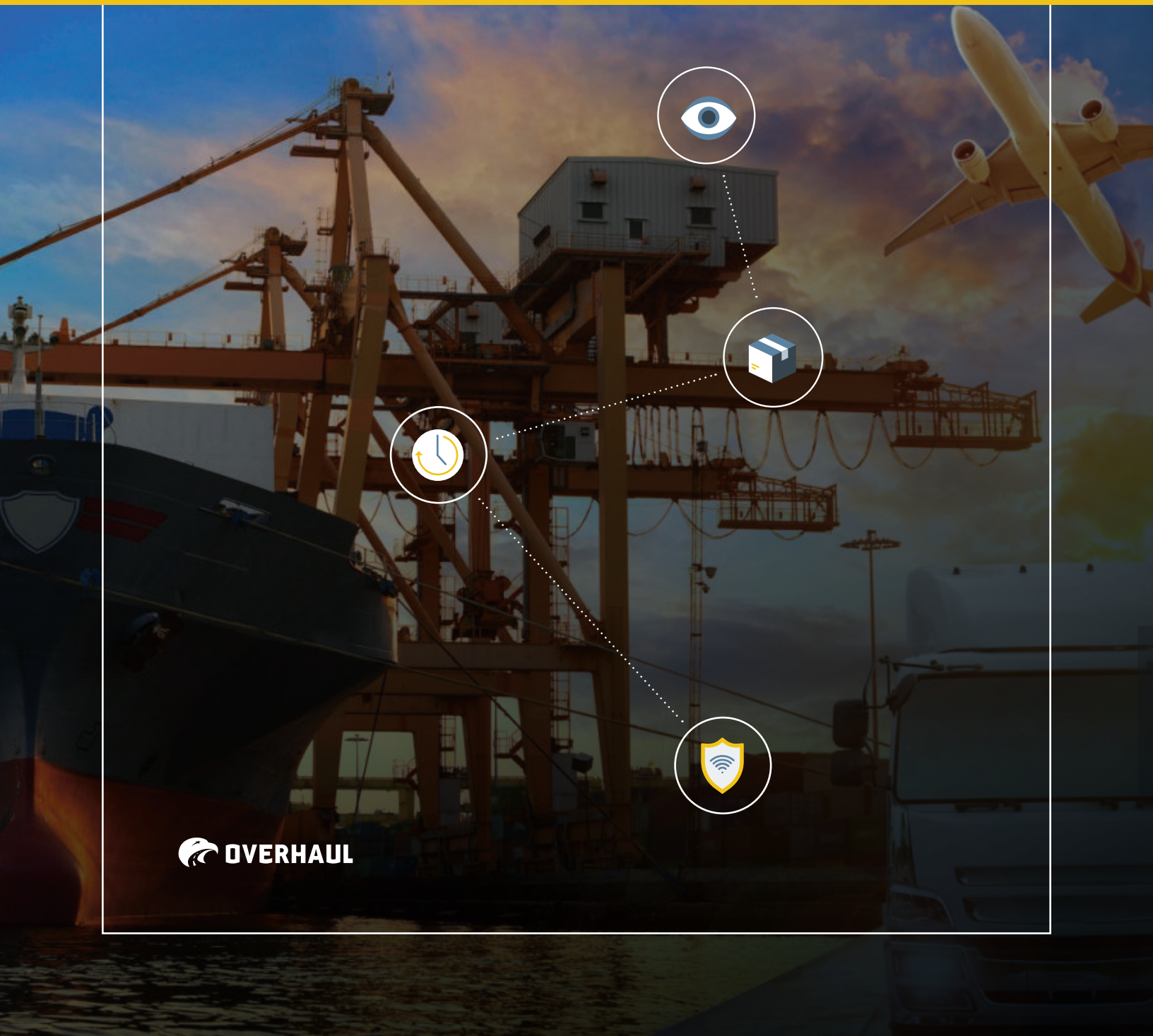


THE VALUE OF SUPPLY CHAIN VISIBILITY

WHITEPAPER



SUPPLY CHAIN VISIBILITY AND DIGITILIZATION ADDRESS KEY BUSINESS TRENDS

Global security requirements, digital transformation, outsourcing, and complex supply chains; these four key trends are reshaping the industry. For supply chain security and logistics professionals seeking responsive innovations to stay ahead of the curve, a digital supply chain strategy offers real-time visibility, risk management, and critical data insights.

