

DRIVING THE FUTURE OF DISCRETE MANUFACTURING LOGISTICS THROUGH TECHNOLOGY



alpega**TMS**

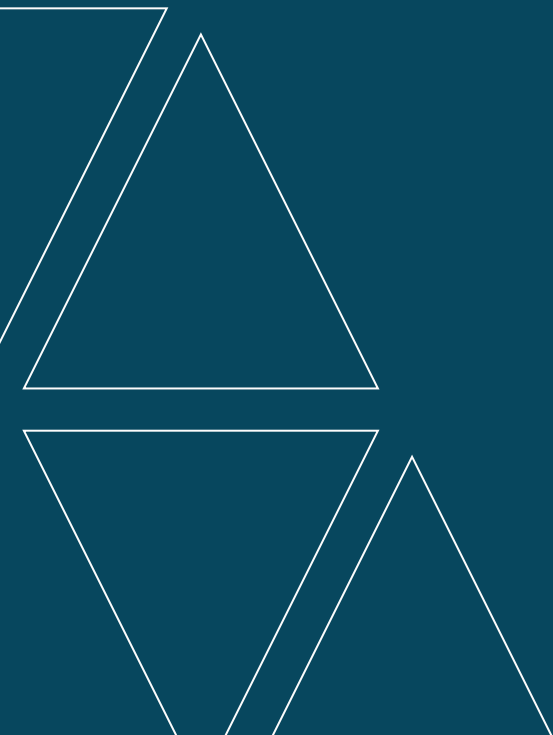




▲ IN THIS E-BOOK YOU'LL FIND

CONTENTS

- 01. **COMPLEX INDUSTRY CHALLENGES**
- 02. **TOWARDS DIGITIZED LOGISTICS PROCESSES**
- 03. **BENEFITS OF A DIGITAL SUPPLY CHAIN FOR DISCRETE MANUFACTURERS**
- 04. **THE AGCO EXAMPLE**
- 05. **CONCLUSION**





01. COMPLEX **INDUSTRY CHALLENGES**

The discrete manufacturing industry has some of the most complex supply chains of all verticals. While companies differ in volume, global reach, investments, and production speed, common challenges include limited IT skills and processes digitalization, high logistics costs, demand volatility, multimodal and international operations, and business inefficiencies. On-Time In-Full delivery, replenishment, and quality assurance are essential for an industry with highly variable demand and short lifecycles, adding pressure to supply chain professionals to get it right.

Disruptions like the COVID-19 pandemic and natural, economic, and political changes highlight the importance of streamlining processes and finding ways to optimize current processes in a sector where risk and unpredictability have become the new norm. According to Gartner, failing to properly link manufacturing and the full supply chain cycle leads to a disjointed approach and poor business performance.

In the coming years, the ARC Advisory Group expects to see a greater focus on value network collaboration, leaving behind a plant-centric approach and some of the challenges above-mentioned, while bringing plenty of opportunities for manufacturers, especially in transportation. Discrete manufacturing companies should become more agile, proactive, and adaptable to achieve supply chain responsiveness and resilience.

This ebook explores digitalization in the manufacturing industry, focusing on the benefits manufacturers worldwide can achieve from embracing technology solutions.





02. TOWARDS DIGITIZED LOGISTICS PROCESSES

Digitalization is rapidly transforming how manufacturers worldwide add value and competitive advantage to their businesses. **Embracing digitalization is no longer just an option**; soon, those companies that haven't yet digitized will fall far behind their competitors.

To address the market need for end-to-end supply chain visibility and collaboration, manufacturers need to rely on solutions that connect several data sources, such as production, inventory/warehouses, distribution, and transportation processes.

However, there is no one-size-fits-all approach. Each organization needs to find and leverage the right digital solutions that connect to their existing systems and allow not only to track their unique processes and requirements but also adapt to their workforce and circumstances.

The digitalization process goes far beyond logistics.

