

EDI Outsourcing: The Evolution to B2B Managed Services



Table of Contents

3	Summary
3	EDI In The Beginning
4	EDI Outsourcing In The Beginning
5	Now, It's About More Than EDI
7	It's About Supporting B2B Integration
8	The Role Of B2B Managed Services In B2B Integration
9	The Value of B2B Managed Services in B2B Integration
10	Process Visibility
10	B2B Process Management and Community Support
12	Conclusion: Use Your Internal Resources Where You Need Them Most

Summary

The earliest forms of EDI outsourcing, going back twenty years or so, can be seen as the provision of software and services by an external company for the implementation and operation of systems and processes for creating, transmitting, and receiving EDI documents. The Value Added Network is core to the earliest forms of EDI Outsourcing. EDI has long been the most effective technology for creating transaction efficiencies among business partners. However, as the global trading environment grows more complex, the need for EDI technologies including the VAN has evolved into the need for business-to-business (B2B) collaboration capabilities. The focus has moved away from the provision of pure EDI to B2B Integration supporting supply chain and trading partner activities by enabling more effective collaboration with business partners. As a result, EDI outsourcing has evolved into B2B managed services which uses the B2B Integration Cloud as its technology platform. As cloud adoption continues to evolve, companies will face a new integration challenge: How do you integrate on premise systems with those consumed from the cloud and how do you then do B2B integration with trading partners also consuming systems in the cloud? Cloud Integration Brokerage is the answer, and expect to see B2B managed services vendors at the forefront of delivering these services.

EDI In The Beginning

EDI or Electronic Data Interchange has existed since the 1960's. The description provided in Wikipedia being as good as any, states: "Electronic Data Interchange (EDI) is a set of standards for structuring information that is to be electronically exchanged between and within businesses, organizations, government entities and other groups. The standards describe structures that emulate documents, for example purchase orders to automate purchasing."

The same description goes on to say: "The term EDI is also used to refer to the implementation and operation of systems and processes for creating, transmitting, and receiving EDI documents."

In this expanded context, the essentials required to perform Electronic Data Interchange can be systems and processes used for creating, transmitting, and receiving EDI data using standards such as UN/EDIFACT, ANSI ASC X12, TRADACOMS and ODETTE. Today these sources of information also include non-EDI data such as XML, Internet Protocol data formats, spreadsheets and other text documents.

The essential systems and processes used for creating, transmitting and receiving EDI data typically include:

- An electronic communication medium to send and receive the data in a timely manner. Originally this would be:
 - Managed File Transfer to facilitate point to point connections with trading partners
 - Value Added Network (VAN) used to facilitate one-to-many connections with trading partners

More recently, Internet protocols such as AS2 and FTP are also used.

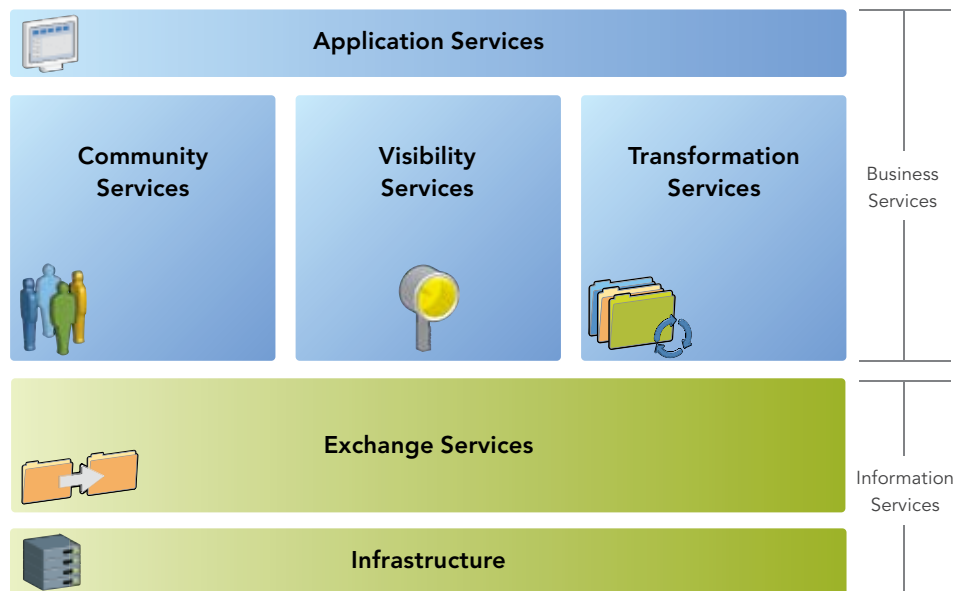
- EDI Transformation software to facilitate the above standards and enable the messages transmitted and received to be translated, mapped, interpreted and checked for compliance. More recently this has evolved to become B2B Gateways, software which not only provides the transformation capabilities, but also process integration capabilities and point-to-point file transfer capabilities incorporating Internet protocols

