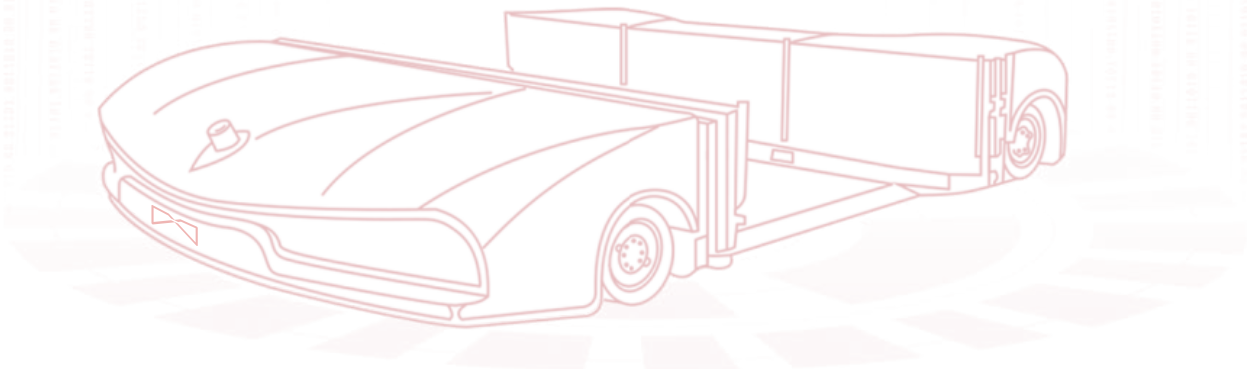
HWArobotics

Customer case

Phoenix Publishing & Media Xingang Logistics Center Project



HWArobotics PTE. LTD.

Phoenix Publishing & Media Xingang Logistics Center

Phoenix Publishing & Media Inc. is mainly engaged in books, periodicals, audio visual products, electronic publications, culture and education, trade services, warehousing and transportation, and import and export trade. As the largest cultural enterprise listed on the Main Board of Shanghai Stock Exchange, it is among the top ten in the global publishing industry, with an annual turnover exceeding USD 2.8 billion.

Project Background

As bookstores in Jiangsu Province continue to expand their businesses, the types of purchases made by them and the shipments made to them have increased rapidly. They order products of rich varieties in small quantities very frequently, and they have high expectations for speed and quality. They have also extended their offerings from the traditional book industry to related digital culture products and shifted their sales model from traditional brick-and-mortar stores to e-commerce, continuing to create a co-development mode for online and offline networks. As part of its strategic planning, Jiangsu Phoenix Xinhua Bookstore Group Co., Ltd. ("Phoenix Xinhua") aims to meet general consumer demands for publications and cultural products. To achieve this goal, Phoenix Xinhua must upgrade its logistics system, enhance its overall competitiveness in chain operations and online sales by integrating supply chains and innovating operational models, facilitate the integrated operations of logistics resources based on modern logistics and e-commerce, reduce logistics costs, and continually create new growth opportunities.

Project Introduction

HWArobotics has undertaken the phase II project of the Xingang Logistics Center of Phoenix Publishing & Media, a listed fund-raising project with a total construction area of 90,000 m^2(968,752ft^2). The system design is positioned as an omni-channel logistics center for small items at room temperature. The goods-to-person picking mode is adopted at a large scale in this system. Prior to construction, HWArobotics conducted an in-depth research and analysis of Phoenix Publishing & Media, looking into the characteristics of its operation process, its logistics needs, and various technical specifications and requirements. Combining our rich expe-

rience in goods-to-person system integration, HWArobotics has adopted three goods-to-person process modes.

We have delivered a total of 40 groups of sorting stations, including 12 groups of sorting stations for processing traditional stock orders, 14 groups of sorting stations for cross-docking orders, and another 14 groups of sorting stations for reverse logistics. This project also features 1 set of pallet AS/RS shuttle system (6,000 pallets), 14 aisles and 168 shuttles, 90,000 standard cases, 1 set of VanRiet slider sorter from Netherlands, and 2 sets of Amblax spiral conveyors from Germany.

Project Highlights

1. The application of the compact storage shuttle system in the storage process, including pallet warehouses and tote warehouses. Compared with the original high-bay warehouse, the overall storage capacity has doubled, and the floor area required has been reduced by nearly half, which greatly alleviates the increasing demand for storage space due to the expansion of business volume.

2. The application of the goods-to-person system in the sorting process. The traditional book industry adopted the "instant receiving and dispatching" logistics process, where the pickers placed all the books on the ground and then picked the required books based on the printed orders or with the RF scanner. This operating mode has its drawbacks, including a low turnover rate and the occupation of extensive warehouse space due to books being placed on the ground, which ultimately wastes storage space. Workers could only start picking after all the books are placed on the ground, and they could only start another picking round after completing the current round and removing all items on the ground. Therefore, the shortest throughput time was two days. As the volume of business increases, placing all the books on the ground becomes inadequate, and the turnaround cycle is too long to meet the market needs. At that time, books were scattered on the ground, people were bustling around, and waste paper was scattered everywhere. Today, things are different — books are automatically transported to picking stations through automated guided vehicles (AGVs) and conveyors in the "instant receiving and dispatching" process, with pickers selecting books based on LED indicators. Additionally, with the automatic case weighing feature, the system can verify whether books are picked for each order correctly based on the weight of the tote containing the picked books. In case of any error, the system will generate an alert message. This greatly reduces the picking workload, improves picking efficiency, and lowers the error rate.

3. Intelligent upgrade of the logistics opera-

tion and dispatching center. The upgraded logistics operation and dispatching center integrates the warehouse operation management system (WMS), the transportation management system (TMS), and the logistics information system for education materials and exchanges information with the ERP and store systems in real time. Combining functions such as vehicle route optimization, BeiDou navigation management, and online logistics office, it can control and dispatch various resources in the supply chain, enabling the real-time sharing of information resources in different places, centralized storage, and cross-region distribution. This center supports centralized management of multiple logistics subsystems and the intelligent unified allocation, and provides interfaces to communicate with upstream and downstream suppliers and customers, forming a logistics information service network with complete functions, shared resources, and convenient services, and realizing full collaboration within the logistics system.

After the intelligent logistics industrial park project is completed, the operation capacity of Phoenix Xinhua logistics distribution center has been greatly improved. Due to the increase in utilization rate per square meter, human efficiency improvement, shorter turnaround cycle, and other factors, this project saves an annual logistics cost of over USD 1.4 million. Thanks to the online intelligent verification of picking, the management efficiency and service quality have been greatly improved. This project realizes online platform based transaction, transmission of digitized data, and application of information technologies in business operations, and satisfies the needs of different business formats like B2B and B2C. The overall modernization and standardization of the work environment, processes, and technologies have undergone a significant leap, which fully meets the characteristics of an intelligent logistics factory.

In overall, as a pioneer in the publication distribution field, Phoenix Xinhua has boldly integrated the latest intelligent logistics technology into publication logistics, which greatly enhances the logistics operation and management efficiency. This project sets a benchmark for the logistics of this industry and provides a powerful boost for the publishing and distribution industry in fulfilling the cultural construction mission.

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