Business Transformed

B2B Communications Hold the Key for Success in Today's Economy

Modernizing the firm's business-to-business communications is essential for participation in today's customer-driven and global markets. Whether collaborating with customers, suppliers, and logistics companies or creating meaningful and vibrant product catalogues with dynamic ecommerce processes, B2B commerce with seamless digital linkages across trading partners is essential to compete and win in our modern economy.

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Introduction: World in Transition

Our global economy operates in networks of business relationships driven by a myriad of complex processes. This web-based marketplace has created new models of competitiveness, catalyzing an urgency for enterprises and their trading partners to collaborate in new and profound ways. Organizations have to execute both globally and locally with the same precision. Supply chains are stretched across the globe, yet customers expect precise delivery windows right to their door. Governments are demanding digitized and accurate data as goods move across borders. Intermediaries want precise to the hour—the minute—information so they can manage the many services and hand-offs required for effective supply chain management.

Executives have spent countless hours and millions of dollars fretting over their enterprise solutions. However, scant attention has gone into the technology we rely upon to operate with our trading partners: B2B communications. In most firms this is often outmoded or, at best, incomplete. Now that has to change. Though Electronic Data Interchange (EDI) is the major glue utilized today (as well as vast custom system-to-system integration programs), the job is incomplete.

The world of information technology is rapidly evolving. Within today's networked economy are rich information networks that are supplanting the old, limited–in-scope and difficult-to-integrate enterprise technology. Supply chain technology networks, the Internet of Things (IoT), as well as mobile and social integration are now expected as part of the modern "glue" that holds the chain together. These networks can manage ecosystems of partnerships that *explode with information that we are only beginning to understand and leverage*.

But first, *business executives need to re-insert themselves into B2B communication strategy and understand how it can help them achieve the next level of competitiveness. And IT needs to educate and ignite their attention to ensure that B2B communication is a priority.*

We will explore the world of B2B communications in this paper and the modern processes that are driving today's virtual, outsourced and webbed world, driving a new generation of customer expectations and trading partner requirements. We will highlight the B2B technologies that can help achieve exceptional collaboration and competitiveness.

Scandinavian Tobacco Group (STG) is a major global tobacco producer with distribution in over 100 countries. STG needed a B2B global partner capable of the EDI integration required at the various branches to standardize and simplify the order-to-cash process.

Functionality, scalability, and capacity to enable international trade and growth were key factors in the selection process.

Reliable communication with trading partners such as department store chains and logistics service providers has been achieved. That, along with e-Invoicing, has reduced DSOs.

Critical Takeaway

Business executives need to insert themselves into B2B communication strategy to understand how it can help them achieve the next level of competitiveness.

IT needs to educate and ignite executive attention to ensure B2B communication is a priority.

Enabling Global Commerce

Is your business commerce ready to do business with any and all new customers—the way *they* want it? Do you have timely visibility into your supply chain across your commercial processes such as order-to-cash and purchase-to-pay (P2P)? Are your processes and systems geared for real time to reduce risk and take advantage of opportunities that materialize? Critically, logistics has taken center stage for many, requiring integration and visibility with carriers and logistics service providers. And what about global trade? Today, governments, customs, and logistics service providers need all the data as early and accurately as possible to secure capacity, reduce operating costs, and ensure frictionless border crossing.

These concerns are shared by trading partners. 80% compliance will no longer sustain an ecommerce-driven world that demands 100% data transparency and precise execution. To compete in the global economy requires digitalizing core communications. These core operations and the supporting integrated information (Figure 1) represent the operational foci of global chains.

