

Driving Business Value Through B2B Outsourcing

**Improving Business Performance,
Trading Partner Satisfaction,
and B2B Capabilities**

FOREWORD BY GXS, INC.



**STANFORD GLOBAL SUPPLY CHAIN MANAGEMENT FORUM
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Foreword

For many years, business process outsourcing (BPO) has been identified as a strategic trend for many industries. As an organization exclusively focused on business-to-business (B2B) e-commerce, GXS recognized a unique opportunity to address the substantial barriers and obstacles plaguing our customers' ambitions to optimize their supply chain and better serve their customers. For much of this decade, we have committed ourselves to combine nearly 40 years of domain expertise and our global reach with significant investments in technology, capabilities and practices.

Earlier this year, GXS explored opportunities to conduct a ground-breaking study on the business and technical benefits of global business-to-business e-commerce outsourcing. The key research questions to be addressed included:

- What are the elements of business value realized by companies that outsource B2B operations, where possible quantifying the level of benefits realized?
- What is the Return-on-Investment (ROI) associated with B2B outsourcing as it compares to other B2B initiatives?
- What are the best practices in B2B outsourcing that have contributed to achieving these results?

GXS was looking for a partner with global capabilities, supply chain expertise, and a strong commitment to leading edge research. Stanford University's Forum on Global Supply Chain Management (the Forum) was a perfect fit. The Forum is a program in partnership with industrial organizations that works to advance the theory and practice of global supply chain management. As a leading research institute in the area of supply chain management, Stanford's Forum seeks to identify, document, research, develop and disseminate best practice as well as new innovations in this area in order to advance teaching and research in global supply chain management.

The following report successfully addressed each of the research questions above and is the result of many long hours of research, analysis, and insight from the team at the Forum. We hope you find the report to be a valuable source of information detailing the business value created through B2B outsourcing.



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Driving Business Value Through B2B Outsourcing

IMPROVING BUSINESS PERFORMANCE, TRADING PARTNER SATISFACTION, AND B2B CAPABILITIES

By Barchi Gillai and Tongil Kim

Executive Summary

Over the years, as the need for more inter-company data transactions grew, so did the inefficiency of manual means of communication, such as phone, fax, or email. Consequently, companies started using B2B solutions¹ to automate information exchange with their trading partners. Such solutions provided them with the means to exchange with their trading partners a higher volume of data more frequently, and at a higher degree of accuracy. Initially, the implementation and maintenance of the B2B solutions was conducted in-house, by internal IT personnel. But as business networks became exponentially more extensive and complex, managing these solutions internally became too burdensome for a growing number of organizations. The increasing number of data formats and communication protocols used by different trading partners further intensified the hurdles associated with B2B collaboration. To overcome these challenges, some companies started handing over the management of portions or all of their B2B solutions to external service providers. B2B service providers can help manage and coordinate B2B activities across different platforms and across different parts of the supply chain, thus reducing the complexity and coordination problems in intra- and inter-enterprise collaboration.

The benefits of B2B outsourcing have been acknowledged and studied in a number of studies, but only a limited number of studies attempted to quantify the magnitude of the technical and business benefits of working with an external B2B service provider. The goal of this study was to fill this gap by identifying, and as much as possible quantifying, the benefits related to technology, business processes, and human resources, which have been realized by companies that have outsourced at least a portion of their B2B operations.

The study was based on information received from 25 companies, which come from a number of industries and vary in their size, past B2B capabilities, and other characteristics. All participants are currently outsourcing at least a portion of their B2B operations to an external service provider.

We collected information related to improvements in technology, business processes, and people. The inputs provided by the participating companies clearly demonstrate that B2B outsourcing can be of much value, regardless of the particular company characteristics. The benefits reported by participating companies are listed below. The numbers in parenthesis are the percent of participants that reported each of the benefits:

Technology

- **IT infrastructure:** higher B2B technical capabilities (83 percent); reduction in spending on IT infrastructure: hardware, software, legacy systems, and network charges (26-46 percent, depending on the category); reduction in data processing time (46 percent); reduction in redundant/overlapping B2B platforms (33 percent).

¹ B2B solutions are defined by Gartner as "multi-enterprise/business-to-business (B2B) infrastructure" used to exchange data and link business processes between a company's internal applications and systems and those of its external business partners—i.e. customers, suppliers, logistics providers, financial institutions, etc.

- **Risk management:** higher predictability of B2B IT costs (71 percent); increase in B2B system availability (58 percent).
- **Roll-out of B2B e-commerce:** reduction in time to set up a new B2B connection (63 percent); reduction in number of trading partners waiting to get on-boarded (42 percent).

