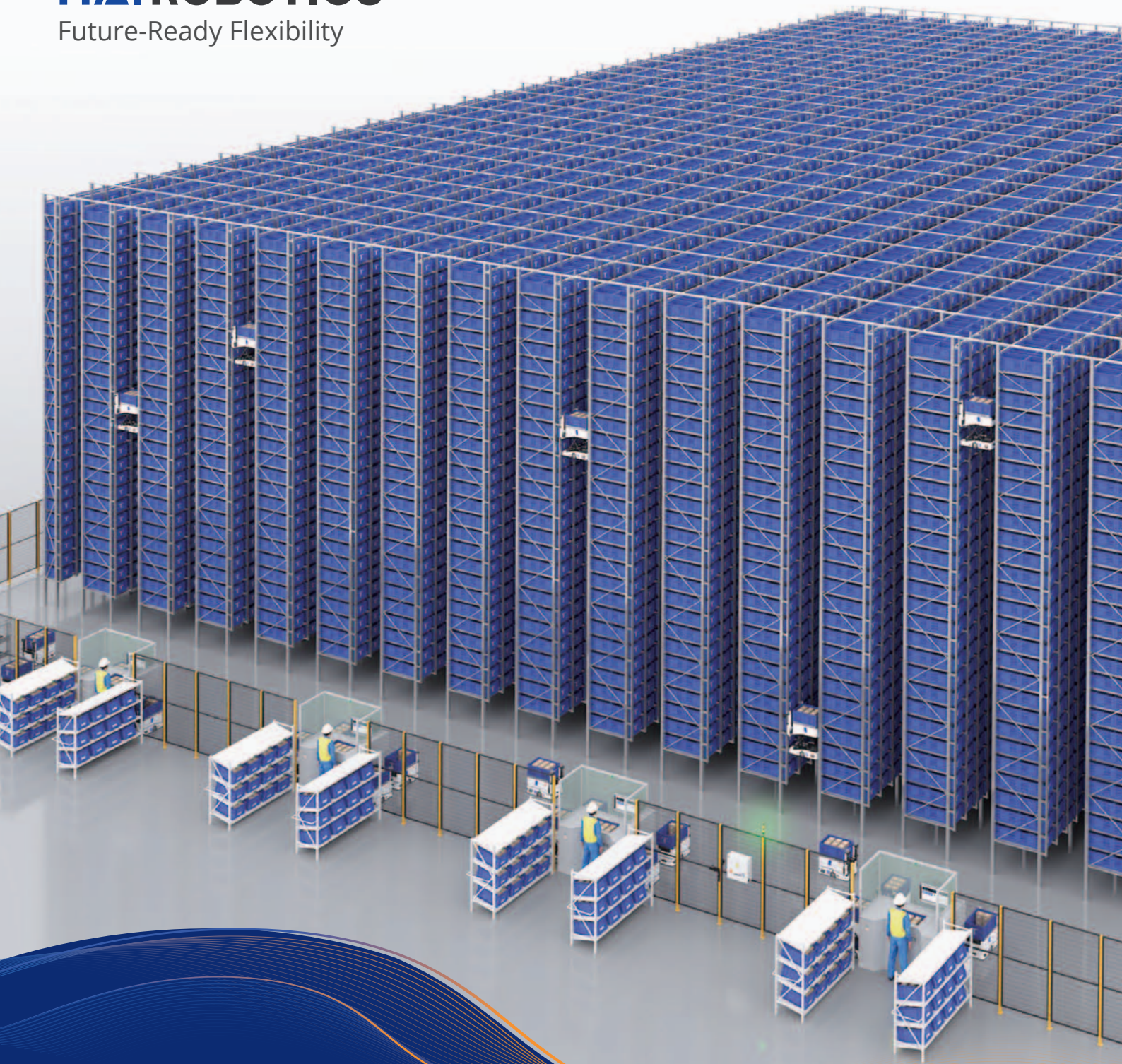


# HAIROBOTICS

Future-Ready Flexibility



**Any size**  
**Any container**  
**Entirely automated storage and fulfillment** □

HaiRobotics.com

# About Us

Hai Robotics is a leading global provider of Automated Storage and Retrieval Systems (ASRS), providing unparalleled system flexibility and maximizing operational efficiency for all facilities.

Hai developed a modular approach to automation called HaiPick Systems. Through a catalogue of advanced robotic equipment and software packages, with the inclusion of almost any industry standard racking and storage materials, Hai Robotics provides tailored automated solutions that are designed for easy modification after implementation.