"Succeeding in Industry 4.0 asks for (far) more than deploying new IT tools; it requires no less than a tech-enabled organizational transformation of operations" McKinsey

When looking into digitizing your logistics processes and overall supply chain, it is essential to take time and different steps within your organization to find the right fit and ensure a successful process and secure ROI:

1. CONDUCT END-TO-END SUPPLY CHAIN RISK ASSESSMENT

Identify changing demand and inventory levels to locate critical gaps in supply, production capacity, warehousing, and transportation.

2. DEVELOP A ROBUST RISK MANAGEMENT PROCESS

Build action plans based on scenario analyses to limit the impact of disasters. Develop a medium-term recovery plan by validating planning assumptions and setting boundaries on risk and cost

3. IMPLEMENT DIGITAL AND AUTOMATED CAPABILITIES

Digitize wherever possible so that you can focus your efforts on managing for exceptions and leave the day-to-day repetitive or rule-based processes to be digitized.

4. EVALUATE AND ADJUST PRIORITIES

Create an agile planning process to better balance demand and supply by implementing a faster-cycle, closer-horizon integrated planning process.

5. INVEST IN COLLABORATIVE AND AGILE PLANNING AND FULFILLING CAPABILITIES

Define common goals with your suppliers, shipping partners, and customers. Create an actionable short-term and outcome-driven resilience strategy with a breakdown of activities among the supply chain ecosystem, aiming to effectively and efficiently leverage additional networks among various suppliers' pool, production, and distribution networks.



03. BENEFITS OF A **DIGITAL SUPPLY CHAIN FOR DISCRETE MANUFACTURERS**

Technology addresses several critical areas for manufacturers, from policies, processes, and network strategies to collaboration. To truly succeed in today's competitive world, manufacturers will need **end-to-end supply chain visibility** to impact their decision-making process and achieve leaner supply chains.

By putting an end to silos within the business, integrating technology, and coordinating different supply chain steps, manufacturing companies can gain full transparency and increase productivity and profitability.



Digitalization adds value to several parts of the discrete manufacturing supply chains:

- **DECREASED LEAD AND DELIVERY TIMES**

Manufacturers feel the pressure to deliver high-quality orders in full and on time. They may even face fines for late deliveries. Technological solutions allow them to meet delivery commitments and to mitigate unexpected situations. Real-time insights on the products' position have become an increasingly important tool for manufacturers to ensure OTIF delivery.

- **COST REDUCTION**

An incomplete and inaccurate view of different product flows, topped by a lack of synchronization between inbound and outbound leads to high logistics costs for manufacturers. A digital solution offers better insights as well as support for the labor-intensive invoice settlement and reconciliation process. Demurrage costs can also be avoided by setting up a slot booking solution for warehouses.



■ **DATA-DRIVEN DECISIONS AND SUSTAINABLE GOALS**

Outdated internal legacy systems, siloed data, and lack of end-to-end visibility result in high levels of manual work and unclear decisions affecting the supply chain. In a fast-changing environment, manufacturers need to collect accurate data through advanced analytics to derive the right insights and facilitate company-wide improvements to optimize performance. Through digitalization and access to shared data, manufacturers can reduce carbon emissions and promote more sustainable logistics practices.

■ **COMPLIANT BUSINESS PROCESSES**

With stricter governmental goals and stringent security measures, an integrated document management and control system supports organizations in managing requirements and making documentation available for the different parties that require it.

■ **RESILIENCE AND INCREASED CAPACITY TO FACE DISRUPTIONS**

Disruptions to supply chains, whether natural, political, or trade-related, can have significant impacts on production, resulting in delays and extra costs for manufacturers. Thanks to digital solutions, visibility across the supply chain can help managers to foresee disruptions and adapt processes. They get alerts such that they can manage by exception.

■ **EFFICIENT DISTRIBUTION NETWORKS AND IMPROVED SUPPLIER RELATIONSHIPS**

A tool that provides a detailed overview of complex global networks and supplier performance, coordinating all efforts between ecosystem partners and the different transportation modes is a must for manufacturers operating globally. Orchestrating the transportation of essential parts or components while keeping in mind production disruptions and changes in demand and supply can cause difficulties in finding qualified carriers to meet the shipment requirements at the right time and place.

