywell, a global leader in delivering productivity and safety solutions across diverse industries, and Hai Robotics, a leader in Automated Storage and Retrieval Systems (ASRS), have collaborated to revolutionize the warehousing automation market.

Honeywell's track record of innovation in automation control, process solutions, and cyber security combined with Hai Robotics' extreme system flexibility, high vertical storage capability, and efficient ASRS solutions, come together to usher in a new era of efficiency, flexibility, and accessibility for all warehouses and DCs with unparalleled productivity gains and safety standards.

This collaboration offers unmatched solutions to maximize the use of existing facility space, helping businesses optimize their operations without the limitations of historical storage automation technology. The extreme automation system flexibility allows for seamless integration into diverse warehouse environments, providing tailored solutions that meet specific or unique operational needs.

Together, Honeywell and Hai Robotics provide ASRS solutions as part of a full warehouse automation environment that easily scales with evolving business requirements. These future-proof solutions adapt to changing demands. With a focus on delivering quick ROI, businesses can rapidly regain their investment and realize significant cost savings over time.



Honeywell is an integrated operating company serving a broad range of industries and geographies around the world. Our business is aligned with three powerful megatrends – automation, the future of aviation and energy transition – underpinned by our Honeywell Accelerator operating system and Honeywell Connected Enterprise integrated software platform. As a trusted partner, we help organizations solve the world's toughest, most complex challenges, providing actionable solutions and innovations through our Aerospace Technologies, Industrial Automation, Building Automation and Energy and Sustainability Solutions business segments that help make the world smarter, safer, and more sustainable.

Honeywell Industrial Automation enables our customers to enhance the safety, sustainability, resilience and productivity of their people, plants, and assets. From refineries to distribution centers to retail stores, we help deliver results while improving worker safety and meeting sustainability goals – by leveraging connectivity, advanced data analytics, software, robotics, sensors, process automation and asset performance management solutions.

Established in 2016, Hai Robotics has become a leader in delivering innovative solutions that significantly enhance efficiency in automated warehouse operations and order fulfillment.

After pioneering the development of Autonomous Case-handling Mobile Robots (ACRs), which expanded possibilities for warehouse automation, Hai Robotics introduced a modular approach to Automated Storage and Retrieval Systems (ASRS) with its family of HaiPick Systems.

Through its catalog of advanced robotic equipment, software packages, and adaptable structures — compatible with nearly any industry-standard racking and storage materials — Hai Robotics enables facilities to achieve maximum results without the complexity and expense of a fully customized solution.

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