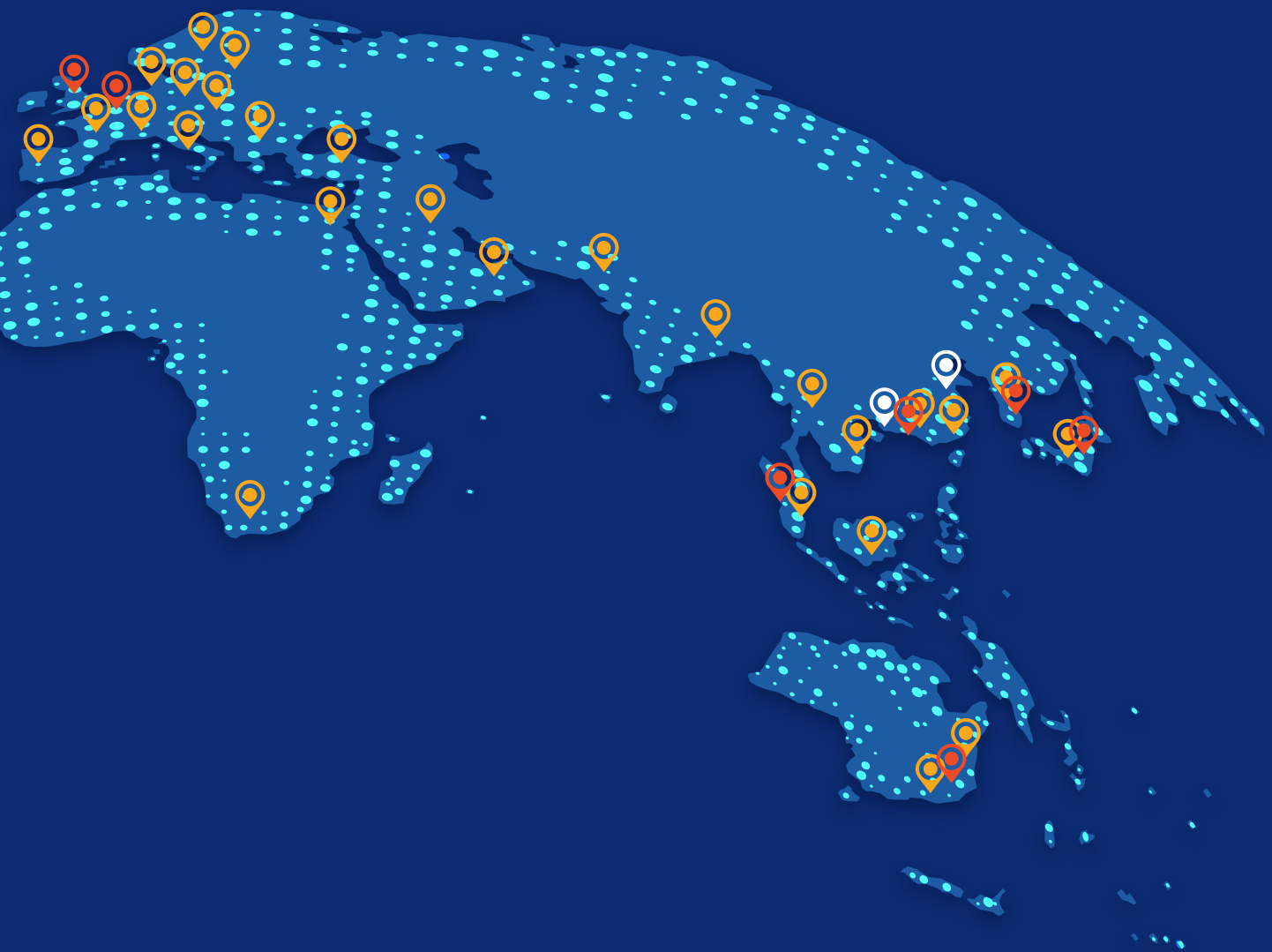
 40+ countries supported

 8 Hai offices

 1,700+ team members globally

HaiPick Systems provide up to **75%** reduction in warehouse storage footprints with increased storage density and 39+ feet/12 meters vertical storage, 99%+ order pick accuracy, **4x** efficiency enhancement, **3x** more daily throughput, and eliminate human travel for order picking.

With **1,500+** projects implemented in 40+ countries, supported by 8 offices worldwide and 60+ global partners, Hai Robotics is a reliable resource for providing local support.



 Worldwide Hai Offices

 Official Partner

 Manufacturing

# The HaiPick Family



# What Are HaiPick Systems?

## The future-ready approach to automated storage and fulfillment

The family of HaiPick Systems are advanced Automated Storage and Retrieval Systems (ASRS) that streamline inventory management and order fulfillment while supporting evolving operational demands and business growth.



Built on a modular framework, these goods-to-person robotic systems automatically store, retrieve, and deliver both contained and non-contained items with high efficiency and high throughput.











Each system is designed using pre-engineered robots and components from our catalog, enabling solutions engineers to customize a base model with the ideal system elements for your specific needs — delivering a tailored solution without the cost or complexity of full customization.