Business Processes

- **Efficiency:** increased traceability of B2B transactions (70 percent); reduction in time to develop support for new technologies and/or standards (64 percent); reduction in time spent on manual transactions (57 percent); ability to focus on higher value business objectives (48 percent); higher data quality (48 percent); increase in utilization and extended capabilities of core systems (45 percent); access to data that was previously not available (26 percent); reduction in payment cycle time (18 percent).
- **Trading partner satisfaction:** increase in number of value-added services provided to trading partners (57 percent); increase in customer satisfaction (50 percent); increase in supplier satisfaction (35 percent).
- **Supply chain management:** higher inventory visibility (39 percent); reduction in frequency and/or duration of shipping delays (30 percent); reduction in excess inventory (26 percent); reduction in frequency of cancelled/returned orders (22 percent); reduction in the frequency of shortages/stock-outs/back orders (13 percent).

People

- Reduction in Full Time Equivalents for internal development of B2B solutions/connections, trading partner support, and internal operations/support (50-59 percent, depending on the category); higher productivity of internal IT resources (57 percent); higher availability of B2B support around the globe (52 percent); reduction in internal B2B training costs (32 percent).

Overall, B2B outsourcing was a positive experience for the vast majority of the participating companies. All participants were able to realize annual costs savings higher than the required annual investment, with the average level of annual benefits being 2.45 times higher than the annual costs. Furthermore, for all but one of the participants the benefits they realized met or exceeded their expectations. Half of the participants felt that B2B outsourcing provided their organization superior capabilities. When managed wisely, the benefits achieved through B2B outsourcing may help a company to improve its position in the marketplace.

It is important to note that at least some of the benefits listed in this report are not achieved automatically. Rather, the ability to realize the more indirect benefits depends on how well a company makes use of the resources that were freed up and the additional information it gained access to through B2B outsourcing.

1. Introduction

The value of information has been well established over the past 20 years. Businesses have long recognized that flawless information flow and knowledge processing streamline business objectives and execution plans, thereby enhancing overall business performance. As businesses entered the era of Information Technology (IT), they began to utilize advanced technologies, such as ERP and CRM systems, to automate information flow and business processes within the company.

While up until 5-10 years ago the focus of information dissemination was internal, such a strategy was not a panacea in the growing global marketplace; globalization has forced businesses to work closely with suppliers and other business partners—many of them located in other countries or continents—to serve customers around the world. For instance, Wal-Mart currently procures merchandise from more than 70 countries around the world while working with 61,000 suppliers in the United States alone.² For many businesses, globalization has expanded their networks of trading partners physically as well as technologically and culturally, calling for more efficient communication methods and better coordination between parties. Lee et al. (1997) observed that information across different stages of supply chains tends to be distorted, and such distortion leads to poor inventory and production decisions, a phenomenon known as the bullwhip effect.³ Naturally, the need for more data transactions and frequent technology upgrades evolved, and companies started using Business-to-Business (B2B) solutions to automate information exchange between trading partners and collaborators in their business networks. Adoption of such B2B solutions had a positive impact on companies' performance, as is evident from a study which was published in early 2007. The study shows that industry leaders take 87 percent of their orders electronically, whereas industry laggards take only 14 percent of their orders electronically. The same study also states that companies exploiting more electronic transactions realize 37 percent shorter cash-to-cash cycle times, 19 percent lower total supply chain costs, 20 percent less raw material inventory, and/or 36 percent shorter order-to-delivery cycle times.⁴

As B2B solutions were considered by a growing number of companies as a key to open the gateway to connect with customers, suppliers, and logistics partners, internal IT resources started to play an important role in keeping companies competitive. But as business networks became exponentially more extensive and complex, a debate arose as to how to efficiently and cost-effectively automate B2B transactions. Although some companies were successful in implementing the B2B infrastructure themselves, others found in-house implementation too difficult to manage and principally burdensome for those trying to concentrate on their core competencies.

To overcome this problem, some companies started handing over portions of their non-core IT capabilities to external service providers⁵. For example, in 1989 Kodak decided to outsource its mainframe data management, becoming IBM Global Services' first customer. Overall this arrangement was of much value to Kodak, since even though it gave away its control over the data center, it gained control over a much wider scale of the

² <http://walmartfacts.com/StateByState>

³ Lee et al. "Information Distortion in a Supply Chain: The Bullwhip Effect," *Management Science*, Vol. 43, No. 4, April 1997.

⁴ Swanton et al. "Benchmarking B2B E-Business: The Value Is in There," *AMR Research*, January 3, 2007.