EDI Outsourcing In The Beginning

The earliest forms of EDI outsourcing, going back twenty years or so, can be seen as the provision of software and services by an external company for the implementation and operation of systems and processes for creating, transmitting, and receiving EDI documents.

The Value Added Network is core to the earliest forms of EDI Outsourcing.

Key Capabilities of the Value Added Network



Other aspects available would be centered around the provision of EDI translation software in one of the following forms:

- Hosted at the customer site and managed by the vendor as part of an IT outsourcing contract
- Hosted and managed by the vendor for a specific company, with a dedicated translation software environment, which may also provide the VAN
- Hosted by the vendor in a large scale hosted EDI translation platform capable of handling transactions from a number of customers

Now, It's About More Than EDI...

Today, the major concern of IT and business decision makers responsible for managing supply chains and trading partners' activities, is:

How to enable more effective collaboration with business partners in different regions of the world with different regulatory requirements, varying degrees of technical expertise, communications protocols, data standards, and back office information systems.

EDI has long been the most effective technology for creating transaction efficiencies among business partners, however, **the global business landscape has shifted, and it has become clear that other tools are necessary.**

As companies are forced by market drivers to become globally integrated enterprises, they increasingly need to expand their ecosystems with more and more partners. Supply chains and trading partner relationships are no longer linear—today they're a complex network that entails much more coordination. These days, a typical manufacturing company relies on more than 35 different contract manufacturers around the world to provide the necessary parts for its goods, which for some companies, such as auto and airplane manufacturers, can range in the tens of thousands. No wonder that over the past 40 years, trade in intermediate goods as a percentage of total trade has doubled.¹

As a consequence, the number of 'standards' has grown to the extent that the term standards in this context can be considered to be an oxymoron. Forrester says: **"Standard message formats.** These are the published open standards defining the format of EDI documents. For example, ANSI X12 (widely used in the Americas) provides guidelines for more than 300 standard business documents and also supports industry-specific variations like UCS (grocery and retail) and VICS (retail and CPG) that provide additional message format details used in these sectors. Similarly, the UN/EDIFACT standard (widely used in Europe) supports variations like ODETTE for the European automotive sector. These standards undergo scheduled upgrades guided by standards bodies in order to maintain their industry relevance."² And, the limitation of EDI technology to support more complex relationships is becoming a barrier to growth for many companies.

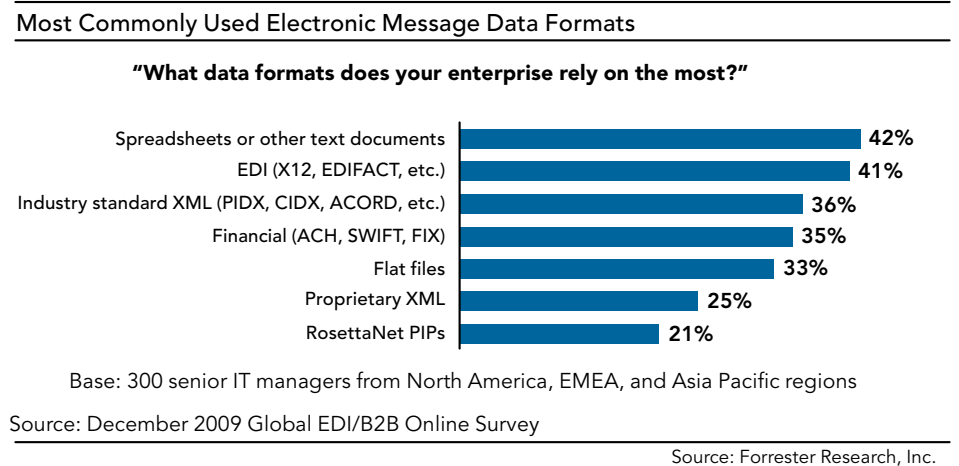
EDI technology designed for transaction efficiency and standardization actually imposed limitations on new trading relationships. Diverse customer requirements and mandates led to disparate systems with multiple environments to support and maintain. And limited flexibility led to a "my way or the highway" attitude that limited the number of trading partners enabled.