Whether you need to handle totes, bins, trays, bulk items, pallets — the list goes on — HaiPick Systems offer a flexible and scalable solution to meet your growing business needs. The modular design allows easy reconfiguration, expansion, or even relocation, making them future-proof for long-term success.

# Why HaiPick Systems?

Out With the Old	In With the New
<ul style="list-style-type: none"><li>• Limited warehouse space</li><li>• Slow, inefficient picking processes</li><li>• High labor costs due to manual work</li><li>• Difficulty managing fluctuating order volumes</li><li>• Labor shortages and skill gaps</li><li>• Expensive and disruptive expansions</li></ul>	<ul style="list-style-type: none"><li>• Maximum vertical storage, utilizing up to 12 meters (39+ feet) of height</li><li>• Fast, automated picking with up to 6x efficiency</li><li>• Significant labor cost reductions — up to 67% savings</li><li>• Easy handling of demand spikes without operational strain</li><li>• Minimal staffing requirements thanks to automation</li><li>• Seamless expansion and adaptability to changing needs</li></ul>

## Competitive Advantages

-  **Up to 6x** operational efficiency
-  **3x** more daily order throughput
-  **99%+** order picking accuracy
-  **Up to 12 meters** (39+ feet) vertical storage
-  **6x** increased storage density
-  **Up to 75%** reduction in storage footprint
-  **Up to 67%** labor cost savings
-  **3-12 months** implementation timeline \*
-  **ROI** in just 1 to 3 years
-  **Easily adapts to** product or demand changes
-  **Scalable** as business grows
-  **Modular design** for effortless scaling

\*Varies depending on location, project scale, and the chosen HaiPick System.

# HaiPick System 1

## Dense vertical storage for fast fulfillment

The cornerstone of Hai Robotics' cutting-edge Autonomous Storage and Retrieval Systems (ASRS), HaiPick System 1 is a highly flexible and scalable goods-to-person solution that maximizes storage space utilization, picking accuracy, order throughput, and warehouse operational efficiency.

Our Autonomous Case-handling mobile Robots (ACRs) strategically navigate through a confined storage zone, picking and placing items from racks up to 12 meters (39+ feet) high. What sets ACRs apart is their remarkable adaptability — capable of handling diverse containers and goods without the constraints of specialized racking or tote size requirements.

System 1 makes use of HaiPort-powered workstations, which enable the ACRs to load and unload 8 containers simultaneously upon arrival. This greatly enhances system performance, enabling more orders to be shipped in less time.

### Competitive Advantages

- ▶ High density storage
- ▶ Vertical storage up to 12 meters (39+ feet)
- ▶ Batch picking up to 9 totes per run for fast order fulfillment speed
- ▶ Accelerated inbound and outbound operations
- ▶ Tote and carton picking
- ▶ 99%+ order picking accuracy
- ▶ Labor cost reduction
- ▶ Integrates with other technology and existing WMS/ WES
- ▶ Auto charging for 24-hour operating capability



# HaiPick System 2

## Automated bulk and mixed-type storage

HaiPick System 2 combines the automated processing of bulk goods, with order picking from containers of decanted goods, into 1 system. With a high-density design, 12 meters (39+ feet) vertical storage, and the elimination of separate processing locations, System 2 significantly reduces warehouse storage footprints and increases operational efficiency and order pick accuracy with the ability to mix pick from a single system.

Using a combination of Hai Robotics' advanced ACR technology, bulk items such as palletized goods, clothing racks, baskets, or bulk boxes are stored at ground level with containers of smaller items in totes, boxes, or trays stored above. HaiPick ACRs can deliver up to 9 totes at a time to a picking station, helping to increase multiple order fulfillment speed, while the Heavy Duty Companion AMR delivers bulk items to the same station, helping to increase mixed order fulfillment speed and operations.

### Competitive Advantages

- ▶ Automated mixed goods-to-person picking or material-to-line operations
- ▶ Large/medium/small, bulk and irregular items stored together automatically
- ▶ 5x higher storage density & reduced storage footprint
- ▶ 6x more efficient operations



# HaiPick System 3

## Extreme storage density & load carrier flexibility

HaiPick System 3 uses Chain-Pick tote technology to maximize density and features ACR to AMR handoff for extreme responsiveness and system flexibility.