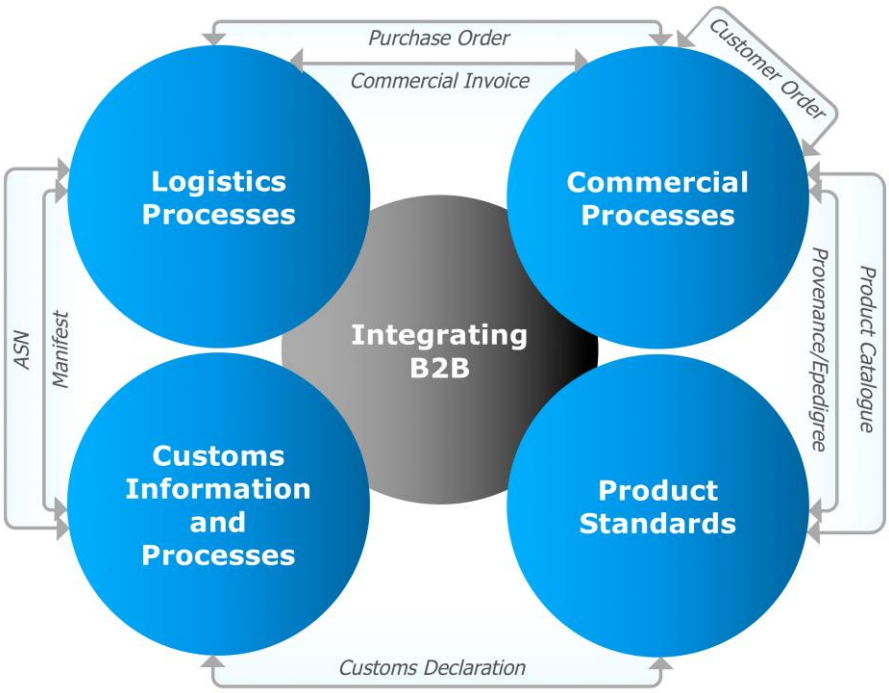

Figure 1: Leveraging the Key Areas

Tony's Chocolonely

Expanding internationally is a challenge for most firms. "Electronic communications standards are different in North America and Europe," pointed out Frans Pannekoek, who is responsible for the Supply Chain at Tony's Chocolonely. Thus, they required a global platform to manage global communications—from suppliers and logistics providers through to retail channels.

Their Descartes GLN deployment allowed them to "implement the new protocols and message sets to effectively communicate with our international retail and distribution customers in the USA."

Let's look at these core operations and see how they are transforming.

Commercial Processes: It All Starts with the Order

Today, end markets (retailers, manufacturers, distributors) are demanding visibility into upstream inventory for allocation and available-to-promise. They expect brilliant responses from their suppliers. Suppliers, conversely, want information about end markets so they can understand changing customer demand and innovate new products and services. All these needs are *fueled by digitizing the supply chain with real-time and granular information.*

> ***Critical Takeaway***
>
> *To compete in the global economy requires digitalizing core communications between trading partners.*

The digitized purchase order, for example, holds key data to be shared across multiple upstream constituents—n-tier suppliers, freight forwarders, and carriers—in interconnected processes.

As more processes get transferred to suppliers (e.g., relying on suppliers to drop ship or manage free-trade zones in target markets), traditional EDI alone may not complete the *connectivity set.*[1] Task instructions and queries need to flow system to system and person to person, relying on application interfaces (APIs), emails, faxes, and workflow management tools. Task-level functions such as available-to-promise, engineering change orders, new configuration requests and data updates to existing shared data syncs[2] are beyond the purview of EDI.

Across the commercial relationship, the financial interactions are critical elements, often overlooked in a B2B communications strategy. Yet finance is the raison d'être of commerce! Collaboration falters when financial information is not handled with care. Thus, e-invoicing, rating and other financial transactions should be envisaged in the B2B environment.

> ***Critical Takeaway***
>
> *Transactions and key information streams have leverage and value beyond one process. They can infuse internal and trading systems, creating durable partnerships in competitive supply chains.*

Customs

Digitalizing import/export processes is not just about customs compliance, but is a key enabler of frictionless global trade. Even the smallest enterprise requires the ability to manage the countless complexities of cross-industry/cross-border supply chains with their attendant financial and trade regulations. With electronic filings, lack of adherence[3] to regional and country-specific regulations will preclude doing business in your desired target markets. Yet, trade regulations are constantly changing, making it difficult to keep up. Here again, precision across processes allows not just accurate duty, VAT and other taxes, but cost saving duty drawback.

Though some enterprises rely on freight forwarders to create customs filings, the information contained therein is a rich data source that can be shared between service providers and shippers, supporting many other communications streams.

These global trade communications streams, in a sense, represent the various interactions between container and conveyances, facilities and locations), the commercial activities (contracts, orders, and

[1] More than the EDI procurement transaction set.
[2] This can include details from inventory, configurations, discounts, and so many other tasks between customers and suppliers.
[3] ACE/AES, Intellectual Property and other licenses and regulators: in Japan, AFR; or Europe, EU.

and other transactional information), the entities (customers, shippers, consolidators, carriers), and regulators (licensing agencies, customs, and border security). It is rapidly becoming a requirement for these streams to harmonize at the border to meet multiple party concerns, from product authentication and inventory visibility to anti-terrorism.

