HAI ROBOTICS – Masterclass, Logistics Summit 2023

The Future of Fulfilment Operations:
Why Flexible & Scalable Warehouse Automation is the Key
to Success

Julian Hafner – Senior Director, Global BD

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The rise of e-commerce has highlighted the need for flexible and scalable warehouse automation solutions.

The Rise of E-Commerce

Rising Customer Expectations

28% of German customers expect same-day delivery for their online orders (Bevh, 2021).

Omni-Channel Fulfilment

Approximately 23% of German online shoppers have used the buy-online-pickup-in-store (BOPIS) service (Bevh, 2021).

B2B & B2C mixed operations

Around 90% of German B2B companies engage in online sales (ibi research, 2021).

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Traditional Fulfilment Challenges

Labour Shortage

Around 50% of companies in Germany faced difficulties finding qualified employees (German Chamber of Commerce and Industry DIHK 2019).

Limited Warehouse Capacity

Growth in prime rents in EU increased by 10.4% in the last four quarters. This is despite vacancy creeping up to 3.5% in Q1 2023 (Savills).

Order picking accuracy

Order picking accuracy is challenged by human error, high volume of orders, system inaccuracies, inadequate training, and complexity of orders.

Inventory Management

Maintaining optimal stock levels to prevent overstocking or stockouts is challenging, especially with variable demand.

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The Evolution of Warehouse Automation

Warehouse 1.0
Traditional manual warehouse

Warehouse 2.0
Semi-automated warehouses

Warehouse 3.0
ASRS automated warehouse

Warehouse 4.0
ACR automated warehouse

About Hai Robotics

1800+
Employees

50%
Engineers

1800 TOP↑
Patents

30+
Countries and regions

1100 TOP↑
Projects launched

Established in 2016, HAI ROBOTICS is committed to providing flexible, intelligent and efficient warehouse automation solutions through advanced robotics technology. We aim to empower every warehouse and factory with logistic robots. The solution has been applied in apparel, 3PL, retails, e-commerce, electronics, energy, manufacturing, healthcare, and other industries.
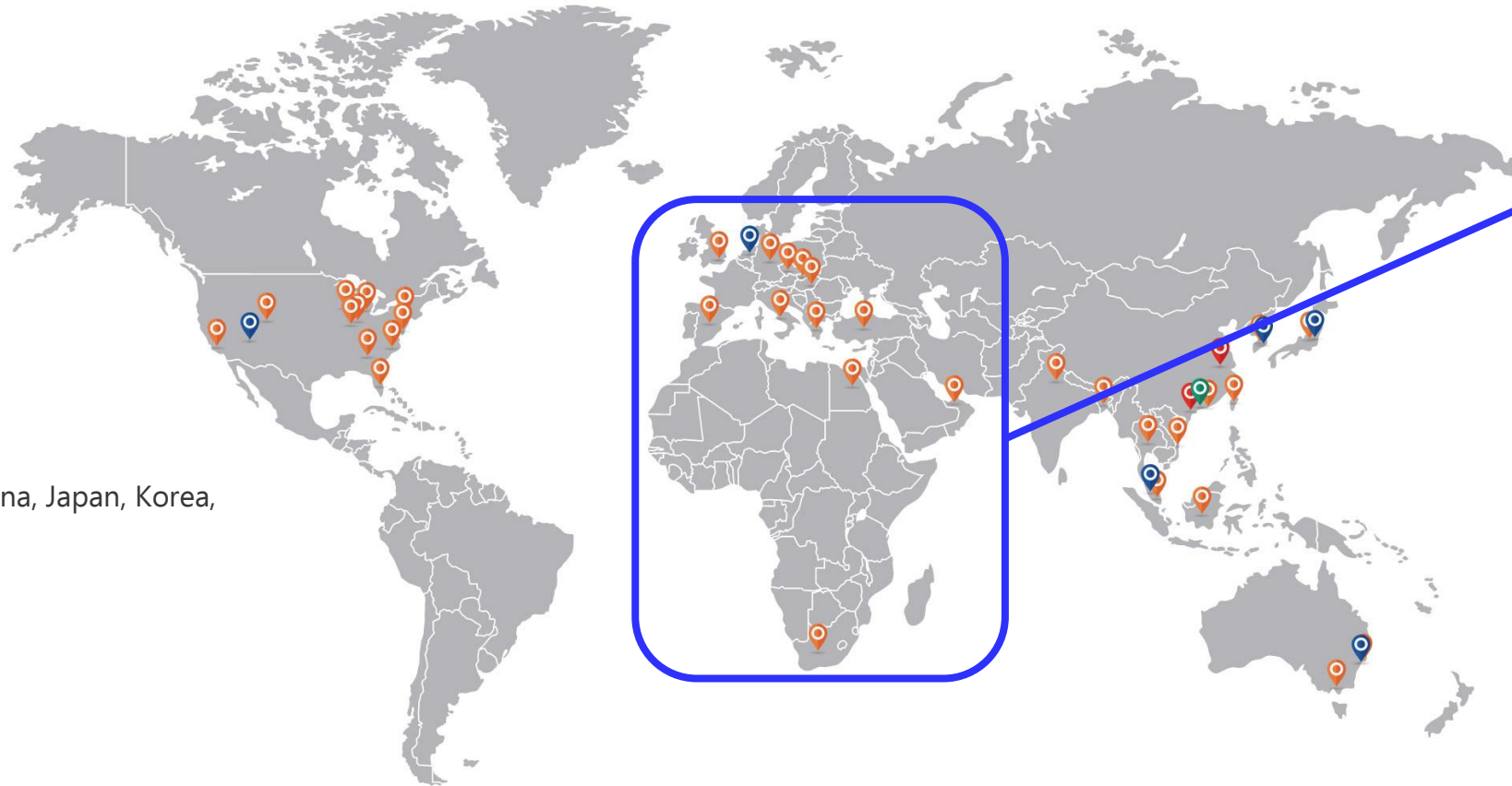
Think Globally. Act Locally.