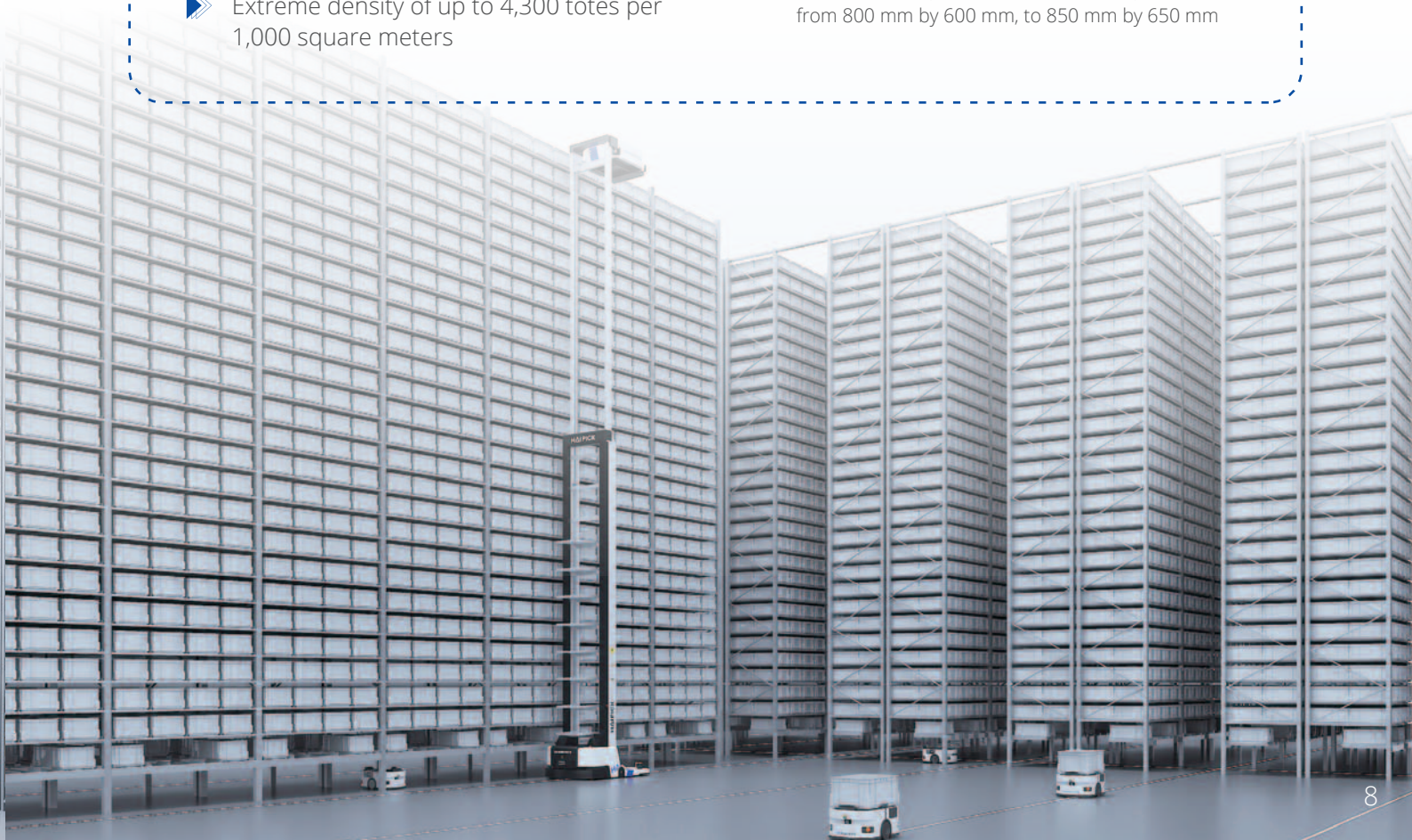
System 3's Chain-Pick technology allows for the highest storage density possible by linking up to 3 totes together, effectively eliminating any wasted space. With a storage capacity of 43 totes per square meter, a 5,000 square meter area can accommodate a total of 215,000 storage locations.

HaiPick System 3 is also designed for flexibly handling cartons, trays, and totes of varying sizes in the same installation. This enables the system to seamlessly adapt to dynamic inventory demands.

Fast-Transit Companion AMRs respond quickly to fast fulfillment, incoming orders. They retrieve totes from the lower level of racking and immediately deliver to pick stations at a swift speed of 4 meters per second, allowing for extended order cut-off times. Tailored for high-priority orders and fast-moving item handling, they further boost throughput and overall operational efficiency.

### Competitive Advantages

- ▶ Ultimate order responsiveness
- ▶ High AMR speed up to 4 meters/second
- ▶ Extreme density of up to 4,300 totes per 1,000 square meters
- ▶ Chain-Pick technology
- ▶ Handles tote, carton, and tray  
from 300 mm by 300 mm, to 650 mm by 450 mm  
from 800 mm by 600 mm, to 850 mm by 650 mm



# HaiPick Climb System

## Simplified solution to unmatched efficiency

The HaiPick Climb system, powered by the HaiClimber robot, revolutionizes goods-to-person warehouse automation with advanced technology in a compact, efficient design.

The HaiClimber uses two climbing arms to connect to a guide rail on one side of the rack, halving connection points compared to traditional climbing systems. This reduces maintenance, ensures greater reliability, and simplifies installation by lowering precision requirements for racks and floors. As a result, HaiPick Climb is ideal for retrofitting existing warehouses or enhancing newly built facilities.

