# Supply Chain Digest Thought Leadership Series



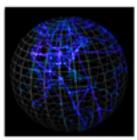


# Impact of Oil and the Economy

Best Practices in Parcel Shipping and Global Trade Management



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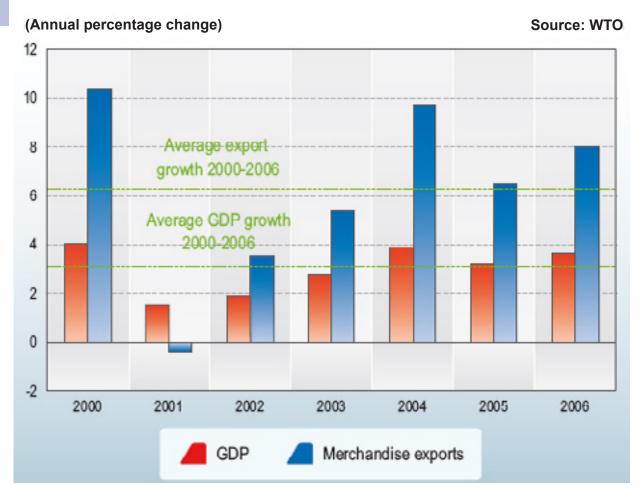
# The Impact of Oil and the Economy

#### Best Practices in Parcel Shipping and Global Trade Management

In the last couple of years there have been dramatic changes in the cost of oil and US economic activity that have driven market leaders to assess their global trade strategy and how they serve domestic customers.

The challenge is to manage risk and reduce costs while still fostering top line growth. As a result, companies must continuously refine their global sourcing strategies, opportunities for export growth, and how to most cost effectively move goods within the US and internationally. The pressure on transportation due to rising fuel costs is well understood. Company after company in the last year has in part blamed earnings disappointments on increasing logistics costs. For parcel-heavy shippers, especially those that offer discounted shipping rates, that cost reality in combination with the changing carrier landscape means they often must relook at existing strategies. Many are looking to increase ground deliveries and reduce air/expedited shipments while seeking more flexibility in carrier decisions.

# **Global Trade Continues to Grow Twice as Fast as World GDP**



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At the same time, there is perhaps no more important force impacting logistics strategies and execution than the tide of rising global trade.

As shown in the graphic on page 3, global trade has continued to grow at levels far above overall world GDP growth, so that trade volumes are doubling every 5-7 years. That means that for both individual countries and companies, being an active and effective participant in global commerce is an increasingly critical element of overall corporate success.

There is no better illustration of that than what has been seen in the United States as the domestic economy slowed down in 2008. Despite this domestic slump, many companies have been able to maintain strong profits through a corresponding surge in export volumes, made possible from both the falling value of the dollar and more robust economies in many other parts of the world. (See sidebar.)

The simple message: if you weren't riding that export train, your company was likely much more strongly impacted by a slowing domestic economy. Being effective in global commerce, in turn, means companies must also become excellent in the logistics and "trade management" processes that oil the wheels of global commerce for both imports and exports.

It isn't an easy task. Global logistics and "trade management" (defined as processes around maintaining regulatory compliance and managing the financial aspects of global trade) are increasingly complex. There can be a dizzying array of players and hand-offs as product moves across countries and oceans – and an increasing number of options to decide between for moving those goods.

Many companies respond to that complexity by using a variety of third-party providers or LSPs (logistics service providers). These include: freight forwarders, global parcel carriers such UPS, FedEx, TNT, and DHL, customs brokers, and 3PLs. But companies that do not put the right level of process and technology support into those outsourced processes risk paying for more than they could with better global logistics control.

# The Export Economy?

There is clear evidence that exports for US companies have been surging, and growing evidence that a variety of factors are causing some companies to reduce or event reverse offshoring plans.

A recent Wall Street Journal article, for example, noted how in the city of Manitowoc, WI, several manufacturers are thriving based on growing exports and rising costs abroad – one kitchen goods factory is even back open again after closing for awhile due to a move by the company to Mexico.

*"The economic forces working in favor of U.S. manufacturing include a weaker dollar, which is helping drive sales for exporters* 

and their suppliers," the article said. "Rising transportation costs are encouraging companies to buy and produce more goods closer to home. An infrastructure and mining boom abroad is boosting orders for the huge cranes made by Manitowoc Co., one of the town's oldest companies. At the same time, rising labor costs in some countries are starting to make outsourcing less attractive."