■ **CUSTOMER SATISFACTION AND CONSUMER EMPOWERMENT**

Manufacturing companies often report low customer satisfaction rates due to non-streamlined processes, delays, and unexpected circumstances that cannot be handled appropriately. Leading companies leverage real-time updates and dynamic ETAs to drive efficiencies, mitigate risks, and meet ever-growing customer demands.





04. THE AGCO EXAMPLE

AGCO is a global leader in designing, manufacturing, and distributing agricultural products and delivering high-tech solutions.



TOWARD SUPPLY CHAIN 4.0

The expansion of its global network, as well as its decentralized logistics structure, led to a lack of transparency around material flow and logistics performance levels. Following a thorough assessment, the AGCO team set new goals toward 'Smart Logistics.' These goals included establishing a globally standardized and integrated digital Transportation Management System to enable optimized global material flows, increase transparency, and reduce transportation costs and inventories. AGCO also needed to build a solid foundation for a sustainable and innovative logistics 4.0 ecosystem that would contribute to its vision.

"It's not just about delivering cost savings or performance. It's about maintaining improvements through robust processes that are well understood and built on a strong foundation." Greg Toornman Vice President Global Materials Logistics and Freight Management

A SUCCESSFUL GLOBAL ROLL-OUT WITH SUBSTANTIAL RESULTS

By deploying Alpega TMS, AGCO closed the digital gap between its network partners and their smart factories. Alpega TMS was implemented at 38 sites worldwide, with 3,250 suppliers and 150+ service providers within 18 months. It created a globally standardized operating model, which significantly increased transparency and efficiency. The solution also delivered the flexibility that AGCO needed to support highly customized products, which require different inbound transportation solutions.

The information flow with carriers was also positively impacted, providing them with detailed forecasts and accurate data to improve their performance. The introduction of global carrier and supplier scorecards led to improved network performance, providing a sustainable inbound flow from the suppliers to factories. Simultaneously, inventory days on hand were reduced by 24%, further decreasing total costs. The TMS system also improved working conditions, provided greater flexibility, increased visibility of potential risks, and enabled further innovation.



"Technology helped us to become a customer, a shipper, and an employer of choice. These are three big wins that do not necessarily fall to the bottom line in a clear way, but definitely have major advantages for our company and supply network."

As a result of the initiative's success in inbound logistics started in Europe, the project was rolled out to America and China and extended to outbound logistics. Thanks to Alpega TMS, AGCO has cut transport costs by 25% and has set a sustainable supply chain path.

05. CONCLUSION

Embracing digitalization is the only way to create a resilient supply chain for discrete manufacturing in the 21st century. Whether you are a multinational or a small to mid-sized manufacturer, the time has come to reevaluate your current situation and adopt technological solutions in order to remain competitive.

Many of the challenges and opportunities for discrete manufacturers covered in this ebook can be tackled with a Transportation Management System (TMS).

A TMS affords logistics professionals the ability to view, manage, and improve all aspects of inbound and outbound shipments across their entire supply chain.

A fully integrated solution with connected networks and data can improve your business's performance and helps future-proof your supply chain. It provides the ability to connect all stakeholders to gain full transparency and visibility of the transportation processes while improving collaboration and fostering sustainable practices.



ABOUT ALPEGA TMS

Alpega TMS is a modular, end-to-end Transportation Management System (TMS) for shippers that brings together more than 30 years of expertise from both inet and Transwide. Our software empowers transportation professionals to manage their logistics and supply chain processes, thanks to the latest in transportation technology. Alpega TMS' 100,000+ users leverage a network of 80,000+ carriers across 5,000 shipping locations to handle more than 30 million transport orders each year. Our cloud-based TMS software is easy to use, and it was created in collaboration with shippers, carriers, and logistics service providers. It is flexible and scalable, and it can transform global and local supply chains into collaborative ecosystems.

Alpega TMS is part of the Alpega Group, a leading global logistics software company offering modular solutions that cover the transportation and logistics needs of shippers and carriers across all levels of complexity. Alpega is present in 80 countries worldwide and employs over 500 people with 31 different nationalities.

For more information about our company and products, please visit www.alpegagroup.com/en/tms

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Shaping Transport Collaboration