⁵ Loh and Venkatraman, "Determinants of Information Technology Outsourcing: A Cross-Sectional Analysis," *Journal of Information Management System*, Vol. 9, No. 1, 7-24, 1992.

company's operations.⁶ In general, with extensive economies of scale available at IT vendors, the cost of internal IT operation began to be viewed as a sheer overhead cost.⁷

Advancement in IT and acceleration of globalization have created another problem for business communities: supporting inter-operation of various data formats and communication protocols used by different trading partners. Business communities understand the importance of standard communication protocols and unified data format which not only automate and speed up information transactions, but also enrich the quality of information flow. However, as is evident today, these standards are far from converging into one universal standard; for example, there exist countless disparate formats and standards of documentation, spreadsheet, database, accounting software, and CRM/ERP packages. Although some industries were successful in establishing standard brokers within their domains—such as RosettaNet, Chemical Industry Data Exchange (CIDX), Petroleum Industry Data Exchange (PIDX), and Odette File Transfer Protocol (OFTP)—inter-operability is still an issue when data exchange is required across different industries. In addition, many Electronic Data Interchange (EDI) and Extensible Markup Language (XML) standards have been localized for regional requirements around the world, which adds another layer of difference and complexity to this problem.

In a myriad of communication standards and data formats, the expense and the complexity of keeping up with new technologies rapidly increase as the business grows. Many enterprises, even large ones, lack the capability to handle this problem appropriately, and face difficulties to cost-effectively solve it in-house.⁸ The B2B managed services industry has been providing solutions to address this issue. B2B service providers can help manage and coordinate B2B activities across different platforms and across different parts of the supply chain.⁹ The service provider takes the control of setting up the connections with new trading partners and deals with different standards and formats to aid trading partners to become connected faster and to share information and applications more easily. The service provider also functions as a “clearing house,” reducing the complexity and coordination problems in intra/inter-enterprise collaboration. B2B managed services aim to help all trading partners communicate in a unified language and improve accuracy of transactions and clarity in their supply chains. The B2B managed services industry is expected to grow at a Compound Annual Growth Rate (CAGR) of 19 percent with its market size reaching \$764 million in 2008¹⁰.

The benefits of B2B managed services have been acknowledged and studied in a number of studies. Yankee Group notes that managed services vendors can better deploy B2B integration by acting as an “intermediary” to efficiently steer coordination and lead to agreements among trading partners.¹¹ Vendors can also provide expertise, physical infrastructure, and personnel to cope with fundamental obstacles in implementing B2B e-commerce.¹² Another study claims that the best approach to establish automated B2B processes is by outsourcing to B2B managed services. This is because B2B transaction management is not a core asset for most businesses, and complete in-house solutions experience difficulties dealing with complexities of extensive B2B transactional activities.¹³

6 <http://www.outsourcingprofessional.org/firm-builder/articles/34/177/591/>

7 Gallivan and Oh, “Analyzing IT Outsourcing Relationships as Alliances Among Multiple Clients and Vendors,” *Proceedings of the 32nd Hawaii International Conference on System Choices*, 1999.

8 Quorcica Insight Report, “B2B Reality Check,” *Quorcica Limited*, September 2005.

9 John Fontanella, “Reducing the Complexity of Multi-Enterprise Collaboration,” *AMR Research*, March 15, 2007.

10 GXS (internal, unpublished analysis, based on data from Aberdeen, Gartner)

11 Kosin Huang et al, “B2B Managed Services Help Companies Expand Footprints and Trading Networks,” Yankee Group, June 28, 2005.

12 Bottebaum, “Emerging Demand for B2B Managed Services, Hosted Integration and Outsourcing,” Yankee Group, November 8, 2005.

13 Quorcica Insight Report, “B2B Reality Check,” *Quorcica Limited*, September 2005.

Other studies have identified the types of benefits that companies expect from outsourcing to B2B managed services. Quorcica interviewed 400 respondents in various industries around the world and reported business communities' expectations on B2B managed services and benefits of such services.¹⁴ Aberdeen Group introduced a concept called B2B Collaboration Value Framework that enlists and categorizes possible direct/indirect benefits of B2B managed services in detail.¹⁵ Still, only a limited number of studies have focused on quantifying the magnitude of the technical and business benefits of B2B outsourcing. To fill this gap, the study summarized in this report focuses on quantitatively assessing the benefits attributable to B2B outsourcing. It attempts to identify, and as much as possible to quantify, benefits related to technology, business processes, and human resource management, which have been realized by companies that have outsourced their B2B functions. The study takes an in-depth assessment into these three categories to help understand how an organization's business activities can be affected by B2B solutions and the outsourcing of the management of these solutions.