Designed for flexibility and speed, the HaiClimber navigates low-precision environments at up to 4 meters per second, moving freely up, down, and beneath racks to effortlessly access any tote in the warehouse. With order delivery to picking stations within 2 minutes—34% faster than typical ASRS—it achieves up to 4,000 tote deliveries per hour from just 1,000 m<sup>2</sup> of storage, maximizing throughput and storage density.

HaiPick Climb is a simplified, high-performance evolution of traditional ASRS, eliminating costly complexity while delivering superior efficiency and scalability.

## Competitive Advantages

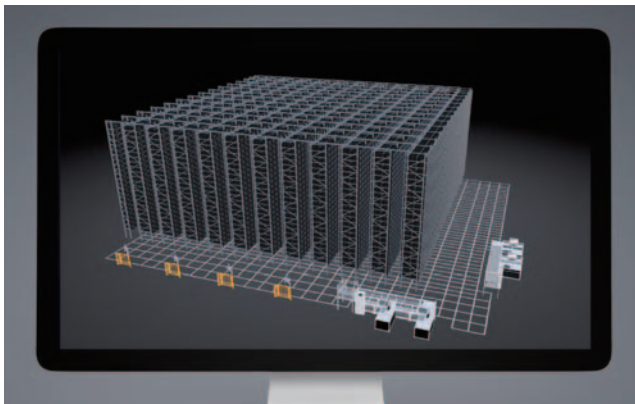
- ▶ Single-sided climbing mechanism with only 2 touchpoints
- ▶ Easy to scale up with plug-and-play robots and standardized materials
- ▶ Rapid go-live with minimal floor requirements
- ▶ Extreme throughput of up to 4,000 totes per hour in 1,000 square meters
- ▶ Simple and intuitive to learn and operate
- ▶ Optimized storage density with narrow aisles and no cross-aisles needed



# HaiQ

## The brain behind the system

HaiQ, an intuitive and user-friendly warehouse management platform, enhances throughput and operational efficiency by intelligently managing order execution and robot dispatch, ensuring faster order fulfillment.



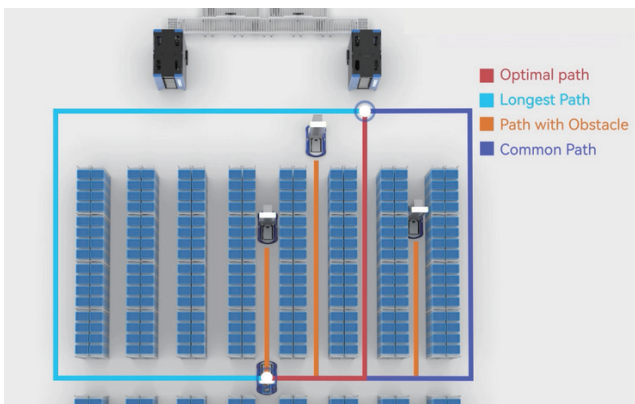
### Solution Design Simulation

HaiQ's simulation design tool can quickly generate 3D warehouse layout concepts and performance analysis in 10 minutes before you make any capital decisions.



### Strategic Order Management

The Warehouse Execution System (WES) integrates seamlessly with upstream systems, offering flexible strategies like heat-map zoning, smart order grouping, and order batching to meet your diverse needs across industries.



### Efficient Robot Management

The Equipment Scheduling System (ESS) efficiently manages robots through task allocation, path planning, and smart charging, ensuring an efficient workflow that enhances operational efficiency.



### Valuable Operation Insight

The Data Platform delivers visualized operational data and real-time status of robots, workstations, and inventory, enabling optimized scheduling and remote inspections for informed business strategies.

# The HaiPick Family

The driving force within all Hai Robotics solutions is our diverse range of robots, encompassing ACRs, AMRs, and the rack climbing HaiClimber. Engineered with application-specific features, these robots overcome the limitations of traditional automation. From maximizing storage density to enabling rapid order fulfillment and handling diverse materials, the HaiPick range offers tailored solutions for optimizing warehouse operations and streamlining the goods-to-person process.



## Multi-Layer ACR

The HaiPick A42 optimizes warehouse efficiency by offering automated picking and storage up to 6m (19.7 feet), handling up to 9 cases simultaneously. Its flexibility allows for mixed picking of totes and cartons with varying dimensions.



## Telescopic Lift ACR

The HaiPick A42T, the world's first telescopic ACR, maximizes storage density by reaching up to 12 meters (39 feet), doubling capacity compared to standard ACRs.



## Fork-Lifting ACR

The HaiPick A3 is a fork-lifting ACR designed for manufacturing scenarios, capable of handling materials like tires, trays, and foam boxes up to 5.5m (18 feet). Its Class 10,000 cleanliness and anti-static features make it ideal for handling sensitive goods like PCBs.



