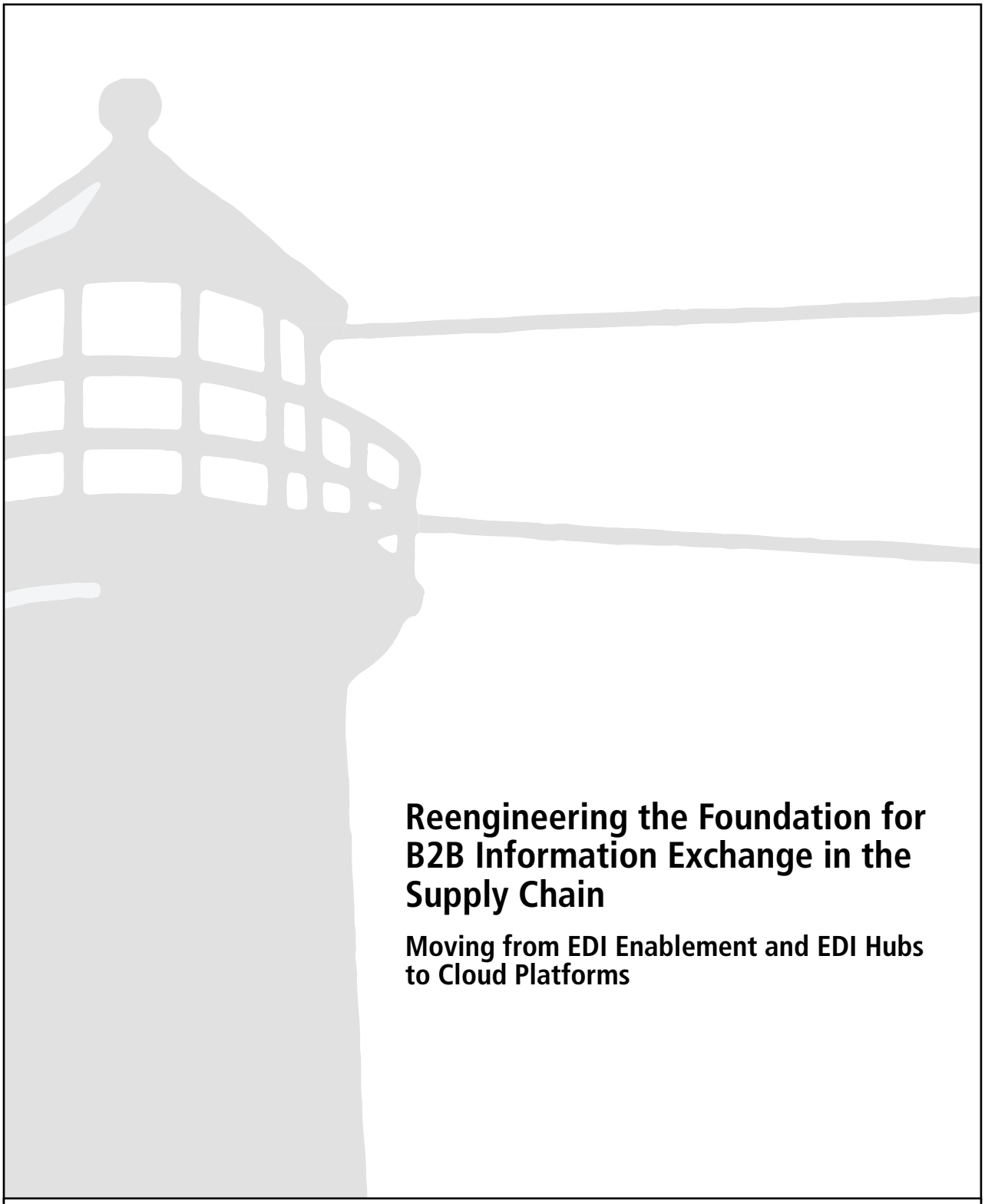


# Reengineering the Foundation for B2B Information Exchange in the Supply Chain

## Moving from EDI Enablement and EDI Hubs to Cloud Platforms

GT NEXUS™

A GT Nexus White Paper

## Executive Summary

In today's globally outsourced business environment, most of the data that companies need to run their supply chains resides with partners, and typically in the systems of those partners.

Companies struggle to get a get a unified picture of their supply chains because the information systems they have been buying for the past several decades were designed to operate within a single company, not across a network of companies.