GLOBAL SECURITY REQUIREMENTS

Ensuring Product Security and Brand Protection

One of the significant challenges facing the global supply chain is theft. The illegal supply chain is usually one step ahead of the legitimate supply chain. As shippers focus on areas of risk, the criminals adapt and become even more inventive. The Internet has created a global marketplace for criminals, resulting in exponential growth in counterfeit products.

Counterfeit and pirated goods made up **3.3% of global trade volumes in 2016, totaling an estimated \$509 billion, up from 2.5% in 2013**, according to a report from the Organization for Economic Cooperation and Development (OECD).¹

ACCORDING TO THE GLOBAL BRAND COUNTERFEITING REPORT, 2018²



The amount of total counterfeiting globally has reached to **1.2 Trillion USD** in 2017



and is bound to reach **1.82 Trillion USD** by the year 2020.

Estimated losses suffered due to online counterfeiting globally has amounted to 323 Billion USD in the year 2017.

Theft of a shipment can occur while in transit or within a warehouse. There are numerous risk mitigation strategies that can be applied based on global standards. Government programs such as the U.S. Customs and Border Protection's (CBP), Customs Trade Partnership Against Terrorism (CTPAT) and the E.U. Authorized Economic Operator (AEO) ensure compliance through a comprehensive security system. The system combines both physical and information security. There are also independent standards developed explicitly for the technology industry by the Transport Asset Protection Association (TAPA), a non-profit organization that leverages its members experience and shares intelligence.

To maintain global standards, shippers are focusing downstream and demanding service providers demonstrate compliance. This is assessed by shippers conducting audits to ascertain levels of compliance and risk. **Current areas for improvement are:**

- BEING ABLE TO PROVIDE EVIDENCE THAT TAMPERING HAS NOT OCCURRED
- ADDING UNIQUE IDENTIFIERS ON PRODUCTS
- DISPOSING OF PRODUCTS CORRECTLY TO ENSURE INTELLECTUAL PROPERTY AND BRAND PROTECTION ARE MAINTAINED



There has been an increase in the creation of the brand protection groups, whose focus now goes beyond the traditional supply chain security matters and into the issues with counterfeit products. The brand protection teams are also applying the principles of a risk-based approach and utilizing data to make decisions. While all of these process innovations are occurring, the most exciting is the use of data and the tools used for data collection. Data has long been a part of the process, but increasingly, data is being used to rationalize the entire logistics process. It is worth bearing in mind that, typically, these data sources are often fragmented between 3PLs, device providers, and transportation modes.

When implemented correctly, we can use data to evaluate the entire supply chain and assist with route validation and lane risk assessments, along with trending the data to measure key performance indicators. Ultimately, bringing all the data together is an example of the “Internet of things” (IoT) approach, with multiple data points and streams providing information and intelligence.



**A DIGITAL SUPPLY CHAIN SHOULD NOT ONLY ALERT YOU OF A
DEVIATION BUT SHOULD ALSO GIVE YOU THE ABILITY TO ACT
UPON AND RECTIFY THE SITUATION IN REAL TIME.**

DIGITAL TRANSFORMATION

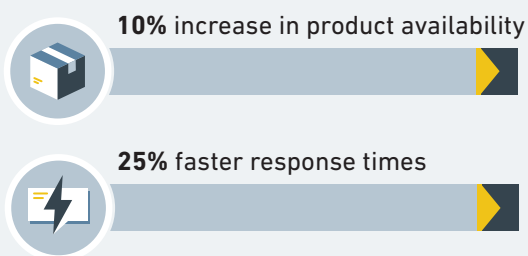
Unlocking Transparency in Supply Chain

Disruptive technologies are reaching new heights of maturity with IoT, mobile-cloud devices, big data, and hyper-connectivity becoming more mainstream.