## HaiClimber

Found in the HaiPick Climb system, HaiClimbers can freely navigate up, down, and beneath racks to execute the complete goods-to-person process with just one robot, allowing for flexible robot allocation and extreme throughput.



## Fast Transit Companion AMR

Found in HaiPick System 3, this fast AMR reaches a max speed of 4 meters per second and allows for extreme responsiveness to incoming orders. Our ACRs hand off totes to the bottom rack where this AMR retrieves the tote and immediately delivers it to a picking station for rapid order fulfillment.



## Heavy Duty Companion AMR

Found in HaiPick System 2, the Heavy-Duty Companion AMR allows for automated management of bulk items up to 1000 KG (2000 LBS) within the same system as smaller items. These AMRs work alongside our ACRs allowing for combined operations.

# Workstations

The workstations are compact, allowing for more storage and space utilization in your warehouse. Their ergonomic design and intuitive interface ensure fast and accurate picking with 99%+ pick accuracy and no human travel to fulfill each order. These workstations allow for 4x operational efficiency and 3x more daily throughput compared to manually dependent operations, helping to overcome challenges caused by a labor shortage and reduce strenuous work while increasing worker productivity.



## Conveyor Workstation

ACR delivers containers to a conveyor for order picking or line order delivery. Available in HaiPick system 1/3.

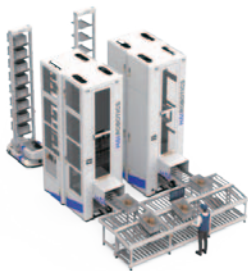
- 180 cases per hour piece picking rate
- Single & double U-shaped layouts
- Increase worker productivity up to 4x
- Compatible with any container type
- On-conveyor docking



## Double-layer Conveyor Workstation

Streamlining inbound operations, HaiClimber robots deliver empty totes to this workstation where they are refilled with inventory. Available in HaiPick Climb system.

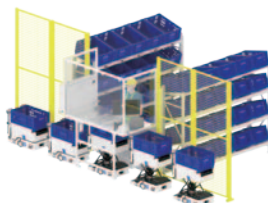
- 150 totes per hour inbound rate
- Easily expands to meet future needs
- Delivers empties & retrieves full totes in one trip



## HaiPort Picking Station

For high throughput operations. Available in HaiPick system 1.

- 600 totes per hour piece picking rate
- 400% faster than direct to conveyor delivery
- Loads 8 cases in 3 seconds
- Compatible with any container type
- On-conveyor docking



## Desktop Workstation

Typically used for order picking, these workstations can double as inbound workstations when appropriate. The robots drive under the desk and present the tote for picking. Available in HaiPick system 3 and HaiPick Climb system.

- 350 totes per hour piece picking rate
- Ensures continuous totes flow
- Quick installation and relocation
- Off the table picking
- Optimal comfort and ease of use

# Hai Safety System

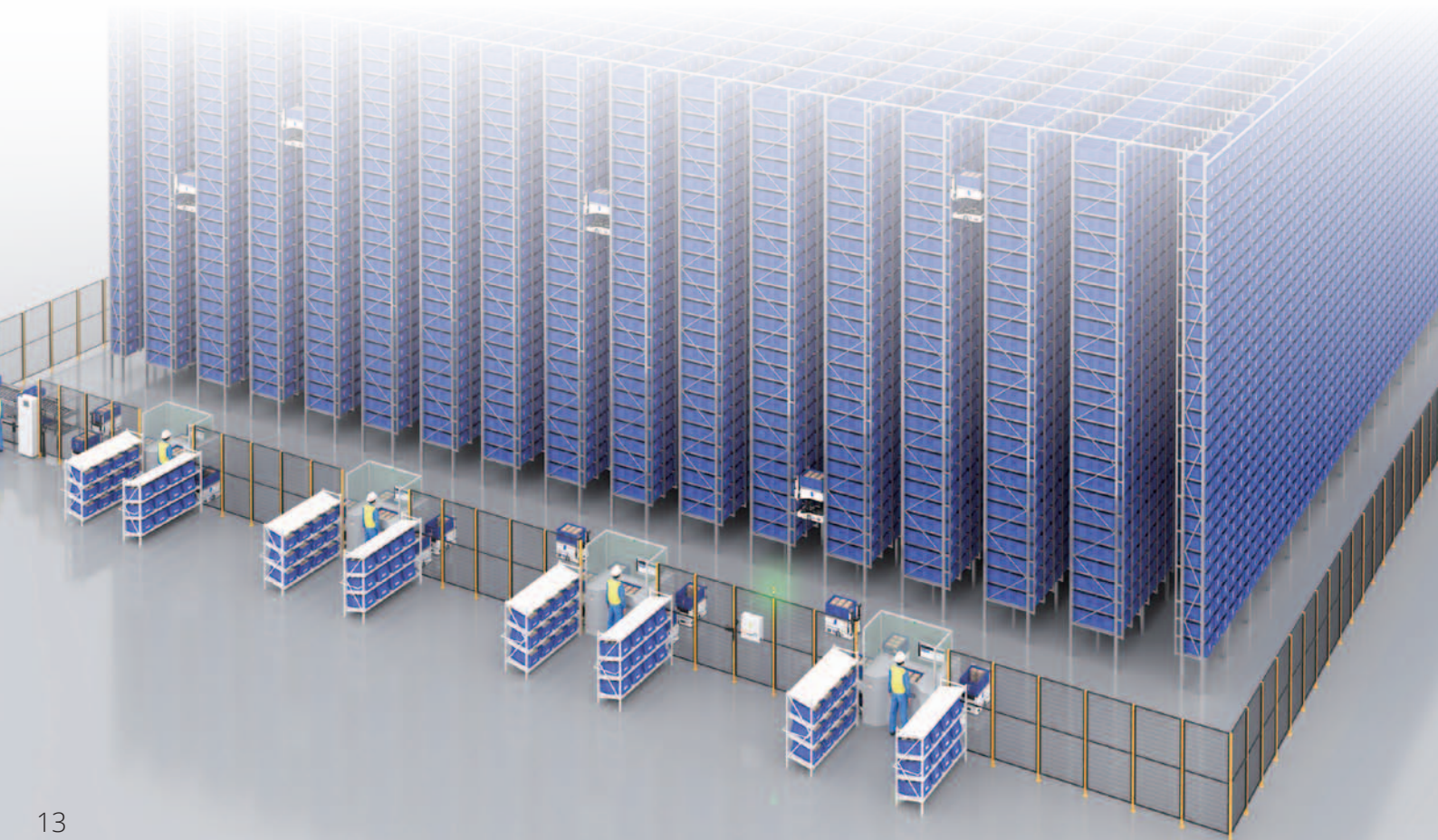
The Hai Safety System is specifically engineered for all HaiPick Systems, ensuring a safe and reliable operation environment by eliminating the risks of accidents.

