Managing transportation has become increasingly challenging as customers grow more demanding and the driver shortage constrains capacity. Innovations such as driverless vehicles loom as potential solutions, but have yet to reach commercial viability.

That doesn’t mean transportation managers are forced to deal with process inefficiencies and data siloes while they wait for new technologies to reach the market. There are exciting innovations entering the market today that deliver a return on investment within three years, and will continue to provide value as other innovations come to market. Here are three to consider:

1. **Unified Platforms for Full Operational Visibility**

Visibility into freight in transit has become a necessity in today’s competitive, always-on marketplace. Yet, the visibility provided by current Transportation Management Systems (TMS) has been limited to the carrier data available through the TMS. That creates blind spots in the supply chain and complicates the challenge of aggregating and analyzing the data to optimize for performance and cost.

The new generation of TMS is addressing this limitation by bringing carrier data together with data from order management, WMS, other TMS and ERP systems. By integrating data across the supply chain, these platforms provide a unified view of transportation-related activities that delivers full operational visibility.

With near real-time data from all systems and carriers, managers can quickly resolve freight issues, even before the customer becomes aware. All data required to analyze performance is also easily available through a single platform, allowing managers to use big data analytics to quickly understand and act on opportunities, to evaluate vendor performance and to employ predictive forecasting.

Realize ROI Through:

- Time saved calling and emailing to resolve issues
- Enhanced use of analytics by consolidating all relevant data in a single platform
- Lower costs without compromising performance
- Stronger customer relationships

Integrating data across carriers and supply chain systems provides single-pane visibility into activities across the supply chain, speeding issue resolution and providing the insight for optimization.
2. Big Data and Machine Learning to Mitigate Risk
Political instability, climate events, strikes and a host of other factors create uncertainty in transportation that can lead to expensive delays and lost or damaged shipments. Through risk management platforms that combine big data and machine learning, supply chain managers gain the ability to predict disruptions before they occur while also simplifying regulatory compliance across the supply chain.

A risk mitigation platform can provide a multi-tiered view of suppliers and logistical locations, as well as products, parts, “value at risk,” and other attributes, while simultaneously capturing the logic of specific network interdependencies. Visualization capabilities show the status of a supply chain in an intuitive manner through an interactive world map. For example, if the supply chain involves ocean transport, it provides visibility of relevant vessel movements and predicts when shipments will arrive at the destination port.

This holistic view of interdependencies highlights exposure and vulnerability in more than 20 risk categories. Using data from a variety of disparate sources – validated by humans – and machine learning, a risk mitigation platform provides cost/benefits analyses related to risk, identifies hotspots and recommends suitable mitigations and alternatives.

Realize ROI Through:
- Avoiding potential supply chain disruptions before they occur
- Focusing compliance, audit and risk management activities on the most relevant suppliers
- Preventing reputation damage by addressing emerging issues quickly
- Identifying supplier non-compliance with financial, safety, labor and environmental regulations

3. Find Capacity Fast Through an E-Marketplace
The sharing economy is disrupting a number of industries, from hospitality to transportation. By providing a platform to efficiently connect those who need a service with those who have the resources and capacity to provide that service, e-marketplaces can lower costs for users and increase asset utilization for providers.

This model is ideally suited for freight brokerage, significantly streamlining the process of finding and securing a carrier. For infrequent or low volume shippers, it provides a convenient tool to quickly secure the capacity they need without upfront investment in a sophisticated TMS system.

The primary value of an e-marketplace lies in the use of software to deliver a simple and intuitive experience to shippers and carriers. Leveraging the global scale of smartphone users, digital freight brokerage platforms enable real-time data flow and communication between shippers and carriers, and thus provide seamless matching of loads with available capacity.

Realize ROI Through:
- Quickly aligning capacity with freight needs in a constricted market
- Reducing need for phone calls and tedious credit checking to get brokered freight
- Allowing insight into all available options to ensure cost competitiveness

Innovation That Delivers ROI
From driverless trucks to solar-powered vehicles, innovation will reshape the transportation industry in the next ten years, offering new opportunities to improve performance and lower costs. The immediate opportunity for most organizations is to expand efforts to collect and use the wealth of data within – and outside – their supply chain. Enhanced TMS, robust risk management and digital freight brokerage platforms each provide significant value today while helping to pave the way for additional innovation in the future.

For more information on these platforms, talk to your DHL Managed Transportation representative or visit us online at logistics.dhl.