¹ *The Global Grid*, Peter Bison, Elizabeth Stepheson, and Patrick Viguerie, McKinsey & Company, June 2010

² *The Future Of EDI*, Ken Vollmer, Forrester Research Inc., 2009

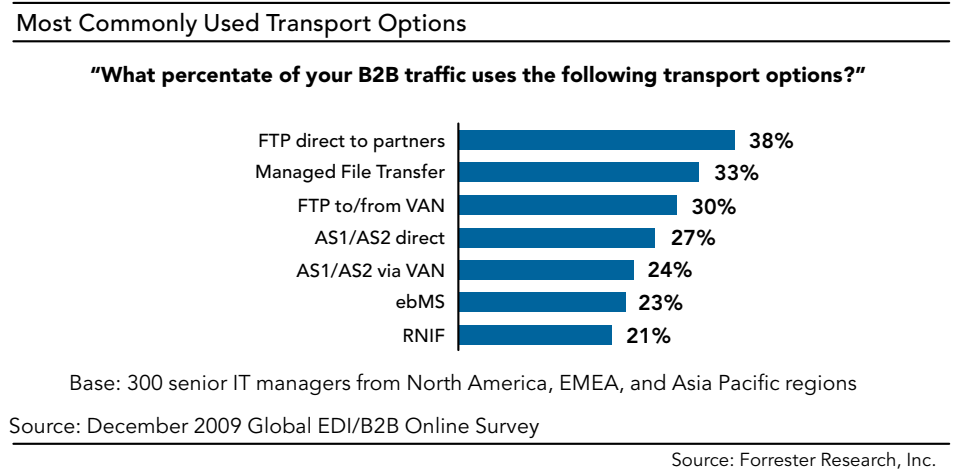
EDI systems are the norm for the exchange of standard business electronic documents in many sectors. It is not likely that EDI will disappear from the majority of companies that rely on it, but it is becoming obvious that newer alternatives beyond EDI have advantages. Companies that use EDI are considering and using these alternatives.

Figure 1



Just as the number of message formats has grown, so has the number of transport options. In particular, the Internet-based AS1 and AS2 protocols have been widely implemented, and a significant number of the respondents in our recent survey are using them.³

Figure 2



³ 2009 Global EDI B2B Online Survey, Forrester Research Inc., 2009

It's About Supporting B2B Integration

As the global trading environment grows more complex, the need for EDI technologies has become the need for business-to-business (B2B) collaboration capabilities that will enhance partner integration, process automation and end-to-end visibility. Companies have come to realize the importance of B2B Integration to their business.

The technical objective: "...exchange business data to link and automate business processes between two or more companies in a way that is easier to manage, faster, more-affordable and more-accurate than manual approaches or custom coding."⁴

The business result: "...bottom-line and top-line revenue increases and cost savings attributed to increased automation, lower costs and improved process execution (visibility and control). This improves business partner relationships and attracts new business..."⁵

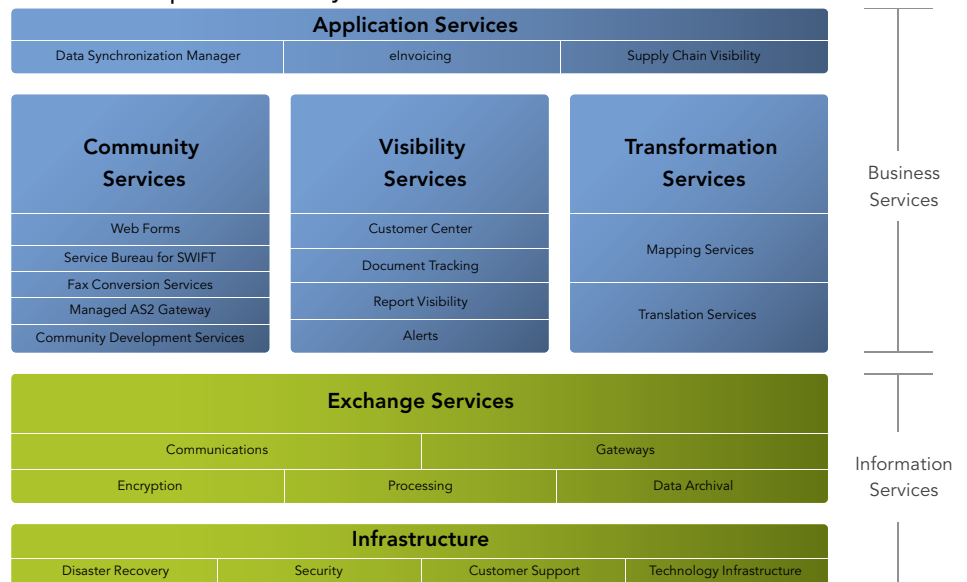
As the focus has moved away from the provision of pure EDI to B2B Integration supporting supply chain and trading partner activities by enabling more effective collaboration with business partners, B2B Integration itself has also evolved.