## Standard Hai Safety solution

All HaiPick Systems come equipped with a standard safety solution that includes safety facilities such as safety fences and interlocked guard doors, creating a secure and fully enclosed area for robotic operations. The system shuts down temporarily when authorized personnel enter the robot zone, ensuring the ongoing safety of maintenance staff.

### Competitive Advantages

- ▶ Enhance warehouse safety
  - PL d (EN ISO 13849-1) rated
- ▶ Increases inventory security
- ▶ Increases maintenance worker safety
- ▶ Prevent unauthorized or accidental entry into the system



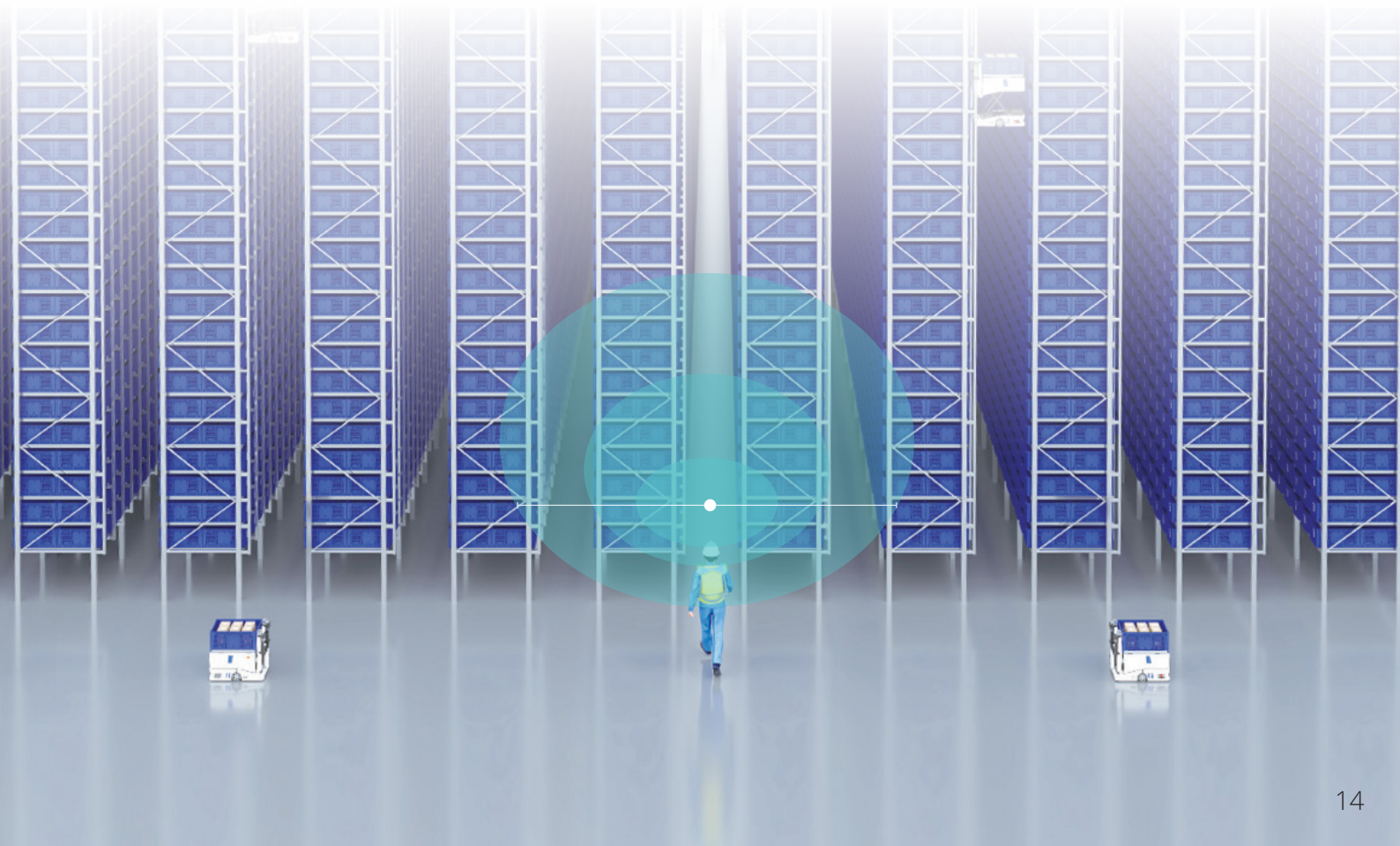
## Premium Hai Safety Solution

The Premium Hai Safety package provides an elevated system accessibility from the standard safety package. This package provides workers with access to live HaiPick Systems without stopping or disrupting ongoing operations.

This lightweight, electronic vest indicates the wearer's position, prompting only the robots that are close to the wearer to adjust their routes, slow down when near, or come to a complete halt if necessary. The rest of the system keeps operating at maximum capacity, ensuring minimal interference with ongoing operations during tasks like maintenance or cleaning.

### Competitive Advantages

- ▶ Enhance warehouse safety
  - Vests are EN ISO 3691-4 certified
  - 360-degree full vision in personnel detection with RFID and UWB technology
- ▶ Uninterrupted operations for maintenance and access
- ▶ Increases inventory security
- ▶ Prevent unauthorized or accidental entry into the system



# Those Who Rely on Hai

## Customers we proudly serve



Desigual.

BOOT BARN



Panasonic

JOHN LEWIS  
& PARTNERS



## Partners we collaborate closely with



Honeywell



VANDERLANDE



TOSHIBA  
東芝インフラシステムズ株式会社



ferag...



XTS Technologies  
sun bhd



## Industries empowered by HaiPick Systems



Apparel