Today, the best companies manage business across their broader networks, not just inside their own companies. They succeed because they are expert mangers of information. Operational excellence requires informational excellence, and these companies know they must see and control the financial, physical,and informational business flows into and out of their companies in order to transform their performance.

While supply chain visibility remains a top operational priority for corporate leadership, the enterprise business software that's installed at most companies comes up short because the data that these software applications must have to be useful is far from complete. The EDI VANs and hubs have not delivered on the promise of high-quality, timely and complete partner data.

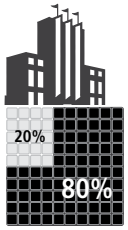
Cloud supply chain platforms invert the traditional EDI hub equation by moving the data processing and linking logic from the partners at the ends of the spokes to the center hub itself. In this model, the entire value chain community leverages a common core technology utility so that all partners link to a single version of supply chain truth across the entire network.

Cloud platforms represent a truly radical shift in how companies exchange information with one another. In this white paper we will describe the shortcomings of yesterday's technology and how new platforms based around the Internet and the economics of Cloud are enabling companies to become agile and hyper-efficient networked organizations. These newer platforms are no longer nice-to-have; they are must-have systems. Without the extra-enterprise nervous systems to see and control the supply chain, companies are at a strategic disadvantage in their markets, and we'll show why.


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## A Flat Business World Demands a Radically Different Approach to Information Sharing

An estimated 80% of the data companies need to orchestrate supply chain operations today originates with external partners — beyond the four walls of the company. Getting to that data, rationalizing that data, piecing together that data to create a unified picture of the supply chain is no small task. Most companies fail.



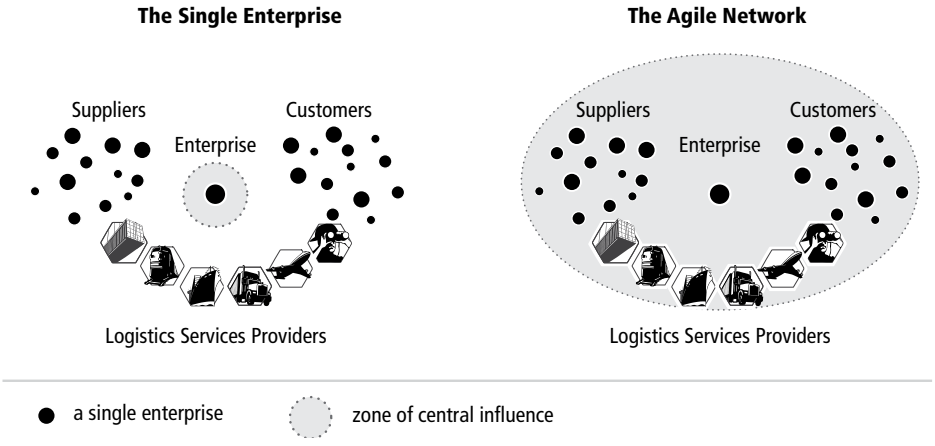

80% of the data a company needs resides beyond its four walls, in the systems of global partners.

For nearly forty years, companies have been buying business software and electronic data interchange (EDI) enablement technology to help them connect the dots. But these technologies, which began their life before the Internet was born and well before business outsourcing and globalization became all-defining mega trends, have proven woefully inadequate in giving companies visibility and control over the hundreds of vital business processes that will make or break them in the new era.

The modern company operates as a network of companies, not as a single company. Core business functions such as procurement, manufacturing, logistics, financial settlement, and even IT are regularly outsourced to specialist partners, many of them located on the other side of the globe. Today, supply chains are longer, more dynamic, and riskier. They are also lot more complex.

The best companies manage business across their networks, not just the business inside their own companies, and they succeed because they are expert managers of information. Operational excellence requires informational excellence, and these companies know they must see and control the financial, physical, and informational business flows into and out of their companies in order to monitor and improve overall performance. They understand that in order to be agile and responsive in an increasingly competitive and fast-paced business world, they must have informational nervous systems that extend beyond their own corporate boundaries.

**FIGURE 1:** Informational nervous systems that extend beyond corporate boundaries allow companies to be agile and responsive across their global business networks.