While manufacturing now represents about 12% of gross domestic product, down from 15% a decade ago, exports have surged. Last year, the U.S. exported about \$1 trillion worth of goods, up 39% from 2002, when the dollar started its decline. The National Association of Manufacturers, a trade group, estimates U.S. exports will hit \$1.1 trillion in 2008. At the same time, those global logistics costs are rising, driven by the unprecedented rise in oil prices that has sent overall transportation rates and especially fuel surcharges higher. While oil prices continue to show high levels of volatility, it seems clear that overall price levels are going to continue to increase, as temporary drops in prices seem simply to set "higher lows" that provide a more costly foundation for the next leg up.

Those rising logistics costs can significantly eat into profits, meaning companies must be increasingly sophisticated about making global and domestic logistics decisions.

Indeed, understanding and optimizing total costs including duties, taxes, and transportation, on both

imports and exports is becoming a critical factor in overall company competitiveness.

"Total delivered cost management is increasingly separating the winners from the losers," said **Gene Tyndall**, an *SCDigest* Contributing Editor with a long and notable career in global supply chain management, during a recent Videocast.

Together, this means companies of all kinds must simply get better at global trade management, and that medium to heavy parcel shippers must continue to increase the sophistication of their strategies and execution to achieve high levels of performance.

# Regulatory Levels Are Increasing... .

In parallel with the increasing scale and challenge of global logistics, in a post 9-11 world regulatory and security-related requirements are adding further pressure to supply chain operations – and it seems clear those challenges are only going to become more burdensome.

There are expanding voluntary programs such as C-TPAT in the US, plus evolving mandates such as 100% container/cargo screen in foreign ports or the new "10+2" advanced import notification requirements (see sidebar). In addition, importers and exporters must manage increasing scrutiny from the government regarding who a company is doing business with in the import or export supply chain.

For imports, the constant dynamics of different and changing tariffs and preferential trade agreements also means companies must achieve continuous intelligence to make optimal sourcing decisions. Taken to an extreme, some companies, especially in the apparel industry, go so far as to employ "duty arbitrage" strategies that move sourcing around based on changing agreements and import limits.

There is now also the real potential that in the face of some backlash against "globalization" that we will see some adoption of protectionist policies that will require even more scrutiny of import strategies and potential cost savings.

Parcel carriers are even imposing their own variations of "compliance." For example, there are different documentation requirements across carriers that are often in addition to what regulatory agencies require. Carriers are also requiring additional information on printed label based on the shipper's electronic Automated Export System (AES) filing.

The ability of companies to keep pace with these regulatory requirements will unquestionably be increasingly difficult.

# New "10+2" Import Reporting Rules are Imminent

At the time this report is being published, it appears that the new so-called "10+2" rules are just weeks away from formal adoption. The new requirements put a heavy burden on importers to improve supply chain integration and data management.

The new regulations ultimately stem from The Safe Port Act of 2006, but it was not until early in 2008 that CBP issued its draft requirements. Officially called the Import Security Filing, the proposed rules became known as "10+2" because they require two electronic filings for imported goods – one consisting of ten data elements, and then two additional ones as the goods move closer to the inbound port.

The ruling requires Importers or their designated agents to file "10" types of data elements 24 hours prior to vessel lading overseas (see table below). The vessel operator will have to submit the other "2" data elements 48 hours from the vessel departure from the foreign port.

