Digital Transformation in the Logistics Industry: A Case Study of Goodaymart Logistics

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Abstract: Digital transformation offers new opportunities for supply chain stability and security. Especially in the logistics industry, strengthening the construction of a digital supply chain system has become one of the effective ways to promote the transformation and upgrading of the logistics industry. This study explores the profound impact of digital transformation on the logistics industry, using Goodaymart Logistics as a case study to analyze its digital strategies and implementation outcomes. Traditional logistics face challenges such as delayed information transmission, inefficiency, and inadequate market responsiveness. Digital supply chains, through technology platforms, digital solutions, and cloud service experiences, significantly improve operational efficiency. This study finds that Goodaymart leverages technologies like IoT, cloud computing, and AI to achieve full-process intelligent management in warehousing, transportation, and end-user services, optimizing cost structures and enhancing customer satisfaction. This study summarizes Goodaymart's successful practices and proposes recommendations for advancing digital transformation in logistics and supply chains, aiming to provide insights and references for the industry.

1 INTRODUCTION

One of the important links of the supply chain is logistics, but the traditional logistics process has obvious limitations. First, the logistics information of traditional logistics is difficult to transmit and update in real-time, which may lead to information delay and wrong decisions, thus affecting the stability of the entire supply chain (Ma, 2024). Secondly, inefficiency is also a problem of traditional logistics. Manual operation still occupies a large proportion of traditional logistics links, resulting in process inefficiency and cost increase. In addition, traditional logistics is difficult to flexibly respond to random changes in the market and laws, and traditional processes cannot match the rapid adjustment of the entire supply chain promptly. Problems such as cargo retention, resource waste, and accounting management difficulties are all challenges that the traditional logistics industry needs to face. The limitations of traditional logistics become more obvious in the context of digital transformation, and digital supply chains provide new opportunities to solve these problems (Chu, 2023).

Digital transformation is the process of improving an entity through a combination of information, computing, and communication that triggers significant changes to its attributes (Vial, 2019). As a global trend, digital transformation has gradually become the core strategy of China's economic development, and most industries are formulating digital transformation strategies in response to the support of national policies (Cheng, 2024). Supply chain systems and logistics are no exception. Digital transformation refers to using emerging digital technologies such as artificial intelligence, cloud computing, blockchain, and the Internet of Things to meet the needs of optimizing business operation processes and improving user experience (Qi, 2024). Digital transformation has become an inevitable trend for the logistics industry to achieve more efficient and intelligent operations. The deep integration of emerging digital technology and supply chain (T. Hazen, 2014) can promote the transformation and upgrading of traditional supply chains to digital embedded supply chains.

Digital transformation can not only promote enterprise transformation and economic development

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but also profoundly impact enterprises' innovation behavior (Yang, 2024). The Internet of Things (IoT) and information physical systems (CPS) are the most critical technologies in the development of digital supply chains (Ben-Daya.M., 2017). The traditional supply chain consists of dispersed physical geographical facilities with physical transport links between them (Baziyad, 2024). The shift from a simple physical transport relationship to a digital supply chain system can improve operational efficiency in logistics, reduce operating costs, and improve customer satisfaction.

Many of the benefits of digital supply chains still need to be explored because the operational management links within the logistics industry are complex (Buyukozkan, 2018). Researchers in academia and industry have systematically outlined the advantages and challenges of digital supply chains. However, there needs to be more attention to the supply chain and logistics, and no concrete example illustrates the relationship between the digital supply chain and the logistics industry. This paper will fill in the research gap.

The organizational structure of this paper is as follows: The following part reviews and classifies relevant articles and explains the development background and process of the digital supply chain through this literature review. The third part discusses the definition, operation mode, and advantages of the digital supply chain at Goodaymart Logistics through concrete examples. The fourth part describes the advantages and challenges of digitalization in supply chain and logistics. The last part contains the conclusion and suggestion.

2. CASE DESCRIPTION

Goodaymart is a logistics service provider committed to becoming China's leading supply chain management company. Since its establishment, Goodaymart Supply Chain has focused on providing supply chain management services for industrial users, taking open and complex consumption supply chains as the main scenario, and providing omnichannel supply chain design and solutions with inventory sharing as the core. In the context of the development of the digital era, Gooday Supply chain conforms to the development of digitalization, strives to promote the construction of a digital supply chain system, creates supply chain management solutions to meet consumer needs through innovative service models, helps the transformation of supply chain management and operation to digital and intensive, and promotes the high-quality development of manufacturing industry with technology and digitalization as the engine. Goodaymart Supply Chain collaborates with Chinese universities to tackle key core technologies of logistics and supply chain. It researches and applies cutting-edge information technologies such as the Internet of Things, cloud computing, machine learning, and big data in logistics and supply chain management, driving the industry to develop intelligent logistics management and service.

