

2022-08-31

Mitsubishi Heavy Industries, Ltd.  
Mitsubishi Logisnext Co., Ltd.

## MHI and Mitsubishi Logisnext to Commence Provision of Automated Picking Solutions for Warehouses Based on “ΣSynX”

**-- System Now in Operation at LogiQ X Lab, a Demonstration Facility within Yokohama Hardtech Hub --**

- ◆ *Picking know-how incorporated into ΣSynX, enabling smart picking system efficiently coordinating AGFs, AGVs and palletizers*
- ◆ *Automated picking system centered on AGFs supports manpower savings at customer's distribution sites*

Tokyo, August 31, 2022 – Mitsubishi Heavy Industries, Ltd. (MHI) and Mitsubishi Logisnext Co., Ltd., part of MHI Group, have completed development of an automated picking system. This system integrates automated guided forklifts (AGFs), automated guided vehicles (AGVs) and palletizers\*1. “LogiQ X Lab”, a demonstration facility for this new logistics solution, has also opened at Yokohama Hardtech Hub (YHH), a co-creation space operated by MHI in Yokohama. Tours of the demonstration facility will be open to customers from October, to support their consideration of adopting automation and reducing manual labor within their warehouses.



“LogiQ X Lab”, a demonstration facility at YHH

Until now, picking operations in warehouses have depended on workers pursuing efficiency through intense concentration. The newly developed picking system introduces automation and intelligence into the picking process through application of MHI’s “ΣSynX” (Sigma Synx) solution\*2 concept currently under development. Customized application developed in-house together with an integrated control system enable efficient coordination of multiple AGFs, AGVs and palletizers. This results in fewer picking and transfer operations, optimized picking processing, and higher throughput.

By automating and introducing intelligence into picking operations conventionally performed by numerous workers, the new solution helps to alleviate current shortages of logistics operators, frees workers from the arduous labor of picking heavy items, and contributes to reducing human error.

Because the new solution does not require any large-scale floor construction or modifications, it can be adopted for today’s increasingly prevalent multi-tenant warehouses, and can also respond to sudden changes in customer requirements.

Mitsubishi Logisnext is scheduled to demonstrate how the system feeds stock pallets and delivers palletized pallets using an automated picking system comprising an AGF and AGV at Logis-Tech Tokyo 2022\*3, to be held at Tokyo Big Sight commencing September 13.

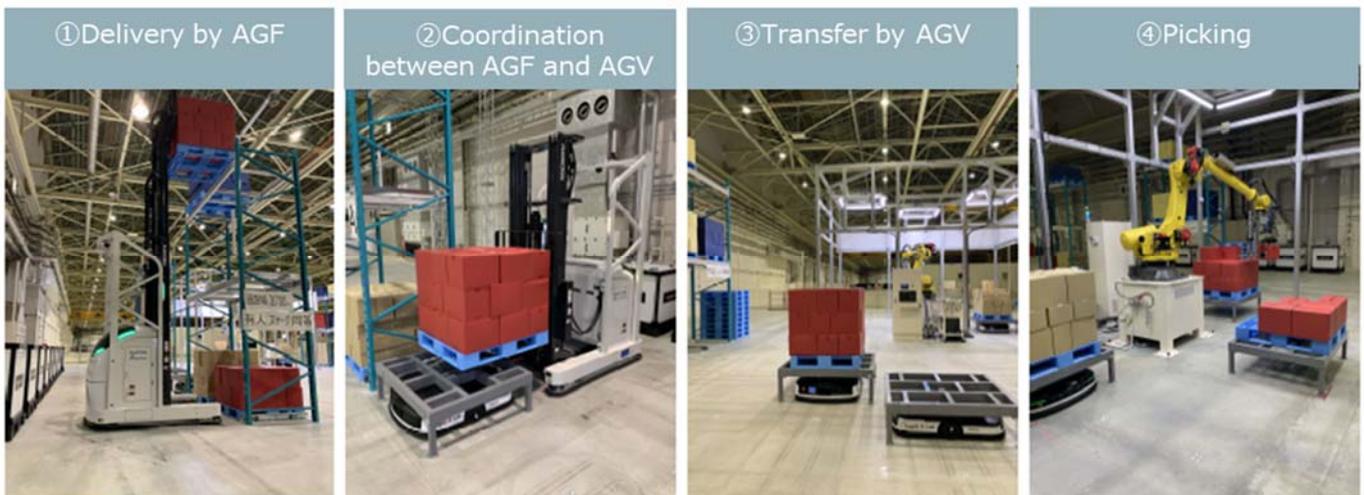
In the future, MHI and Mitsubishi Logisnext will continue applying the full complement of MHI Group's capabilities to the development of advanced products, including automated warehousing and shipment systems enabled by  $\Sigma$ SynX, providing optimal solutions to the diverse challenges facing the distribution industry.

### Notes

\*1: A palletizer is a device that performs automated placement and stacking of products on pallets.

\*2:  $\Sigma$ SynX is MHI's standard platform for synchronizing and coordinating various machinery systems. It is a consolidation of digital technologies that enable optimized operation by making machinery systems intelligent.

\*3: For details, visit: <https://www.logis-tech-tokyo.com/ltt/index.html>



### Major Characteristics

- Automated picking system centered on AGFs

In this fully automated work system, the AGF supplies items removed from storage shelves to the AGV and palletizer. After picking, finished items are retrieved by AGV and AGF and transferred to storage shelves.

- Proposal of optimum equipment configuration through logistics simulation prior to system adoption  
Distribution flow is simulated prior to system installation based on the customer's historical picking data. A proposal is made of the optimal equipment configuration and layout to satisfy the customer's needs.
- Optimal equipment coordination through adoption of MHI's integrated control system  
AGFs, AGVs and palletizers are coordinated efficiently through use of MHI's integrated control system. The adoption of optimized logic responds to needs using the minimal number of palletizing operations.

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### **About Mitsubishi Heavy Industries Group**

Mitsubishi Heavy Industries (MHI) Group is one of the world's leading industrial groups, spanning energy, smart infrastructure, industrial machinery, aerospace and defense.

MHI Group combines cutting-edge technology with deep experience to deliver innovative, integrated solutions that help to realize a carbon neutral world, improve the quality of life and ensure a safer world.

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