Data Element	Brief Description	Challenges	
Manufacturer Name and Address	The entity that last manufactures, assembles, produces or grows the commodity	One of the most difficult data to gather; often, actual manufacturers and actual addresses will not be known; supplier may not want to divulge details, or have bad data	
Seller Name and Address	Last known entity by which goods are sold or agreed to be sold. If not sold, owner is reported	Typically known through the commercial invoice and/or purchase order issued by the Importer	
Buyer Name and address	Last known entity to which the goods are sold or agreed to be sold	Typically known through the commercial invoice and/or purchase order issued by the Importer	
Ship To Name and Address	The first deliver to party scheduled to physically receive the goods after release from Customs	Unique to the 10+2 rules	
Container Stuffing Location	Name and address of the physical location(s) where the goods were stuffed or if break bulk goods, where they were made shipment ready	Data element known only at the origin, typically by the supplier or Freight Forwarder; unique to 10+2	
Consolidator Name and Address	The party which stuffed the container or arranged for its stuffing. For break bulk goods, again the party who makes them shipment ready	Will have similar challenges to the container stuff location	
Importer of Record Number	The IRS, EIN, SSN or CBP assigned number of the entity liable for payment of any duties and responsible for meeting all import requirements	Typically known by Customs broker	
Consignee Number	The IRS, EIN, SSN or CBP assigned number of entity on whose account merchandise is shipped	Typically known by Customs broker	
Country of Origin Code	Clarified to include the country of manufacture, production or growth, based upon import law definitions and other rules and regulations	Typically known by Customs broker	
Commodity HTS number	Still require to the 6-digit level, but allowed to be reported at the 8- or 10-digit level.	Classification often done by the broker	
Source: Kewill			

"One major change that is not evident when you review the data elements is the requirement to link certain required information," a recent white paper on the topic from Kewill recently noted. "CBP is requiring that the manufacturer name and address and country of origin be linked to each of the commodity HTSUS [Harmonized Tariff Schedule of the United States] numbers. For many suppliers, this will require a change to their commercial invoice format to make sure this data is available at the line item level."

While many of the data elements can be obtained from the importers purchase order/ERP system – others are more challenging to acquire. For example, the filing requires the identity of the last entity that "manufacturers, assembles, produces or grows" the commodities being shipped; in many cases, an importer will not know that information. Offshore suppliers may be reluctant to share it, or submit bad information that could result in the importers receiving fines.

#### **Major Impact on Logistics Processes**

The new rules "will have a profound impact on how carriers and importers do business in and outside of the Country," says the Columbus, OH law firm of Bricker and Ecker, which has a specialty in logistics-related law.

While there is no trial period, there likely will be a 60-day grace period for importers to implement the rule. Penalties for noncompliance would likely not be levied for another year after that, giving importers more time to get their systems and processes ready.

## ... While Technology Enablement Lacking .

The challenges of keeping pace with global logistics and trade management requirements are even greater because technology support for global logistics continues to lag that in many other areas. There is simply no question that for most companies, technology enablement of global supply chain and logistics processes is well behind that for other areas of the enterprise and the scale of global supply chain operations themselves.

As analyst **Dwight Klappich** at Gartner recently wrote, "Even sophisticated companies that have more global supply chain experience and were early adopters have only automated a small fraction of their global trade operations."

There are a variety of reasons for this. The growth of global sourcing and the opportunities to increase sales into global markets happened so quickly, relative to most business trends, that many companies were knee-deep in the strategy and execution before they could really assess technology needs.

Similarly, the seeming potential of substantial cost reductions from moving to low cost country sourcing alone seemed attractive enough that many companies simply assumed the benefits could be achieved through the sourcing decisions alone. The reality is that challenges of estimating and achieving the right level of savings leaves many companies less than fully satisfied with their global sourcing strategies, and many now look to better technology enablement to improve their results. At the same time, the imperatives of trade compliance are much greater today given changes in the regulatory environment and the scale of global trade, meaning manual systems have a much tougher time keeping pace.

On the import side, for example, many companies handle import compliance manually, with poor visibility and controls, and multiple "copies of the truth." They also lack the ability to well-calculate total delivered costs.

On the export side, most companies are very early in the journey of developing process automation. Export compliance checks and documentation are often not well integrated with order fulfillment and supply chain processes, and are managed "off-line" in a majority of companies.

In general, the state of parcel shipping technology for domestic moves in most companies is probably ahead of that for global logistics and trade management. That said, many companies still struggle with parcel systems that are dated and not able to keep up with the increasingly sophisticated requirements of parcel shipment planning and execution. Historically, parcel manifesting solutions have been purchased and implemented at the departmental level. Now that companies are deploying global WMS/ERP backbones systems such as Oracle and SAP, they are looking for a global parcel solution that can leverage the ERP investment.

# Fast, Efficient and Compliant

Given these supply chain and business realities, it is simply essential that companies invest in process and technology improvement to become fast, efficient and compliant in parcel shipping and trade management operations. Below, we offer thoughts on best practices in each of three areas: import compliance, export compliance, and parcel shipping.