E-com



3PL



Retail



Manufacturing

Over 1,500 HaiPick Systems are currently operating around the globe, helping facilities in over 40 countries advance and accelerate their operations.



Electronics



Automotive



Healthcare



Food & Bev



Energy

Customers who come to Hai Robotics are looking to automate inventory management and facility operations through rugged systems with extreme flexibility to evolve with a company for generations-securing success through whatever the future brings.

# Success Stories We Enable

## BOOT BARN

- 250% increase in efficiency
- 2x storage density
- Reduce 50% labor
- 100% picking accuracy



USA



- 60% reduced storage footprint
- 2.5x increased storage capacity
- 80% reduced picking personnel per shift
- 65% increased daily throughput



USA

## Desigual.

- Delivers 30,000 units daily
- Improves warehouse efficiency by 3-4x
- 60-80% reduction in operational costs



Spain

## JOHN LEWIS & PARTNERS

- 100,000 storage locations
- 1,500 lines processed per hour



UK



- 118.52% increase in throughput in peak season
- 240% more vertical storage
- 42.9% increase in SKU management



USA



— EST. 1989 —

- 150,000 SKUs stored
- 30,000+ daily order lines handled



Poland



- 4x improved warehouse efficiency
- 99.99% pick accuracy
- 50,000 daily piece processing



UK



- 50% labor savings
- 2.9 million stored items
- 66,000 items shipped daily



South Korea

See more customer success through our library of case studies:



# HAIROBOTICS

FUTURE-READY FLEXIBILITY



## Hai Robotics EMEA

Polarisavenue 136  
2132 JX Hoofddorp, The Netherlands  
Tel: +31233039101  
[marketing.eu@hairobotics.com](mailto:marketing.eu@hairobotics.com)

Partner:



TRANSSYSTEM SA  
Wola Dalsza 367, 37-100 Łańcut, Polska  
tel: +48 17 24 90 100  
e-mail: [transsystem@transsystem.pl](mailto:transsystem@transsystem.pl), [www.transsystem.pl](http://www.transsystem.pl)