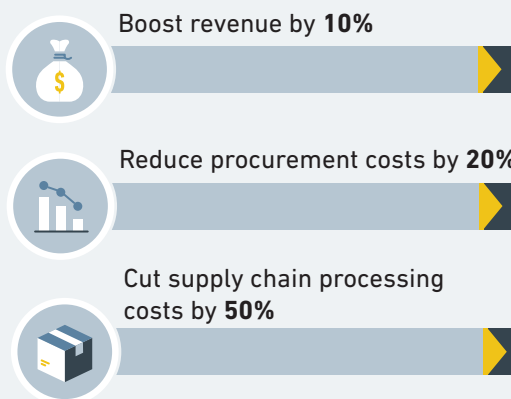
Digitization is the new industry buzzword. Often misused, it is the process of converting information from a physical format into a digital one. When this process is leveraged and held on IoTs to improve business processes, it is called digitalization. The results of this process are called digital transformation. This is the future of supply chain management, moving from retrospective risk management towards preemptive and proactive. The goal is to be able to use data in a meaningful way for product integrity. Digitization of paper-based documentation is one of the first stages a company takes on its digital journey.

A FULLY DIGITIZED SUPPLY CHAIN STRATEGY CAN RESULT IN IMPRESSIVE RETURNS ON INVESTMENT.³

According to the Boston Consulting Group, digital supply chain managers report:



A 2017 study by the Center for Global Enterprise indicates that supply chain digitization could:⁴



FUTURE REQUIREMENTS FOR A TRULY CONNECTED NETWORK

Assuring Security In Data Sharing



Historically, data sharing between key stakeholders within the supply chain has been minimal and only when necessary. Shippers need to drive a cultural change for collaboration amongst supply chain service providers and encourage a modern-day approach to data-sharing agreements. The sharing of data allows for a truly connected supply chain. While the industry will initially be reluctant, this can easily be enforced as a condition of awarding business and a requirement in an RFQ. Secure platforms, such as blockchain, will offer assurance of data storage and security which may alleviate some of the areas of concern.

Connectivity of all IoT information streams, such as Transportation Management Systems (TMS), GPS tracking devices, as well as situational events like weather and traffic, are more effective at detecting and mitigating risk when available together. This offers a multi-layered risk mitigation solution and allows for risk management in real time with no single point of failure.

A device-agnostic solution is key for shippers being able to leverage the best technology. Many hardware solutions providers offer visibility platforms for their hardware, which restrains the shipper from being agile in their procurement of cheaper and more advanced technology as it enters the market.

LOGISTICS OUTSOURCING

Staying Informed Amid Increasing Complexity

Outsourcing is commonplace within most industries. The flexibility and expertise that outsourcing to a third-party contractor can offer enhances a company's productivity by allowing them to concentrate on their core competencies. However, the manufacturer has the ultimate responsibility for product security and must ensure they are choosing compliant partners to meet the demands of the global security requirements and their insurers.

Knowing which products are in transit, exactly where they are, and how they move through multimodal distribution supply chains has historically been a challenge. With increases in track-and-trace technology, a level of these pain points have been addressed, as they provide some visibility into when shipments reach certain milestones. However, the real return on investment occurs when data can provide critical insights that result in real-time corrective actions. Data-driven insights are not only of value day to day but for medium- to long-term strategic direction and continuous improvement.