# **Overcoming Import Compliance Challenges**

With the growth of global sourcing, *SCDigest* sees three interconnected best practices emerging in import compliance processes and technologies:

#### 1. Mastering "Master Data Management":

A concept termed "Master Data Management" (MDM) is becoming increasingly important to overall supply chain excellence – and no where more so than in global logistics and trade management.

The majority of large and mid-sized companies today operate in multiple regions and/or use multiple ERP systems or "instances" of the primary ERP.

The result: key data objects (customer, order, product, product classification, etc.) are defined in multiple ways. This makes the development of standardized processes and trading partner integrations extremely challenging – and creates

special problems in the area of global trade management.

Too often, individual locations are managing product classifications for tariff, duty and denied party screening individually, leading to excess administrative time and cost.

More important than the cost, the decentralized approach to data management means companies may be missing opportunities for maximizing global trade finance and ensuring regulatory compliance. Mis-categorized product, for example, can lead to missed opportunities for lower tariffs and/or duty drawbacks.

A new generation of Master Data Management solutions, some targeted specifically at global logistics and trade management, are now enabling companies to centralize the definition and maintenance of global trade "objects" (See

#### **Global Logistics and Trade Management Master Data Management**



Your First Stop for Supply Chain Information

illustration on page 8). These objects and item classification are registered in a single repository, and then shared with other business applications that use them.

Gartner, for example, defines MDM as follows: "Master data is the consistent and uniform set of identifiers and extended attributes that describe the core entities of the enterprise — and are used across multiple business processes. Some examples of core entities are: parties (customers, prospects, people, citizens, employees, vendors, suppliers or trading partners), places (locations, offices, regional alignments or geographies) and things (accounts, assets, policies, products or services)."

*SCDigest* believes that we will see rapid adoption of MDM strategies and tools over the next 2-3 years, and that the specialized nature of global trade management data will lead many companies to adopt focused global trade data management and synchronization solutions.

#### 2. Automating Import Compliance

**Processes:** MDM is important because it sets the stage for additional automation of import-related process, especially in terms of total delivered cost calculation and regulatory compliance.

Currently, however, many companies continue to use very manual processes to address import processes and regulatory requirements.

These manual approaches have always created some risk and led to poor sourcing decisionmaking. They also increase the likelihood of delays in the flow of goods and/or delays or mistakes in filing appropriate documentation and data to customs agencies and others government entities.

The opportunity now exists to automate many of these process and to ensure the flow of imports is not hampered by manual and error prone processes..

Just as important, participation both in voluntary trade programs such as C-TPAT and meeting new regulatory requirements such as "10+2" means importers must build robust and consistent

compliance processes with continuously updated trade content to ensure that they know who they are buying from (i.e., are they on any restricted parties list?), what are they actually buying (i.e., are the goods properly classified for Customs reporting measures and duty/valuation determination?) and where the goods are actually made (i.e., what is the actual country of origin – not just what is listed on the manifest?).

The good news is that growing import volumes and regulatory changes are causing an increasing number of importers to recognize that manual approaches just can't scale, increase risk, and lead to leakage of potential savings from global sourcing strategies.

Many companies have not found robust import compliance capabilities in their current ERP systems. The last several years have seen strong improvements in the offerings of specialty software vendors in the import compliance space that can substantially automate many of the import compliance process steps.

#### The benefits of this automation include:

- Reduce administrative costs for meeting compliance and documentation requirements
- Reduce risk of doing business with a denied party and potentially incurring fines and negative publicity as a result
- The potential for "self-filing" to customs agencies, potentially savings hundreds of thousands or even millions of dollars in outside costs
- Improved integration with customs brokers, forwarders, and other third parties.
- Reduced delays in customs clearance

#### 3. Embracing Global Trade Analytics:

Based on some of the foundation discussed above, companies have the opportunity to mine their global trade and logistics databases to look for what may be significant savings opportunities that are buried in the data. This would include, for example:

- Finding situations in which a company missed opportunities for trade agreements and other special programs but were not taken because of misclassification or oversight.
- Reviewing existing suppliers in the context of preferential trade agreements and other financial impacts to see whether savings could be achieved from changing the sourcing mix to reduce tariffs and duties.
- Examining the impact of tariffs and other global trade costs in the context of determining "total delivered costs." In many cases, changing sourcing locations (for example, components going into China for final assembly) or the "ownership flow" as products move across the globe can generate substantial savings in total duty costs.
- Rigorous determination of the opportunities for "duty drawbacks" on imported goods.