Product Management

Product-centric issues, though not transactions per se, are still a critical focus of many B2B interactions: product lifecycle management; product standards, certification, and authentication; catalogue management; and inventory visibility.

To ensure required inventory levels as well as maintain freshness, there needs to be a stream of inventory messages and status updates flowing between sellers and suppliers. As the complexities in channel management grow, location data about inventory to inform demand planning and outbound shipping is also required. This information not only feeds replenishment activities, but more strategic analytics such as designing supply chain networks.[4] Product data flows inform a myriad of activities for discrete product chains (such as electronics, appliance, and other mechanicals) for their distributors, service parts-depot managers, and repair technicians.

Today, product data is also shared with consumers in a variety of media formats—print, web, kiosks, mobile, configuration and design systems,[5] and at the point of sale (POS), to name a few, requiring information systems to be able to interpret and present big data formats—graphics, video, temporal data and sensor data (see Figure 2, page 6).

Catalogue data synchronization[6] is becoming more widely adopted, reducing constant data re-entry and errors. For a brand manufacturer leveraging the information, creating a catalogue entry once ensures that your product is properly described, displayed, and priced. The benefits of speed to market and cost reduction from not having to recreate these catalogues at each end point are huge.[7]

Dutch Railway Retail (NS Retail)

NS Retail has been expanding their business model to include retailing at their stations. This has created a dynamic of daily transactions (orders) and inbound fulfillment as well as other transactions. Like many other organizations, they have limited staff to address the EDI changes that occurred as they brought more suppliers into their network and modernized much of their IT environment.

"Rather than manage it, we decided to intensify the collaboration with Descartes. The conclusion was that it would be more beneficial to outsource the full EDI communication process and management. By deploying communication through a SaaS service, we succeeded in increasing system availability, reducing errors, and are using the most up-to-date EDI knowledge," said Iwan Hoevenaar, Project Manager NS Group.

NS Retail has also automated their supplier communication to include suppliers that had not used EDI. This allowed a complete operational picture for orders and inbound supply management at each retail location.

[4] Facility and inventory optimization exercise.
[5] Computer Aided Design (CAD), Product Lifecycle Management (PLM), and Product Information Management (PIM) systems, for example.
[6] "Catalogue Item Synchronization is the process of continuous harmonization of item information between trading partners which ensures that the master data is the same in all trading partners' systems." (GS1 definition.) You can read more about these standards here.
[7] Product traceability is another area of benefit for companies, but has already been widely written about elsewhere.

Logistics

Transportation is increasingly at the forefront of corporate strategy as companies grapple with global sourcing and Omnichannel. And, now, with the internet of things, there is an implied immediate service response.[8] Customer logistics services to support these changing models are revamping the entire transportation industry, requiring a new approach to B2B communications.

Across global chains, change is happening. Today's importers want information and control to inventory *within the container* and the ability to reroute products to different end markets. *This means a real change in the business models of ocean carriers and port operators who have not been part of the "visibility" game to date.* Talk of *smart containers* or *fast-lane container management* will need to be backed up with collaborative information systems from shippers to freight forwarders, carriers, customs, and other logistics service providers, right through to the importer.

Omnichannel is the ultimate, inclusive operation in commerce today, demanding a behind-the-scenes dynamism not experienced before. While a customer is shopping, the merchant is checking inventory across multiple stores, warehouses, suppliers, and, possibly, multiple carriers to offer the customer the best availability and pricing options. That "in stock" and "order by 10 pm and have by 9 am" is a *promise even before the customer hits the buy button*.[9]

These searches represent more than random queries: *suppliers have to be ready to promise actual inventory.* Then, once the purchase is complete, *all the parties must execute*. A confirmation must be delivered in seconds with all the transactions committed to by partners in the background. Drop ship is also becoming the norm, especially with larger products such as appliances and furniture. To do this takes both a rich API library[10] to connect to the network of trading partners' real-time availability, terms, and pricing; and EDI transactions for orders and commitments. The old "store-and-forward" approach to EDI just won't support this responsiveness.

To master a process such as this requires not just purchase/confirmation communication, but must *also traverse transportation transactions[11] that are operating almost in unison*. This highlights the need to improve transportation efficiencies and information connectivity.