According to the 2019 23rd Annual Third-Party Logistics Study,⁵ **the most prevalent outsourced activities are:**

- 81%** Domestic Transportation
- 71%** International Transportation
- 69%** Warehousing
- 50%** Freight Forwarding
- 40%** Customs Brokerage

MORE COMPLEX SUPPLY CHAINS

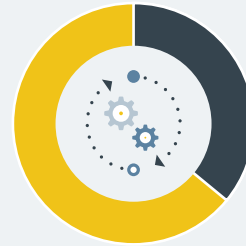
Managing Inventory In Transit

As multimodal supply chains become increasingly more complex, manufacturers are often using multiple service providers across the globe to balance compliance and risk while attempting to reduce costs. The reality is that while most companies have an understanding of stationary inventory, they do not have detailed information on their inventory in transit.

A digital supply chain strategy allows shippers to leverage the data from service providers and aggregate it to gain granular visibility into their operations. With full visibility, a digital strategy enables shippers to not only become aware of nonconformities but to react and implement a crisis management solution instantly. Insurance companies also benefit from this information, and shippers demonstrate the additional risk mitigation solutions used to protect products. The insight could result in a reduction of insurance premiums as the risk of insurance claims from theft or product loss lessens.

Connectivity allows for the unification of in-transit data with contextual shipment data, delivering the scalable, real-time, end-to-end visibility that shippers need to keep up with increasing complexity. Connectivity offers security, efficiency, and consumer insights, making it a competitive and strategic way to stay ahead of the next trend.

According to McKinsey & Company, by digitizing their existing business, carriers can remove significant cost across the value chain, further increasing customer lifetime value.⁶



Automation can reduce the cost of a claims journey **by as much as 30%**



DATA OVERLOAD

Giving Data Value

As the world becomes more connected, and we can obtain more information than ever before, we must have solutions in place to make sense of the data. Watching thousands of shipments across the world is an unnecessary use of time and resources. Exception management needs to be at the forefront of a solution, autonomously filtering risk, developing a workflow that encapsulates your security protocols and mirroring your standard operating procedures. This workflow then becomes the backbone of every shipment.

Nonconformities are assigned risk levels, and actions are agreed upon in advance. The solution then manages this

automatically, and risk alerts are sent accordingly through an escalation protocol.

A highly trained Global Security Operation Center (GSOC) oversees and monitors the risk events 24/7/365 and acts upon the information to issue real-time corrective actions. Being alerted when nonconformities occur is one thing, but having a team of experts who understand your products and can rectify in real-time is true risk management on a global scale.

ROI OF AN END-TO-END SUPPLY CHAIN INTEGRITY SOLUTION



VISIBILITY - Full audit trail of the shipment journey through the supply chain with real-time visibility around location, status and security of all shipments.



PERFORMANCE MANAGEMENT - ETA delivery notifications and data to facilitate demand planning to ensure inventory is in the right place at the right time.



PRODUCT INTEGRITY - Maintaining security standards and product integrity by preventing theft, pilferage and tampering.



COST SAVINGS - Reducing risk and maintaining compliance standards.



CROSS-COMPANY VALUE - Customized user group workplaces (Logistics, Quality, Risk Management, Integrity) to integrate with, or stand alone from legacy systems.



PROACTIVE RISK MANAGEMENT - Real-time monitoring services and corrective actions to reduce shipment risk and provide evidence to insurance companies of supply chain risk management strategies.



USE OF DATA - Giving data meaning for both operational and longer-term strategic management of the supply chain.

ABOUT OVERHAUL

Overhaul is a supply chain integrity solution offering real-time visibility and 24/7 automated monitoring functionality for all active shipments. By connecting disparate sources of data, Overhaul provides critical insights that can instantly trigger corrective actions, impacting everything from temperature control to handling requirements or package-level tracking, ensuring cargo arrives at its destination safely, undamaged, and on time. All active shipments, all corresponding data sources, all in real time through a single unified view. For more information, visit over-haul.com.

Sources

1. Organization for Economic Cooperation and Development (OECD)
2. The Global Brand Counterfeiting Report, 2018
3. Boston Consulting Group
4. Center for Global Enterprise
5. 2019 23rd Annual Third-Party Logistics Study
6. McKinsey & Company