The VAN has evolved to meet the needs of its customers into what is described as Integration as a Service (IaaS), a B2B Collaboration Network, Integration on Demand, Business Process Network, B2B Integration Cloud or Integration Platform as a Service (iPaaS), etc depending on who you read. The latter is an example of how transport and deployment options have changed to further enable B2B Integration.

The following B2B Integration diagram shows the core components you should expect today:

This diagram also reflects the approach Sterling Commerce, an IBM Company, takes to B2B Integration.

Solutions Component Summary



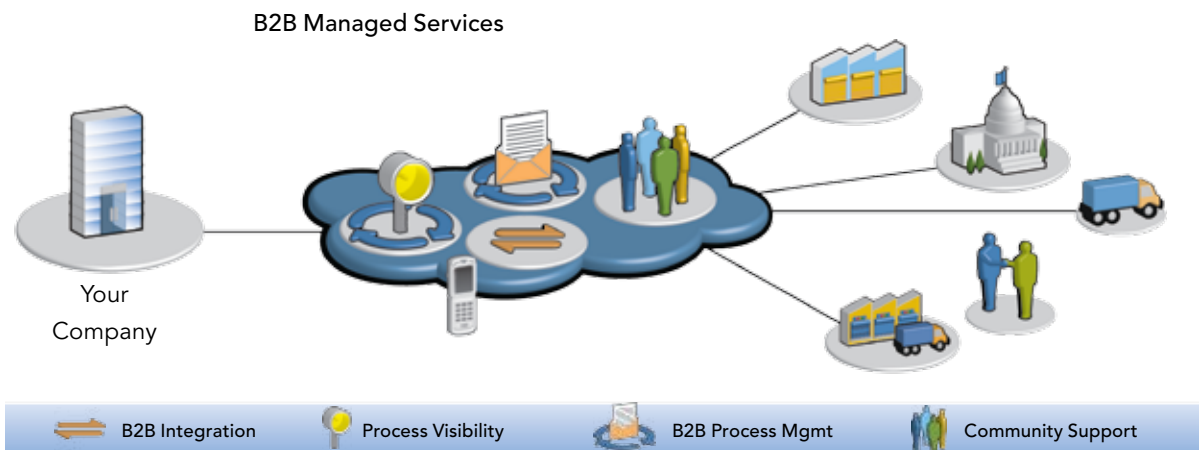
4, 5 Market Trends: Multienterprise/B2B Infrastructure Market, Worldwide, 2009–2014, Fabrizio Biscotti, Paolo Malinvernio, Benoit J. Lheureaux, Thomas Skybakmoen, Gartner, July 2010

The Role of B2B Managed Services in B2B Integration

Now that the VAN has evolved into a B2B Integration Cloud with the core components of community services, visibility services and transformation services, EDI Outsourcing has evolved also. Again a myriad of terms are in circulation including B2B Integration Outsourcing, B2B Process Outsourcing, B2B Integration Services or Integration Brokerage, but for the purposes of this paper, the term B2B Managed Services will be used.

A B2B Integration Cloud like the one below is the core technology behind B2B Managed Services. The Cloud includes the electronic communication medium to send and receive the data in a timely manner and also includes the B2B Integration Gateway software to enable process orchestration of the messages transmitted and received to be translated, interpreted and checked for compliance. Instead of a dedicated or large shared instance it is now in the Cloud; a multi-tenancy environment, built on a Service Orientated Architecture (SOA) platform.

Today's B2B Managed Services is a \$800 million market with a 20% compound annual growth rate (CAGR) over the next five years.⁶ It has evolved from technology-based EDI Outsourcing to include B2B Integration, Process Visibility, B2B Process Management and Community Support.



All this enables an organization to have a single connection to the B2B Integration Cloud and leverage the economies of scale available to a B2B Managed Services provider.