Shenzhen, CN
Global Headquarters

Dongguan & Wuxi, CN
Factory for 20.000 robots p.a.

20+ offices in US, Europe, China, Japan, Korea, Taiwan, SEA, Australia
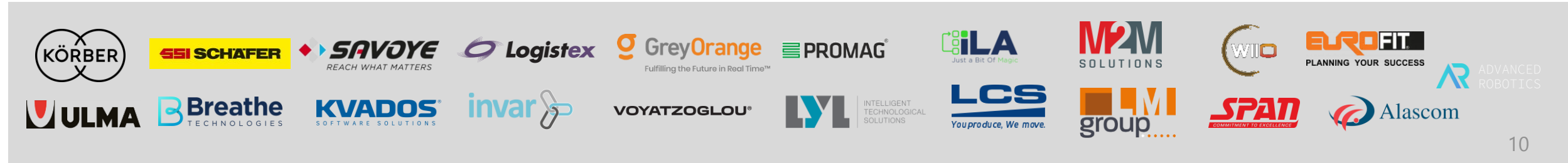Worldwide Locations

60+ global/regional
Partners

Hai Robotics EMEA

800+ ACRs deployed
90+ Employees
20+ Partners
3+ Offices

Headquarters

Factory

Subsidiary/Branch

Partner

EMEA Partners

Trusted by Global Customers

HAIROBOTICS

Apparel
NIKE · ANTA · adidas · SKECHERS · Desigual · YKK · INDITEX · ERKE
JNBY · SCALPERS

Consumer Electronics
PHILIPS · EPSON EXCEED YOUR VISION · GE General Electric · hp · Lenovo · 美的 Midea · Panasonic

3PL
MAERSK · BOLLORÉ LOGISTICS · syncreon A DP WORLD Company · GEODIS · SF DHL Supply Chain China · JDL 京东物流 · CJ · YAMATO TRANSPORT · KERRY TJ LOGISTICS 嘉里大榮物流

Retail
JOHN LEWIS & PARTNERS · Sam's CLUB · L'ORÉAL GROUPE · sisley PARIS · Unilever · watsons · booktopia · Walmart

Pharma
Alcon · 大参林 dashenlin · 国药集团 SINOPHARM · SPH 上海医药 SHANGHAI PHARMA · Sinocare 三诺 · TRUKING · 中智大药房 ZEUS CHAIN DRUGSTORE · Cofoe 可孚

Others
TME Electronic Components · 谷仓海外仓 GOODCANG · MITSUI SEIKI · prodrive · WINIT 万邑通 WINIT CORPORATION · WULING · GEELY

We Provide Flexible & Scalable Warehouse Automation Solutions
One-Stop-Shop

Through HAI & Local Suppliers

- HaiPick robots
- Chargers
- Workstations/HaiPort
- Conveyors
- Storage systems
- Totes
- Software interface

Through Our System Integrators

- Sorter: Cross-belt, Tilt-tray, Pouch, etc.
- Carton erector
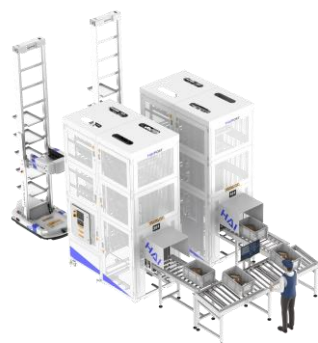- Lid applicator
- Box-on-demand automation
- And many more…