Müller Fresh Food Logistics

Müller, like many logistics providers, not only offers logistics services but the accompanying technology such as EDI. It provides seamless service for Müller's customers, and ensures that communication is complete and accurate. This enhances customer satisfaction and delivery performance.

At the same time, EDI messaging is not a core skill of many enterprises, including Müller, who have limited IT staff to support EDI. Thus, they required a partner who has up-to-date EDI knowledge and can provide reliable support.

Müller implemented and continues to expand their use of Descartes' B2B messaging solution to exchange orders, dispatch messages and packing slips, and perform invoicing, achieving end-to-end commercial and logistics process support.

[8] Read *Optimizing the Customer Experience with Exceptional Home Delivery*.
[9] Home Delivery is not just an issue for retailers. Read *Always On* and read more at *Home Delivery strategies*.
[10] See Table 1 about APIs. (Page 7)

Integrating B2B: Understanding Technology

Today, companies need an information strategy to keep up with the ever-expanding marketplace's demands for information. Having separate stovepipes for supply-chain tasks or EDI transactions provides little *information leverage* to optimize and execute the many cross-functional and cross-enterprise activities that must fuse. This is why we see more ecosystems of partners moving to shared cloud platforms that can leverage information.

Even consumers don't just want the goods, they want information, too, such as the product pedigree and shipping status.

Into this world of complex end points with its increasing requirements to communicate, enter more and more forms of data and technology that we must absorb, analyze, and respond to (Figure 2).

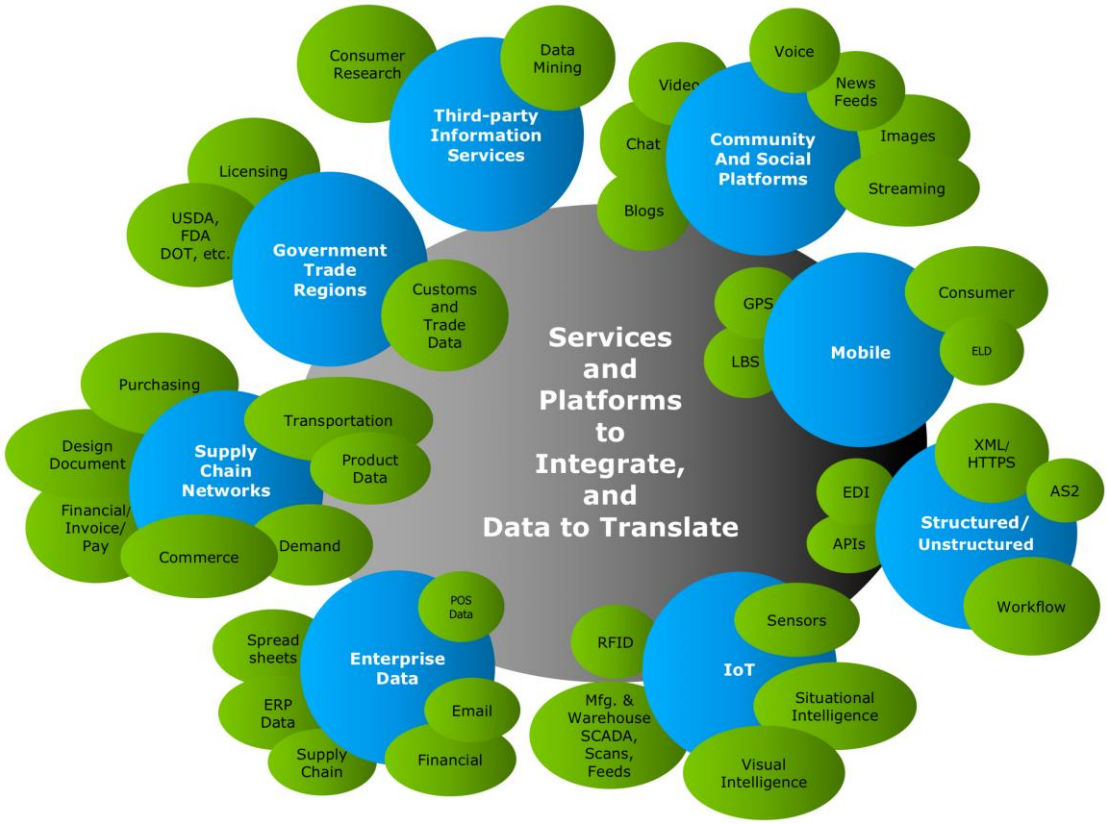

Figure 2: Today's Integration Challenges—Content, Media Across Protocols, Formats, Data Sources from the Cloud as well as Enterprise On-premise Systems Behind Firewalls

A great deal of this information comes from—or is needed by—our trading partners. Creating an environment where this is easily, yet securely, done requires an architectural approach beyond enterprise-type systems. Table 1 provides some considerations on the types and purposes of today's communication techniques. They are more than transactions!