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**The focus of traditional business software is on the single enterprise, not the networked company.**

If the focus of big business software over the last several decades has been automating the "interior" business functions of the company, then the next several decades is about automating the hundreds of inter-company "exterior" business processes that define commerce today. But none of it can happen without a sturdy and scalable foundation for intercompany information exchange across the larger partner-facing supply chain process domains like procurement, supplier management, order fulfillment, logistics, and commercial settlement. Streamlining these and hundreds of other inter-company processes can unlock significant new value in operational efficiencies, in reduced inventory and logistics spend, in increased reliability and improved customer service, and fewer missed revenue opportunities. But before process automation can happen, there must be visibility across the supply chain. There must be sight. Companies must be able to see the well-lit road before they put their cars into gear to drive.

## Supply Chain Visibility Rises to the Top, but EDI Hubs Fall Short

Supply chain visibility remains the highest operational challenge for companies not because there isn't business software applications for it but rather because the data these applications need to run is so poor.

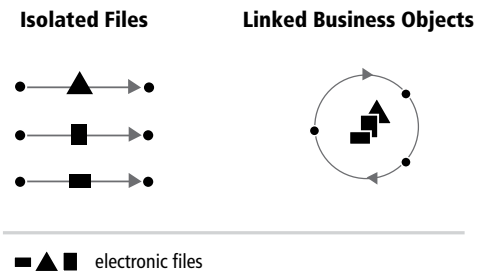
> Chief Supply Chain Officers ranked supply chain visibility the #1 priority for process and technology improvements.
>
> *Aberdeen Group, 2011 CSCO Study*

EDI service providers have been tapped to supply the B2B infrastructure to connect companies with their partners but they have not delivered on data quality. EDI VANs enable secure and robust electronic file exchange between partners, but they have left the heavy lifting of rationalizing, linking and creating a complete supply chain picture to each and every one of the many stakeholders in a modern commerce network. In other words, the prevailing technology for B2B integration has not gone far enough in helping companies rationalize and transform this incredibly complex, dynamic and highly variable data into useful information.

They have also not taken advantage of the enormous economic and scaling benefits that newer cloud-based deployment models provide across entire trade communities.

Like hyper efficient switchboards optimized to dispatch millions of individual "pixels" to partners on the network, traditional EDI enablement platforms deliver files securely but place the onus on the receiver to interpret the files and assemble the high resolution picture from scratch.

**FIGURE 2:** Caption here.





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In supply chain, and especially in supply chain execution where the process focus is highly collaborative and partner-dependent, the data is often nonstandard, incomplete, and inaccurate. The heavy lifting falls not just on one company — it falls on every company in the chain. Every company must individually assemble the detailed and up-to-the-minute picture of the supply chain on which it depends. Every company must make the same, sizeable technology investment for piecing together the unified picture of the supply chain that the entire network needs.

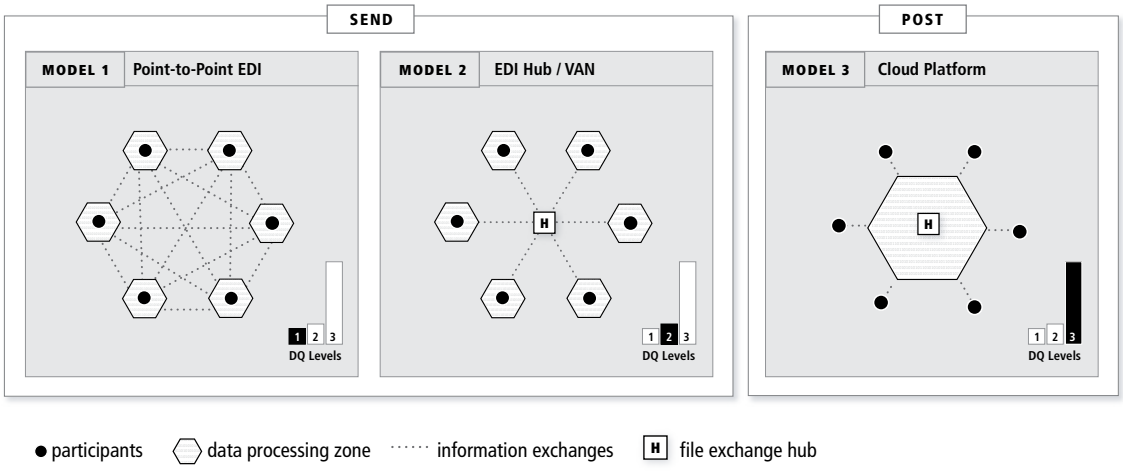
## Game Changer: Cloud Information Platforms

Cloud is radical not just because it allows technology to be delivered more cost-effectively, over the Internet as a pay-as-you-go service, with less risk and capital. Cloud's most radical aspect is multi-tenancy: the notion that it can be used to create a "commons" — a common infrastructure or a common place that many companies can utilize at once, together, to spread and lower the costs for all.