ACR Systems - Flexible & Scalable Automation

Autonomous Case-handling Robot (ACR) systems are highly efficient Goods-to-Person solutions designed for totes & cartons transportation and process optimization.
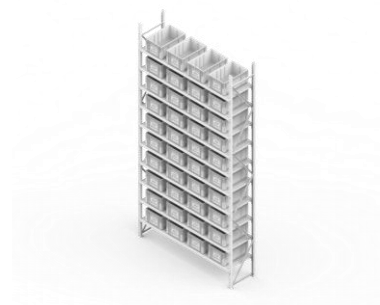

HaiQ Software Platform

HaiStation

HaiCharger

Storage Unit

HaiPick Robots

HaiPick Systems

HAIPICK SYSTEM 1

HAIPICK SYSTEM 2

HAIPICK SYSTEM 3

The most flexible goods-to-person automation solution

The most versatile goods-to-person automation solution

The most powerful goods-to-person automation solution

- Most flexible ACR solution, handling various storage unit sizes
- Handles inbound and outbound operations
- Integrates directly with conveyor-based workstations
- Adding HaiPort docking stations supercharges HaiPick efficiency
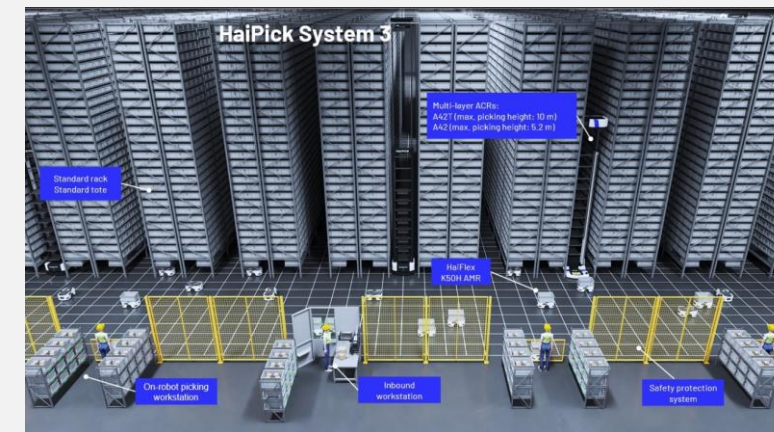
- All HaiPick System 1 advantages
- ACR & AMR integration (600 – 1000 KG)
- ACR for tote handling while AMR for pallet/cages/hanging garment rack handling
- Enables order consolidation

- ACR & AMR integration
- Fastest AMR in the industry at 4 m/s
- Max. performance density: 1.5 cases/h/m^2
- Significantly increase storage density above 50 totes/m^2
- Intelligent robot path & order scheduling for 1000+ robots simultaneously

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Core Advantages

Rapid Deployment

Easy to transform and upgrade
6-9 months after PO

Third-Party Usability

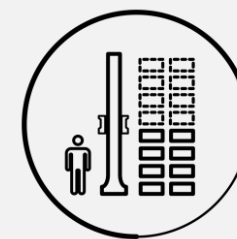Suitable for a variety of application scenarios, handling various SKUs