Critical Takeaway

Successful B2B communications require the ability to leverage multiple processes, methods, and data streams on one platform throughout the end-to-end relationship.

Types and Purposes of Various B2B Communications	
API	Application Programming Interfaces (APIs). There are thousands of commercially available APIs that are published for many integrations. For example, there is an API set for third-party solutions like ERP; or specific task libraries for just about any function: getting rates, calculations and rules, freight booking, and searches.
BPE	Business Process Extensions (BPEs) are more than API. BPEs are *expressed in business language*, for example, "Print a barcode label; find part number/inventory; execute drop ship; send service request; send ship notification; issue a material return authorization."[11] BPEs use a variety of technical enablers, API, EDI, and workflow to create tasks. Modern providers of these services allow for configuration (checking off the box) by users or business analysts and behind-the-scenes automation by the tech provider.
EDI	EDI is transforming, but the idea of a standard message and well-defined data still thrives, although it may be communicated with different technology. Today, the ability convert across industry standards is essential.
IoT and Networks	Device integration is not new, but IoT has given it a refresh including more data from more sources such as sensor and RFID data and smart, connected equipment and products. Devices on vehicles in today's logistics world have GPS and Electronic Logging Devices (ELD), and mobile to support driver telematics, labor management, safety, and road-service applications. Consumer devices such as Alexa or Dash, or a consumer's mobile create orders that demand that the whole supply chain be alerted and activated based on their IoT signals.[12] That information can be collected in IoT and supply chain networks to rationalize and analyze the data streams to support responsive processes. IoT also supports modern tracking technologies.
Community	Sharing content within group or person-to-person social networks is an essential part of collaboration today. Beyond day-to-day problem solving, a community can be the starting point for building networks of partners as well as creating a knowledge base of industry practices.
Workflow	Customized messages flow to multiple parties, routing, guiding workers, ensuring accurate procedures, and signatures/approvals.

Table 1: B2B Communications

Of course, all this is only academically interesting unless it leads to unifying business processes. There are many stand-alone technology companies who provide one or some of the above capabilities. However, today, to unify partners, companies cannot restrict themselves to one process such as procurement or one data stream. So *the smarter move is to provide the ability to leverage multiple processes, methods, and data streams on one platform throughout the end-to-end relationship. Information from one party should be leveraged to enhance the process for all the participants in the process.*

As shown in Figures 1 & 2, the integration and translation support from the supply chain network harmonizes all these data models, technology, and information streams so that they are shared and leveraged within the enterprise and across the chain.

[11] A great example here is Descartes OzLink™. Users fill out a form and "check off the boxes" of the process extensions they want to use and the end point they need to integrate to. Behind the scenes is all that integration code that users don't have to deal with, e.g., a technical API, EDI, and workflow library.

[12] These are not just IoT signals like location alerting. These signals connect to those infinite catalogues that offer an infinite variety of products from so many sources, delivered to potentially thousands of end points. They have upended the enterprise, requiring a new level of analytics to absorb all the signals and plan out the day (and the corporate product, partner, and supply chain strategy). As well, there is IoT and mobile data emanating from vehicles: GPS or mobile/cellular locating, ELD, assists with routing, and precision telematics/turn-by-turn guidance.

Next Steps

To create new opportunities today businesses cannot go it alone, but must create bold and successful partnerships to expand and reach new markets and customers. As partnerships are part of the plan, these relationships must be codified with connected business processes.

Thus, for even the most automated companies, more must be done to revitalize the B2B communications capability. This will require focus in two areas—business leadership and technology partnership.

Business Leadership: B2B Is a Business Decision

Business leadership has to provide the guidance on where the business is going—what partners, what processes, and what results need to be achieved. They, not just IT, should ignite the initiatives to explore and expand the B2B foundation.