For many companies, these savings opportunities can be in the millions even tens of millions of dollars. Numerous studies have shown that even large companies rarely take full advantage of all of these potential savings – largely because either the data is too difficult to aggregate or a lack strong technology support makes the manpower requirements to perform the analysis too burdensome.

Global trade management tools can provide a database of trade transactional history, and companies can analyze that data looking for savings opportunities in all of these areas. While such tools already exist, *SCDigest* expects global trade vendors to provide increasingly automated and intelligent solutions to proactively identify potential savings opportunities for further analysis, and to offer "what if" analysis tools.

# Automating Export Compliance and Work Flow

While the growth in US export volumes has been welcomed by US businesses, with that expansion comes increased risk of violating export rules, which could potentially result in substantial fines and damage to a company's reputation and brands.

As with import compliance processes discussed above, getting Master Data right for exports is also critical. Mis-categorization obviously raises the possibility of violating import or export laws in terms of buying from or selling to "denied parties," risking substantial fines and damage to the company and its brands. In some cases, a company could even lose export licenses, which could have a substantial impact on revenue and profits. Just as critically, those export regulations are in a constant state of flux, meaning shippers need online and increasingly real-time access to a dynamic database of rules regarding denied parties and products combinations.

With the increasingly complex flow of goods across the globe, the risks a company faces by relying on manual export compliance checks and processes are high.

Even in previous times, these manual approaches created risk that could lead to fines and penalties for failure for doing business with various denied parties. It could also lead to delays in the flow of



goods, and delays or mistakes in filing appropriate documentation and data to customs agencies and others.

But as the scale of global trade in both imports and exports expands dramatically for many companies – and the penalties for non-compliance continue to rise – rules-based process automation starts to become critical.

Such automation will move to real-time checks for "denied parties" at order time, as well as import and export license determination.

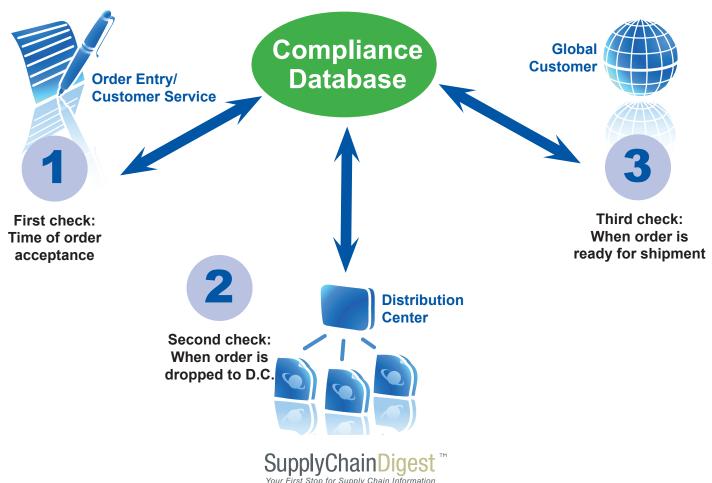
That automation flows through to preparation of both physical and electronic documents, and automatic

filing as appropriate with government agencies around the globe.

The technology to create such automated process flows has in reality been available for some time, but only the most globally active or risk sensitive companies (e.g., those in high tech) tended to adopt this level of technology support. The good news is these solutions continue to improve each year.

The bar for and potential benefits of these solutions have been raised due to the increasing scale of globalization. There is already frequent evidence via cases studies and other news that this expansion of global trade technology support is starting to increase.

# Denied Party Screening and Compliance Checks Must Be Performed Multiple Times in the Order Fulfillment Process



Exporters should look for global trade management tools that offer strong "work flow" tools to configure process (such as when compliance checks occur) and which offer web options integrating with compliance data bases.

