Transforming Transportation for the Intelligent Enterprise

How to Build a Smart, Seamless Supply Chain

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Transportation and the Intelligent Enterprise

Modern transportation companies must move more goods than ever before, serving clients and customers who demand fast, attentive service. It’s a fast-paced environment that requires optimizing every resource, from employees to technology to processes. Data needs to be collected, analyzed and properly linked together at every stage.

Artificial intelligence (AI), machine learning (ML), and the Internet of Things (IoT), combined with advanced analytics, can help transportation companies become intelligent enterprises. Data-driven, intelligent enterprises leverage software, technology, and innovative development platforms in three key ways:

- **Optimization**: Maximizing efficiency and reliability in existing processes.
- **Extension**: Moving beyond efficiency to capture new sources of value.
- **Transformation**: Reinventing the company’s business model to capture new data-driven revenue streams.

The process of becoming an intelligent transportation enterprise starts with a seamless digital supply chain. To help you get started, we asked five experts in supply chain logistics for their tips. Read on to explore the crucial elements of a digitized supply chain, how to create your strategy, and more.
I’d advise anyone involved in the ocean freight industry to take up a hobby: understanding what machine learning and bots are and what relevance they have to your particular company and industry. It’s less important to understand how these concepts work under the hood and more important to know how they will change (and partially or fully automate) core processes like procurement, carrier selection, contracting, execution, and payment.

Machine learning systems will help shippers, carriers, and intermediaries refine the voluminous amounts of data generated each day. They will help those parties sift through the less important data and elevate the more important data. They will then eventually make automated, routine decisions based on that data refinement.

Bots (the good ones) will help practitioners make sense of unstructured dialogue (such as in emails, phone calls, and instant messaging applications) to further inform decisions, especially when coupled with machine learning tools.

I expect shippers to drive the need for this, and for service providers (whether 3PLs, software providers, or the carriers themselves) to fulfill that demand through investment in these technologies. In that environment, service providers will continue to be a necessary cog in the liner shipping industry, but they’ll be filling an evolving need.

So, again, I’d advise anyone in ocean freight to take up the hobby of being the go-to knowledge leader in their organization on these subjects. Otherwise, you’ll be relying on the expertise of others and potentially be expendable when automation becomes the norm rather than the aspiration.
Technological progress will never be as slow as it is today.

New information and communication technologies, such as the Internet of Things, in combination with ever more availability of data, will allow for an exponential growth of automated transactions. The underlying processes will link maritime carriers, seaports and inland transport providers with the shippers’ own globalized supply chains. And all this sooner than later with the help of AI.

Now, for the time being, the exchange of data between the players in the maritime supply chain is not as smooth as it could be. This is due to the use of different standards, mistrust (at times), and also the concerns of competition authorities that some exchanges of information might facilitate collusion.

Container transport providers will increasingly want to control the entire supply chain. This helps to better control costs, such as the possibility to choose a terminal that belongs to the same group. It is also a tool to fully benefit from the possibilities of the digital transformation, as data can be shared more easily, and processes can be better automated, within a company than across companies.

The challenge for governments and competition authorities is to ensure that providers make the best use of the digital transformation, and at the same time ensure that these benefits are passed on to the clients, the shippers.
We are moving to the era of real-time supply chains. Response velocity is the next capability that will define competitive survival.

Velocity is the ability of an organization to drive working capital rapidly from suppliers through end customers. Visibility is the relative transparency of events, material, and flows to all key decision-makers in the extended supply chain.

Visibility requires transparency, which in turn can be leveraged through the new technological capabilities of inexpensive cloud-based computing, distributed computing “at the edge,” and the growth of a digital ecosystem. Those who harness these technologies through collective innovation with their supply chain partners will win.

In concert, these elements move supply chain activities towards a frictionless and sustainable future. Visibility allows individuals to see what is going on, and empower these individuals to interpret information and rapidly make decisions in response to data.

Velocity and visibility are only possible to the extent today because of the evolution of technology.

Clearly the establishment of the Internet spurred the explosion of information and the plethora of supply chain management tools and applications now harvesting data, and driving the evolution of “cognitive” computing.

Yet this disruption has not fully matured; in fact, it is really only just beginning. As organizations begin to engage and mediate impacts upstream and downstream, the power of this force will become evident. It will be those companies that not only survive, but thrive.
Before going down the digital path, collaborate with all teams within your company to formulate a strategy. Identify pain points that digitizing could solve. For example, reducing physical paperwork such as contracts and trade documentation could free up not only filing cabinet space but also the number of email transactions between all that are involved, visibility in tracking and management of shipments could result in more proactive actions versus reactive ones.

Once a plan has been formulated, consider implementing the transformation in steps. Prioritize each opportunity, identify the best technology option, test, test, and test again and then introduce to customers.

Lastly, measure – Establish KPIs and measure the gains you’re likely to achieve from digitization. A PwC study¹ notes that for the transportation and logistics market, an annual average 3.2% in cost savings can be achieved by digitization.

Ta-da! Now that you’ve digitized your logistics, you’re done, right? Wrong! Always stay in tune with industry changes, emerging technology tools and most importantly, listen to your customers. Transforming is a continuous process.

Today’s business world has no room for cool technology for the sake of cool technology. Digital transformation is only a useful task if it is closely tied to a clear business objective. Instead of starting with a new enterprise product offering that promises digital transformation and trying to apply it the organization, logistics providers should first identify the biggest headaches in the organization that might be solved by a digital approach.

What is the low hanging fruit? This conversation should be had with stakeholders throughout the organization. The resulting goals should be both targeted and measurable. By successfully implementing and demonstrating time savings, lowered cost, or increased speed using digital technology in one area, technology proponents will be able to get corporate buy in for the next stages of transformation more readily.
Conclusion: Moving Beyond Efficiency

Transport and shipping organizations face unprecedented challenges to keep pace with consumer demands. Fortunately, we also have the tools we need to meet these challenges head-on.

Intelligent technologies are poised to transform the transportation industry. The right technology partners can help your organization move beyond efficiency and create new, data-driven revenue streams.

SAP Leonardo enables businesses to become event-driven, intelligent enterprises in three ways:

1. **Imbedded Intelligence**: Technologies like ML, IoT, blockchain and advanced analytics

2. **Industry Innovation Kits**: Pre-integrated capabilities to help solve critical industry problems

3. **Open Innovation**: Best-in-class innovation with intelligent technologies powered by the SAP Cloud Platform

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