Businesses need to assess the current health and future direction of their partnerships. Where are the gaps in operational dexterity that need to be addressed? What policies need to be updated? What information is required to infuse and improve partner relationships and overall supply chain performance? How can we mutually modernize and leap ahead competitively? This assessment can subsequently lead to the establishment of priorities to guide strategy.

Technology Partnership

Creating the right partnerships also means selecting the right technology partners to enable transformation. Since these relationships are so critical to business success, there is more

Cross-Functional Communications: Many businesses no longer subscribe to a strict business model, e.g., retailer or manufacturer or wholesale distributor. Rather, they may do a little—or a lot—of everything. A technology provider who supports one function only, such as retail or invoicing, may limit the growth and functioning of the enterprise.

Full Communication Suite: There are media reports about EDI vs. API, or Blockchain replacing EDI. But, in fact, these are all *additive capabilities* that will be used across even a one-to-one relationship. Seek a platform that supports the various communication types (Table 1) so that managing business relationships is all-inclusive. With the growth of IoT, a solution should be sought that can include devices within the overall network.

Management and Monitoring: The many-to-many network's forte is taking on the management challenge of creating and monitoring B2B communications on behalf of an entire network. This takes a real burden off the IT department—the angst of building a proprietary hub and managing constantly changing data, along with the nightly vigil of ensuring that their communications are not repudiated by customers and partners.

Quality Assurance in Onboarding: Each new partner or new shared process with existing customers requires painstaking onboarding with coding, testing, and changes. B2B communication experts have the tools, staff, and relationships to ensure rapid and successful onboarding.

Global Expertise and Support: Cross-border regulations today just don't apply to goods, but cash and information exchange. With trade regulations always in flux, end users can't keep up. So they need to rely on a third party who is staffed with global trade experts to support them. Setting the standard for exceptional partnerships means ensuring all of the processes and data meet the highest standards.

Table 2: Technology Solution Fundamentals

than just the technology to consider in selecting this partner. So what kind of partner should we seek for B2B communications today?

Technology leadership and vision are key here, since your investments should sustain your operations and transformational ability for a long time. For today's B2B challenges, a technology provider with global reach is essential. Successful operation in foreign countries requires local knowledge of trade, product, and financial standards and regulations.

Your corporation's *reputation* (ensuring efficient and accurate operations) and *identity* (leadership in your industry and marketplace) are critically impacted by the technology you use. From an operational perspective, Table 2 provides some key capabilities that should be priorities in your evaluation.

Conclusions

The B2B world is not like other technology sectors, specifically, enterprise software, which focuses on "one": one enterprise, one data model, with one goal of building and strengthening the cohesion of that one enterprise. Those enterprise systems are not architected for the many-to-many virtual, outsourced, global, and partnered world. The enterprise focuses on solidifying and codifying their own unique data model, but doing that challenges their ability to communicate outward to the vast and ever-changing world.

Today's B2B network's foundation, on the other hand, is architected for the many-to-many communications challenge with multi-protocols, support for multiple industry standards, and translation between thousands of enterprises. This foundation makes businesses commerce ready for any and all partners and customers, enhancing relationships through information as well the high operational performance enabled thereof.

Typical Benefits from B2B Communications:

Performance improvement across the supply chain

Accurate order promising

Inventory optimization

Reduction/elimination of manual interventions

Reduced transactions costs

Acceleration of information cycle times

Reduction in overall IT costs

Improvement in cash cycles with more accurate and timely invoicing

Increased participation and enhanced compliance in B2B information sharing

Business managers are constantly confronted with benefits statements and conflicting priorities regarding which processes and projects are most urgent to address. Through mutual engagement, IT and senior management can now create an understanding about the technology options and how they can enhance trading partner performance.

The priority is to have exceptionally competitive supply chains. And today's supply chains are information powered. *The stakes are too high to minimize the essential need—the goal—of frictionless commerce.* It *must* be achieved to participate in the global economy. Businesses can't win alone.

About ChainLink Research

ChainLink Research, Inc. is a Supply Chain research organization dedicated to helping executives improve business performance and competitiveness through an understanding of real-world implications, obstacles and results for supply-chain policies, practices, processes, and technologies. The ChainLink 3Pe Model is the basis for our research; a unique, multidimensional framework for managing and improving the links between supply chain partners.

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