Newer, more advanced cloud supply chain platforms invert the traditional EDI hub equation by moving the data processing and linking logic from the spokes to the central hub itself. It's a radical shift in the model, and the consequences are equally radical. The entire value chain community leverages this core information power plant technology asset to gain a single version of supply chain truth across the entire network.

EDI messages and files are not just sent across an electronic network. Rather, they are posted and persisted centrally in the cloud platform where the data processing logic resides and every partner can benefit. Here, this data can be rationalized, linked and even fortified to create the high definition picture that every partner needs. Members in a network subscribe to the picture upon which the entire community depends. They synchronize their own internal systems with this picture so those systems can benefit also. They don't subscribe to files, they subscribe to the full picture.

**FIGURE 3:** By moving the data processing and linking logic from the spokes to the central hub, companies and their partners all benefit form a single version of supply chain truth.





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What is at the core of this foundational technology? What is it made of? First, importantly, it is technology designed for the deep and detailed processes of a specific B2B domain. It is not generic. In this respect it diverges sharply from traditional EDI technologies that were designed for file transport and translation across all processes. Traditional systems take a "one size fits all" to information exchange: EDI file delivery for everyone, but a complete picture for no one.

In rich process domains such as supply chain execution, where the processes are long-lived and highly collaborative, what is needed is an information transformation layer that is knitted to the specific business processes at hand. Only by understanding the underlying and highly detailed data models and linkages of the critical business objects themselves can an information exchange platform create tight mappings to process. If an EDI VAN transports file packets but is blind to the contents, the next generation platform interprets at the content level — it applies technology to the inside of the packet, in other words. For this to happen successfully, the technology must examine and map such things as:

- locations and their spellings and formats
- conveyance and equipment types, their spellings and formats
- organization names, department names, and their spellings
- event or milestone names, their spellings and formats
- currencies, their spellings and formats

This requires that the platform maintain comprehensive, up-to-date master data tables at the industry level so that any partner's proprietary data model and nomenclature can be mapped and translated accurately on the platform. It requires that the platform provide partners with the ability to self-map and self-maintain; related to this, it requires an infrastructure to handle partner-specific business rules that can be established once, in one place, so that the investments can be leveraged many times over.

Because EDI VANs were not really designed to go beyond the secure exchange of files, they lack the robust infrastructure and technology to make the data meaningful. Newer technology points directly at the problem of data interpretation, standardization, and distribution.

## The Additions of One Benefit All Across the Community

The power of such a model is further increased when the technology "smarts" at the hub relies in part on partner specific content and rules that the partner community itself develops and maintains for the good of all. Not unlike crowd-sourcing models (think here of Wikipedia, or Jigsaw, for example) that engage the community to improve the common service, cloud platforms for B2B information exchange engage industry participants to actively improve their own connection and content so that data quality levels increase for any receiver as a matter of course, with or without you. The community is working for you.


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## Conclusion

Cloud platforms represent a radical shift in how companies exchange information with one another across globally distributed business networks. Not unlike the powerful information sharing models inherent in social networks platforms, these cloud platforms give business communities the collaboration "commons" to quickly update and share information around the hundreds of vital inter-company business processes that traditional single-enterprise IT systems ignore. The idea isn't fringe today; it's proven and in-place with leading companies across all industries. For these companies, B2B cloud platforms provide the only means for reliable intercompany information exchange in the specific domains where tight process linkages and high quality data are paramount. It is this model that suddenly makes massively scalable information sharing across entire networks finally possible. It could not have happened without a reliable and ubiquitous Internet. It could not have happened without cloud platforms designed from the ground up to harness the inherent connectivity and collaboration models that the Internet affords.

In short: for companies to achieve and sustain truly breakthrough levels of data quality across their supply chains, they must move beyond simple file exchange and invest in more modern cloud-based B2B integration platforms designed specifically for the process domains where transformation is no longer a nice-to-have but a must-do.


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