The remainder of the paper is organized as follows: Section 2 outlines the major steps taken to conduct this study. Section 3 provides information on the companies that participated in the study, while Section 4 summarizes its major results. At the end of the paper are the Summary and Conclusions.

2. Methodology

As a first step, we probed the potential areas of improvement that businesses may realize from outsourcing the management of their B2B operations to external service providers. The list of the possible areas of improvement was compiled based on the review of existing literature, the knowledge of the team members, and inputs from industry experts.

Examples of the possible benefits identified include:

- **Technology:** less spending on hardware, software, and network charges; increased B2B technical capabilities and flexibilities; improved risk management (e.g. higher B2B system availability); and faster roll-out of B2B e-commerce solutions.
- **Business Processes:** improved operational efficiency via increase in data quality, data accuracy, and traceability of transactions; increase in number of value-added services offered to trading partners; and improved inventory management and minimized shipping delays through better supply chain visibility.
- **People:** increased productivity of internal IT personnel; and ability to reduce the size of the IT team or divert some of these resources to other value-added activities.

Based on the identified potential areas of improvement of B2B outsourcing, we prepared a questionnaire, in which we asked respondents to indicate which of the identified potential benefits their organization was able to realize, and whenever possible, to share with us the percent improvement associated with each particular benefit realized. In addition, we asked the target companies to evaluate their overall satisfaction with their B2B outsourcing experience, based on the overall return-on-investment (ROI), actual benefits compared to initial expectations, and whether the use of these services provided their company with any

¹⁴ Quorcica Insight Report, "B2B Reality Check," Quorcica Limited, September 2005.

¹⁵ Aberdeen Group, "B2B Collaboration: How On-Demand Platforms Accelerate Value and Impact TCO," Aberdeen Group, February 2007.

competitive advantage. Finally, we also asked each participant for some basic information about the company (e.g. industry, annual revenue) and their B2B outsourcing initiatives (e.g. the number of years of using these services, factors that drove the B2B outsourcing decision, etc.). To view the complete questionnaire, see the Appendix.

The questionnaire was distributed to a group of selected companies around the world. Eligible companies were limited to those currently outsourcing the management of B2B transactions. Our intention was to comprehend these companies' experience with B2B managed services and acquire quantified benefits based on their actual experience rather than based purely on expectations. We also tried to gain different perspectives from companies based on the types of solutions they were using in the past, prior to partnering with an external B2B service provider, to exchange information with their business partners.

We set a goal of recruiting about 20-25 companies to take part in this study. Such a range would be small enough to allow us to collect detailed information from participating companies and to conduct in-depth phone interviews, but large enough to gain useful insights into the benefits of B2B outsourcing.

Half of the companies that filled out and returned the questionnaire were then asked to participate in an in-depth phone interview. The purpose of the phone interviews was to clarify their written answers as needed and collect more detailed information about their experiences with B2B outsourcing.

We were successful in recruiting a total of 25 companies, ranging in size from less than \$500 million in annual revenue to over \$10 billion. The companies represented a variety of industries, including general manufacturing, financial services, high-tech, consumer products, retail, textile/apparel, healthcare, and logistics. All companies filled out the survey, and 10 of them also participated in an in-depth phone interview.

Once we collected all the data from the participating companies, we proceeded with data analysis, including both a quantitative and a qualitative analysis. The quantitative analysis focused on the number of companies that were able to realize each of the identified potential benefits, and the magnitude of the realized benefits. We decided to focus on improvements in percentages rather than monetary terms for two reasons. First, most companies are hesitant to disclose the monetary value of any benefits or investments. Second, study results in percentage are more informative since the monetary value of benefits may be perceived differently depending on the size and business volume of the company that wishes to use this report. The qualitative analysis focused on probing responses from phone interviews to reveal other insights related to companies' expectations and actual experience with B2B outsourcing.

While the study was successful in identifying a wide array of potential benefits of B2B outsourcing, due to the small number of participants and the variety of industries they operate in the results should not be interpreted as the reflection of a "typical company" in any specific industry.

3. Profile of Participating Companies

This section summarizes the characteristics of the 25 companies that participated in the study, either by responding to our written survey and/or by sharing with us details of their B2B outsourcing experience through an in-depth phone interview. In defining the characteristics of these companies, we asked participants for the following details:

- the primary industry in which they operate,
- annual revenue,
- the length of their B2B outsourcing history,
- current use of in-house and outsourced B2B solutions,
- change in number of trading partners integrated via B2B solutions after outsourcing, and
- primary business drivers for outsourcing their B2B operations.