For example, days or even weeks can pass between when an order is taken and when a product is actually shipped. Smart companies realize that compliance checks need to be performed at least thee time (*see illustration on page 11*):

- 1. When the order is first taken
- 2. When the order is sent to the factory or distribution center for processing
- 3. Before the order is actually shipped

The bottom line is that export processes need a higher degree of automation and better integration into total supply chain and fulfillment processes.

# **Optimizing Parcel Shipping Strategies**

At both a domestic and global parcel shipping level, parcel shippers need to ensure they are optimizing logistics costs and managing trade-offs between cost and customer service. The increasingly complexity of the decision-environment means automated tools and flexible "rules engines" that enforce desired strategies are increasingly essential for medium and large parcel shippers.

#### 1. Building a Solid Domestic Foundation

The changing cost and carrier dynamics of domestic parcel markets in North America and Europe continue to make life challenging for parcel shippers.

The scenario is especially an issue for e-commerce vendors that use shipping rates, including free shipping, as part of their overall sales strategies. Indeed, optimizing parcel shipping decisions and execution for those companies can often have a critical impact on bottom line performance.

As shipping costs rise and service offerings change, it is essential that parcel shippers build strong multi-carrier solutions that can automate parcel shipping strategies and "rules," and to relook at those parcel carrier and service strategies frequently and make adjustments as necessary. That in turn puts a premium on having a parcel system that allows users to quickly turn those strategies into automated rules in the system that execute those decisions during fulfillment processes.

More manual execution processes and older home grown or commercial parcel shipping solutions simply lack the power and flexibility many shippers require today to optimize parcel strategies and execution.

Having a solid platform for domestic parcel shipping in turn sets the stage for a similar approach for global parcel shipment processing.

# 2. Enhance Global Parcel Shipping Sophistication

Goods move across the globe in many ways, but small parcel shipments are certainly an important mode for many companies.

The benefits of "multi-carrier" parcel shipping on the domestic side are well understood. But many companies, probably due to perceived complexity, often take a more limited approach when it comes



to international parcel shipping. That could be a big mistake.

There is perhaps no better example of this than the annual "Great Package Race," conducted each year by Georgia Tech. That student-led exercise ships packages from Atlanta, GA to various difficult delivery locations across the world. Each year, the exercise finds substantial differences in costs and service to many locations across UPS, FedEx, and DHL.

While this exercise presents an extreme situation, at the same time it highlights the opportunity from consistently choosing the best mode and carrier for each shipment.

Leaders are negotiating with carriers, developing global parcel shipping strategies and configuring these rules into parcel shipping engines for realtime execution. They are doing on-line rate shopping for global shipments to locations where they do not have defined logistics strategies.

They are integrating global parcel shipping processing directly into existing Warehouse Management and ERP systems, and automatically generating required export documents.

The savings opportunities that come from this automated multi-carrier strategy are actually even greater on a global shipping level than they are domestically, because of the greater total cost and less consistent pricing for deliveries across the world.

*SCDigest* believes companies should analyze the opportunities for optimizing mode and carrier decisions for parcel shipping. In nearly all mid and larger global shippers, the expected return from an automated global shipping solution will easily pay for the cost of new parcel shipping technology.

# Summing It Up

We are in a dynamic supply chain and logistics world. The pressures are great, and at no time in the last several decades has the effectiveness of a company's logistics strategy and execution had a larger impact on the bottom line than is the case today.

The incredible rise in global trade along with a parallel rise in trade regulations has clearly placed the import and export operations of many companies under stress, especially as technology support for global logistics and trade management is so lacking in most enterprises.

In this new logistic era, companies need to ensure that they have an appropriate set of "weapons" – technology support – to deploy against this tide of complexity and cost. *SCDigest* sees good progress being made in the sophistication and ease of use in the current generation of both global trade management/ compliance solutions and in parcel shipping systems, especially in support for global parcel moves.

The good news for logistics managers is that the intense corporate focus on risk reduction, and rapidly rising global and domestic logistics costs, means the appetite for investment in supporting technology has been very high.

*SCDigest* expects to see continued strong levels of investment in both import/export technology as well as upgrades to new generations of parcel shipping solutions.



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Kewill delivers solutions that simplify global trade and logistics.

Global businesses face an ever increasing complexity across their supply chains including decisions on sourcing, customs, compliance, transportation, storage, finance, visibility and connectivity. Inefficiency in any of these areas will lead to supply chain delays and resulting increased costs.

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