⁶ Market Trends: Multienterprise/B2B Infrastructure Market, Worldwide, 2009–2014, Fabrizio Biscotti, Paolo Malinvernio, Benoit J. Lheureaux, Thomas Skybakmoen, Gartner, July 2010

The Value of B2B Managed Services in B2B Integration

Built on the solid base of the B2B integration cloud, companies today should expect their vendor to provide a range of managed business services to help them achieve the benefits of B2B Integration. These services would typically include:

- **Global Communications**

The B2B Integration Cloud now has capabilities such as:

- The ability to handle data types other than EDI such as ACH, Flat file etc.
- Global partner reach
- Support for legacy (e.g. X.400) and newer Internet protocols (e.g. OFTP2)
- Data archiving
- Updated security and disaster recovery capabilities to meet today's business needs
- Support for communications gateways such as AS/2, Customs, industry specific networks e.g. automotive, finance, retail etc.

- **Transformation**

Access to B2B Gateway software in the cloud reducing the need for behind the firewall B2B Gateway and integration software and providing interoperability with back-end systems such as ERP. The creation, testing, maintenance and management of mapping and the capability of transforming one trading partners' set of data into a format and type which can be used by another partner should also be included.

- **Community Development**

As the number of global trading partners has increased, competitive pressures have also driven the need for trading partner automation i.e. the ability to trade with partners electronically to enable more effective collaboration with business partners. Community Services typically include the following:

- Community Development to combine proven small partner enablement tools and processes with dedicated resources to help build, manage, and expand B2B communities on a project basis.
- Supplier Portal to provide an economical way to exchange documents with smaller partners over the Internet. The trading community can access electronic business forms, which members can fill out and return in minutes.
- Fax Conversion to convert incoming faxes to EDI or XML documents and reverse the process for outgoing documents, proactively alerting both senders and recipients of potential problems. The ubiquitous use of Fax as a method of sending and receiving orders makes this type of service just as important today as it was 10 years ago. This is another way to exchange documents with smaller partners.
- Managed AS2 Gateway to enable compliance with AS2 mandates without the expense of having to build complex infrastructure for secure Internet communications, and smooth the way for suppliers to make the switch to AS2.

Process Visibility

Process visibility is critical to companies today. It should provide real time supply information helping companies systematically access and share information, proactively manage supply processes and maximize business performance with suppliers. Better visibility into supply information lowers inventory, improves operational efficiency and improves responsiveness by summarizing and displaying inbound supply information in a usable, understandable, and actionable format.

- Actionable visibility results include:
 - Improved strategic decision making with real time alerts and visibility into B2B operations

Need for real-time visibility into business processes' rated as 'major business issue' by 81% of senior IT management⁷

Many companies are gaining additional visibility into their processes by taking advantage of the ability provided by some vendors for them to take their views of their processes with them when they are not at the office or in front of a computer. Mobile devices and apps for those devices are rapidly gaining traction.

B2B Process Management and Community Support

Even with a world class B2B Integration Cloud that provides real time process visibility, companies still require skilled and experienced people to manage the related B2B process and support a trading community, which may cover time zones and regions.

B2B process management – companies today should expect their vendor to provide a range of business process management services to reduce the burden on internal resources and enable companies to focus on differentiated core business activities.

Results include:

- Accelerate B2B Integration and maximize B2B investment

IDC study shows for every \$1.00 invested in Sterling B2B Managed Services, companies in the study realized \$3.57 in reduced costs, increased productivity, and other business benefits.⁸

⁷ 2009 Global EDI B2B Online Survey, Forrester Research Inc., 2009

⁸ Business Value of Sterling Commerce Managed Services for B2B Integration, Maureen Fleming and Randy Perry, IDC, 2009

Examples of Managed Services

Shepherd Neame: The oldest family-run brewery and pub operator in the UK, based in Kent, Shepherd Neame is a traditional family-run business operating around 370 pubs. Historically, the company relied on a manual validation process which led to lost revenue and increased costs as a result of human error in processing order, price, and invoice data. Shepherd Neame selected a B2B integration solution including managed services to provide complete support and delivery of its B2B infrastructure, and provide end-to-end visibility across the order management process to facilitate growth and increase efficiency across its supply chain operations.