The number of raw materials required by manufacturing enterprises in the manufacturing process is huge, so the corresponding number of suppliers to provide raw materials is also large. At the same time, the supply process is extremely complex, and there are many pain points in the process, such as data needing to be updated in time, information needing to be more transparent, and so on. In this context, the Good Day Supply chain creates the whole process of interactive, visual, traceable VMI raw material supply chain management solution by breaking the situation of multi-party data closure to accurately connect the upstream and downstream needs of the industry, effectively reduce supplier operating costs, and further achieve cost reduction and efficiency. As a leading supply chain management solution and scene logistics service provider in China, Goodaymart Supply Chain deeply integrates the new generation of information technology with the service industry. It builds a full-scene and all-factor digital service system of the supply chain through the comprehensive interconnection of the logistics system.

3. CASE ANALYSIS

The digital service system of Gooday’s supply chain is mainly reflected in three aspects: the technological logistics platform, the digital solution capability, and the scenario-based cloud service experience platform capability.

3.1 Technological Logistics Platform

Goodaymart’s technology-based logistics platform is driven by digital technology and realizes logistics infrastructure and service architecture by building a nationwide warehouse system, distribution system and integrated service network. Goodaymart provides customers with comprehensive and multi-scenario solutions, improving client supply chain management efficiency. At present,

Goodaymart Supply Chain has built a three-level distributed storage network covering the country, covering more than 30 provinces and 130 prefecture-level cities. Through self-build and lease, the company quickly deployed more than 990 warehouses, including central, regional, and transshipment centers. These warehouses have formed a national radiation network, of which Jimo, Huangdao, Jiaozhou and other places are intelligent warehouse groups. In these warehouses, Goodaymart's supply chain uses intelligent robots, large automatic guided vehicles, and other customized intelligent machines and equipment. In addition, the warehouse is integrated with artificial intelligence technology, including intelligent inventory, picking, handling, and digital twin technology, to carry out intelligent transformation of the warehouse, thereby improving the efficiency of storage operations. In addition, to meet customers' specific needs for intelligent warehousing, Goodaymart Supply Chain also provides advanced intelligent warehousing solutions to realize the transformation from traditional manual and mechanized warehousing management to automated and intelligent modern logistics warehousing management. This transformation increases the efficiency and capability of warehousing operations and fuels advances in digital logistics.

Goodayday supply chain has established a nationwide distribution network. The company operates tens of thousands of transport lines, dispatching a huge team of cooperative vehicles to ensure the vast majority of the country's provinces, municipalities, autonomous regions and prefecture-level cities comprehensive coverage. In addition, with the continuous expansion of cross-border logistics services, GoodayMart’s supply chain has integrated numerous sea, rail and air routes, focusing on customer needs to build an international logistics network that can serve multiple countries and regions worldwide. In terms of end-distribution and installation services, Goodaymart's supply chain achieves end-service deep into villages and communities through service outlets. The company has established a nationwide service network, ensuring the fast fulfillment of logistics and improving end users' distribution and installation experience.

3.2 Digital Solutions

Goodaymart’s digital supply chain provides solutions based on digital technology, integrating and utilizing all resources to provide customers with full-chain services.

The digital supply chain can realize the data collection of each link in logistics service and optimize the supply chain operation by data analysis. In addition, the system integrates core business processes such as order management, warehousing, transportation and end service and integrates business management platforms such as OMS, WMS, WCS, TMS and CDK to achieve real-time data acquisition and tracking management of supply chain nodes. Timely data collection helps optimize logistics routes and resource allocation, providing customers with highly informationized, visual and standardized comprehensive solutions. In addition, the big data analysis platform within the system can summarize and monitor business data, provide intelligent decision support and visual reports, and provide data support for the fine management of the supply chain, thereby improving the overall operational efficiency. Especially in the VMI project,

Goodaymart's supply chain focuses on full-link innovative service solutions such as product warehousing, in-warehouse management, and outbound storage, and it applies multiple types of intelligent devices to realize the full fine management of raw materials.

Goodaymart Supply Chain has revolutionized the warehousing process through an innovative digital system, achieving efficient management of the whole process from inbound to outbound. As the first link in the supply chain, the Goodaymart supply chain has significantly improved its operational efficiency by going paperless." The "Storage Reservation" system allows drivers to book online and arrange loading and unloading flexibly, reducing the safety risk caused by vehicle backlogs. In the material inspection link, Goodaymart's supply chain collaborates with the factory side to advance the inspection to the VMI warehouse and improve the reputation of the full-link operation through the "blind inspection" mode. In the shelf link, intelligent shelf guidance replaces the management mode that relies on manual experience, reduces the complexity of work, and improves the accuracy of warehouse location and storage utilization. Goodaymart Supply chain uses the VMI management system to achieve standardized report, product, and personnel management. The sharing of real-time inventory information solves the problem of information opacity and helps factories realize visual inventory management. The intelligent inventory technology realizes automatic data collection, and the accuracy of inventory counting reaches 99.99%." The "Tianye" automatic capture logic algorithm realizes

7*24H early warning supervision, ensuring the compliance and efficiency of warehousing operations. The efficiency of the warehousing process is crucial to the entire warehousing operation.