High ROI

Significantly shortens the return period of investment to 2-3 years

Increased Operational Efficiency

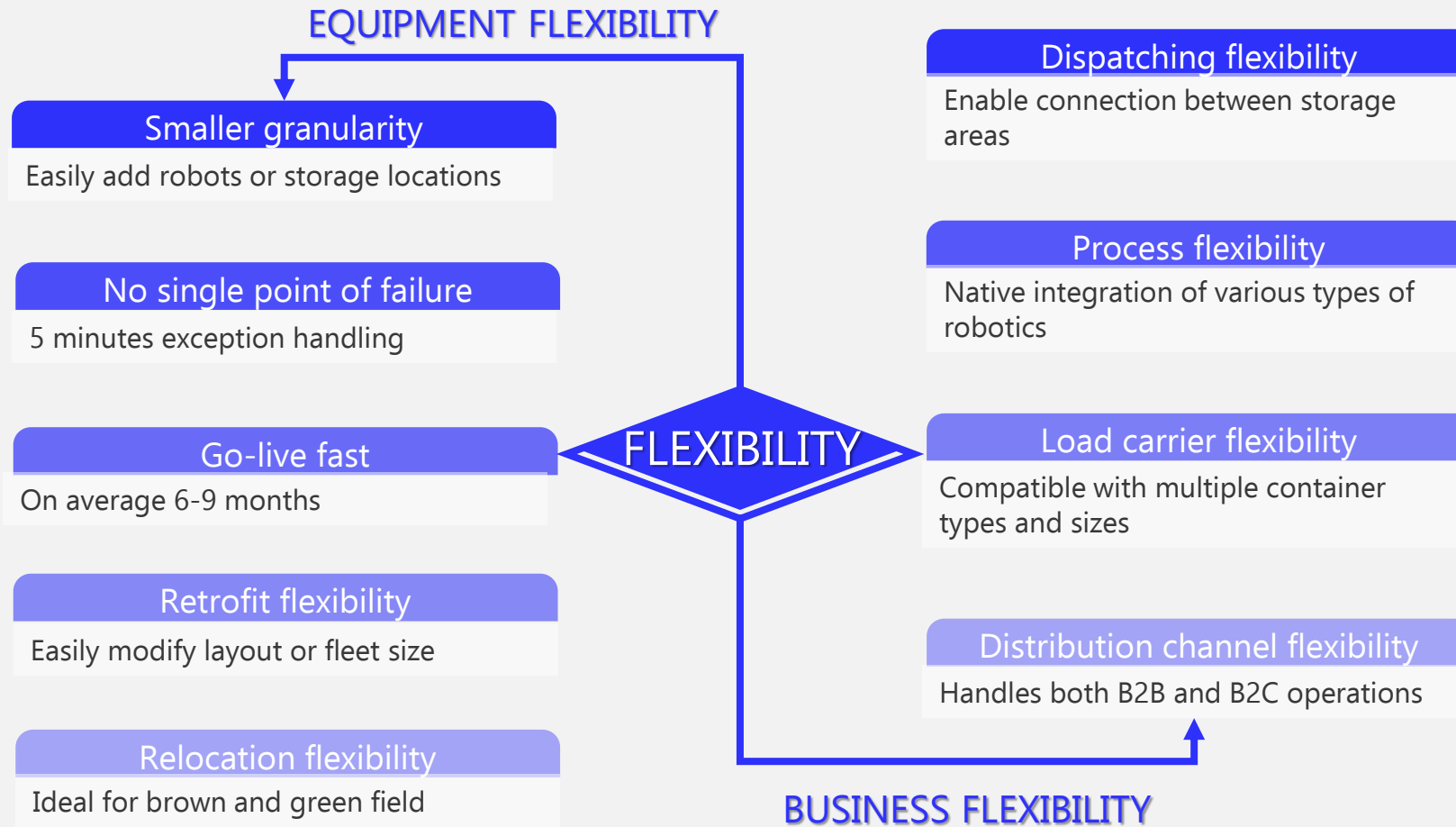Intelligent picking and handling increases efficiency by 3-4x

Higher Storage Density

Improve warehouse space utilization above 50 totes per m^2

Key Strengths - Flexibility

EQUIPMENT FLEXIBILITY

Smaller granularity
Easily add robots or storage locations

No single point of failure
5 minutes exception handling

Go-live fast
On average 6-9 months

Retrofit flexibility
Easily modify layout or fleet size

Relocation flexibility
Ideal for brown and green field

FLEXIBILITY

Dispatching flexibility
Enable connection between storage areas

Process flexibility
Native integration of various types of robotics

Load carrier flexibility
Compatible with multiple container types and sizes

Distribution channel flexibility
Handles both B2B and B2C operations

BUSINESS FLEXIBILITY

Key Strengths - Scalability

EQUIPMENT SCALABILITY

Fleet size scalability

Add ACRs or AMRs to your fleet without disrupting operations

Space scalability

Increase space, storage or SKUs without needing different automation

SCALABILITY

Growing together

Grow your automation solution as your business grows

Start small

Start with the automation solution that fits your needs now
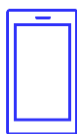
BUSINESS SCALABILITY

Key Strengths – Industry Expertise

Grocery

- Suitable for micro-fulfillment centers.
- Operate in chilled and ambient environments.
- Flexibility on order cube.

3PL

- Flexibly handles different size/type of SKU's.
- Easy to expand – growth of business.
- Enables multi-tenant facilities.

Apparel, Retail & E-Com

- Handling of carton boxes.
- Efficient returns handling.
- B2B & B2C operations supported.

Electronics & Manufacturing

- Flexible integration with the manufacturing line.
- Reliable uptime.

Automotive

- Dedicated solution: A3.
- Flexible integration with the manufacturing line.

Pharmaceutical

- Class10000 cleanliness and anti-static:
- Fit for clean and sensitive environments. Dust proof.

Thank you for your attention.

We are on a mission to disrupt the industry. Within proximity to our customer.

Julian Hafner – Senior Director, Global BD,

Feel free to contact me on **Linked**in.

3PL & Grocery

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