Gist: A third party logistics company and member of The Linde Group, Gist develops logistics and supply chain solutions to enable its suppliers, distributors, retailers, and transport companies to meet the challenges of distributing ambient, chilled, and frozen products. To enable communications between systems, Gist had relied on customized, hard-coded, point-to-point solutions requiring excessive manual effort to update when adding new applications. A managed services solution has enabled Gist to automate the exchange of business critical data and has provided real-time visibility and 'traffic light' status alerting of transaction data. The company now has a standardized and simplified B2B Integration framework.

B2B Managed Services vendors should provide the capability to expertly handle the following responsibilities:

- **Integration services** – provided at the time the service is implemented and ongoing as part of the contract to for example ensure:
 - The B2B Integration Cloud is seamlessly integrated with business partner transactions with back-end applications
 - B2B consultancy expertise is on hand to support any new project
 - The provider is an active partner in developing the company's e-commerce strategy
- **Document process management** – one of the most resource draining functions for companies is responding to problems associated with processing their trading documents. Offloading this responsibility to a provider greatly reduces this internal burden and leverages the economies of scale the vendor should provide.
- **Support and service level agreements** – One of the main advantages of using a managed service should be increased levels of support and service level agreements that meet business need. This should include:
 - Support that reflects global trading needs; 24x7 in multiple languages
 - Service level agreements that go beyond simple technology availability to actually meet the needs of the business. For example a shipping notice has to reach a customer before the truck does or it will get turned away and incur a financial penalty from that customer. An integration service provider should provide a SLA to facilitate this and face their own financial penalty if they don't deliver.
- **Community support** – For companies with several hundred or indeed thousands of trading partners (both customers and suppliers), responding to their demands and needs increases the burden for expertise in multiple time zones and languages dramatically. Not getting this right can impact customer satisfaction, increase the time required to get new products and services to market and add to the cost of doing business significantly. Companies should expect their vendor to provide a service to reduce this burden, typically:
 - A level 1 trading partner help desk, where the vendor will take calls from all trading partners on behalf of the client supporting them in resolving B2B trading issues

In addition to the service components we see above, B2B Managed Services providers continue to add to their portfolio to respond to market demands to include B2B process applications like more sophisticated community enablement solutions and e-Invoicing.

Saint Gobain Abrasives: A division of Compagnie de Saint-Gobain, a multinational corporation with headquarters in Paris, France, Saint-Gobain Abrasives has manufacturing capabilities in 39 countries, and is the leader in the abrasives industry. The company manufactures and markets a full line of bonded, coated, and specialty abrasive products. Saint-Gobain Abrasives decided they needed to rethink their approach to B2B integration. Improving customers' experiences and mitigating risk within the IT department became a strategic project. Saint-Gobain Abrasives evaluated updating solutions internally, but determined it to be less cost effective than outsourcing. With a managed services solution, Saint-Gobain Abrasives is now able to process orders every ten minutes using real-time visibility, which is a drastic increase over their prior capability of processing orders four times per day. They now have improved visibility of advanced shipping notices and invoices for distributors, earlier in the order lifecycle, ensuring cleaner orders, resulting in increased data accuracy.

Conclusion: Use Your Internal Resources Where You Need Them Most

For companies with several hundred or indeed thousands of trading partners (both customers and suppliers), responding to their demands and needs dramatically increases the burden for B2B integration expertise across multiple time zones and languages. Not getting this right can impact customer satisfaction, increase the time required to get new products and services to market, and add significantly to the cost of doing business. Companies should expect their vendor to provide a service that can meet these evolving challenges.

As EDI Outsourcing has evolved to meet the needs of the shifting global business landscape, and to adapt to increasingly rapid advances in technology, developing B2B integration capabilities—while supporting larger numbers of trading partners, existing legacy systems, and increasingly complex business processes—conspires to drive up supply chain total cost of ownership. Then throw into the mix the question: Would your internal resources be better focused on differentiated core business processes instead? If the answer is “Yes” then the business case for B2B managed services becomes compelling.

Expect B2B Managed Services to continue to grow and change. As cloud adoption continues to evolve, companies will face a new integration challenge: How do you integrate on premise systems with those consumed from the cloud and how do you then do B2B integration with trading partners also consuming systems in the cloud? Integration Brokerage is the answer, and companies should expect B2B Managed Services providers with the experience of using a cloud-enabled B2B integration platform to be in the forefront. It's in their DNA.

About Sterling Commerce

Sterling Commerce, an IBM® Company, helps organizations worldwide increase business agility in their dynamic business network through innovative solutions for selling and fulfillment and for seamless and secure integration with customers, partners and suppliers. More information can be found at www.sterlingcommerce.com.

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