Goodaymart's supply chain has built an integrated electronic sorting system, which is connected to factory data, automatically generates a picking list, and improves the picking efficiency by 30% through intelligent sorting technology. Intelligent vehicle allocation improves vehicle loading rate and reduces transportation costs. The full-link delivery control tower realizes the visual management of the whole process. With the promotion of the digital wave, Goodaymart's supply chain actively embraces changes, constantly innovates service solutions, changes how it connects with customers, and reshapes its operation and management model. The transformation and upgrading of Goodaymart's supply chain will create more possibilities for developing the supply chain industry. In terms of integration, the Goodayday supply chain has comprehensively upgraded storage links through digital innovation, from storage reservation, material inspection, and shelf guidance to warehouse sorting; each link reflects the efficiency and high accuracy brought by digitalization. Through the VMI management system and the full link control tower, Goodaymart's Supply chain not only improves its operational management efficiency but also injects new vitality into the development of the supply chain industry. With the continuous progress of digital technology, Goodaymart's supply chain will continue to lead the industry in a more efficient, smarter and more convenient direction.

3.3 Scenario-Based Cloud Service Experience

Goodaymart Supply Chain has been committed to providing comprehensive home appliance supply chain management services for Haier and other enterprises since its inception. It has accumulated valuable experience. As one of the few enterprises in the market that can provide end-to-end supply chain management solutions from manufacturing to online and offline distribution channels and end-user scenario services, Goodaymart Supply Chain has demonstrated excellent service capabilities in many fields. In terms of consumer supply chain services, Gooday Supply Chain provides customers with one-stop solutions, covering program design, warehouse management, transportation, end-distribution, installation, and reverse logistics to improve customers' operational efficiency and user experience in the circulation link. For manufacturing supply chain services, Goodayday Supply Chain is deeply involved in customers' production and marketing coordination and purchase order management, providing raw material suppliers with services such as collection, shipping capacity, VMI and circular packaging while providing manufacturing enterprises with line warehouse management and JIT distribution, enhancing customers' flexible and agile manufacturing capabilities. In the field of international supply chain, Goodaymart Supply Chain provides "end-to-end" solutions, including door-to-door pickup, warehousing, booking agent, customs clearance, customs inspection and transportation services, covering sea, air, land and multimodal transportation and other diversified transportation modes. In terms of transport capacity services, Goodaysmart supply chain uses Internet technology to build a network freight platform, integrate dispersed cargo transport needs and social transport capacity resources, and provide shippers with nationwide trunk transport capacity services. Goodaymart Supply Chain is also actively expanding its ecological innovation business, including last-mile scene service and after-vehicle ecological business. The last mile service focuses on the needs of end users in the home, fitness, travel and other scenarios, providing personalized solutions and value-added services.

The aftercare ecological business focuses on the life cycle management of commercial vehicles, providing value-added products and services such as oil products, insurance and tires.

4 CONCLUSIONS

In the era of the digital economy, digital transformation is an inevitable choice and a new opportunity for enterprise development. This paper studies the changes in various stages of Goodaymart's digital transformation. This found that in GoodayMart, the digital transformation of the supply chain can improve the operational efficiency of the entire organization, and the digital transformation has a positive impact on the development of the logistics industry.

The findings have the following implications. First of all, Goodaymart's supply chain, as a pioneer in the industry, not only enhances its service capabilities through continuous upgrading and application of digital technology but also contributes to the intelligent transformation of the industry. Through an in-depth understanding of industry

customer needs, the company provides customized solutions to help customers achieve cost-effectiveness optimization while setting a new service benchmark for the logistics industry, leading the new trend of service innovation. Secondly, different stages of supply chain digital transformation will have different strategic directions, so managers should make a good strategic layout and clarify the objectives of different transformation stages. Strengthen digital capabilities, master the application scenarios of various technologies in a targeted manner, and consolidate the transformation support architecture. In addition, digital transformation requires enterprises to continuously develop new solutions and operating models, creating new vitality. For the government, the key is to ensure the implementation of policies and, on this basis, to further promote and support enterprises in carrying out digital transformation to avoid enterprises in the process of development bottlenecks. The government needs to closely track all stages of enterprise transformation, identify and solve key challenges and problems in the transformation process, and provide precise assistance and guidance. In addition, local governments should formulate differentiated incentive and subsidy policies based on the characteristics of local enterprises and regional economic conditions to stimulate the enthusiasm of enterprises for digital transformation. The logistics and supply chain industry is reshaping in the technological revolution and industrial change. Overall, the government plays an important role in promoting the digital transformation of enterprises, and companies like Goodaymart Supply Chain provide practice cases and impetus for the transformation and upgrading of the industry through continuous technological innovation and service upgrading. The concerted efforts of the government and enterprises will jointly promote the logistics and supply chain industry in a more efficient and intelligent direction.

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