The information was used only to gain a better understanding of the profile of the companies that took part in the study. We did not use the information for any analysis that compares benefits of B2B outsourcing based on such characteristics as company size or primary industry, due to the small number of participating companies representing each category.

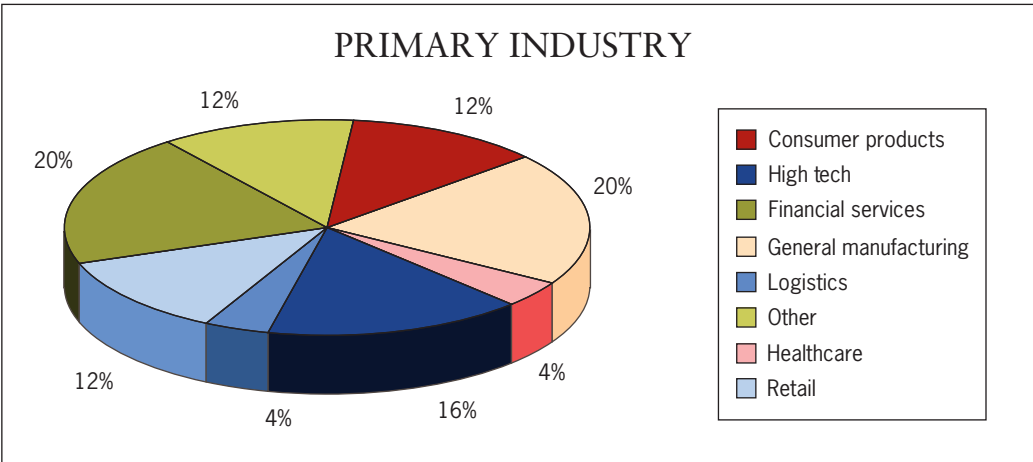
While most respondents answered the question at the firm level, some at large corporations were only able to provide their answers based on the divisions or regions for which they are responsible.

The following is a summary of the profile of participating companies.

Primary Industry

The participating companies represent a number of industries, as shown in diagram 3.1. Financial service companies and general manufacturing companies each account for 20 percent of the total participants; sixteen percent of the participants are from the high-tech sector; retailers and producers of consumer products each account for 12 percent of participants; and companies in other industries, such as healthcare, logistics, textile, and apparel account for the rest.

Diagram 3.1: Participating Companies' Primary Industry



Annual Revenue

In addition to the primary industry, the volume of business operations of the participating companies is also diverse. As shown in diagram 3.2, the annual revenue of the participants ranged between \$100-500 million, reported by 4 percent of the participants, to more than \$10 billion, reported by 36 percent of all participants. Twenty-four percent had annual revenue of \$0.5-1 billion, 28 percent of the participants had annual revenue of \$1-5 billion, and 8 percent had annual revenue of \$5-10 billion.

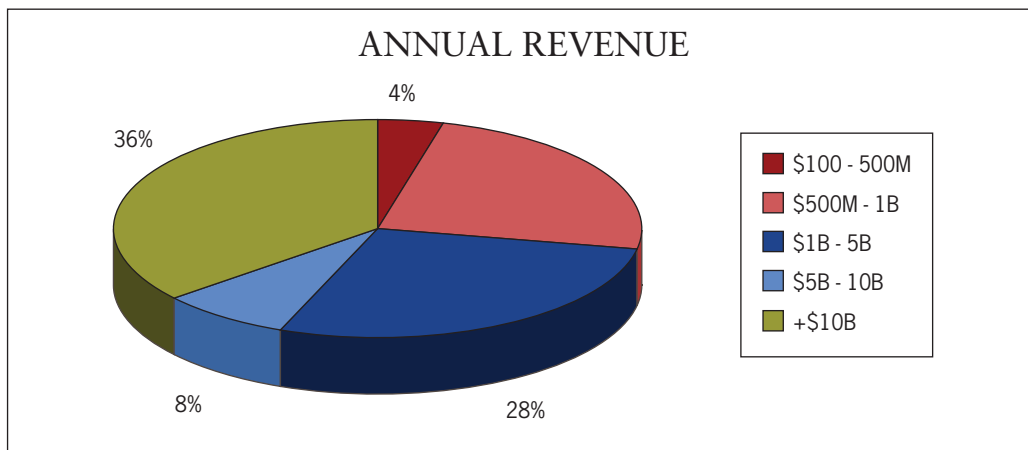


Diagram 3.2: Companies' Annual Revenue

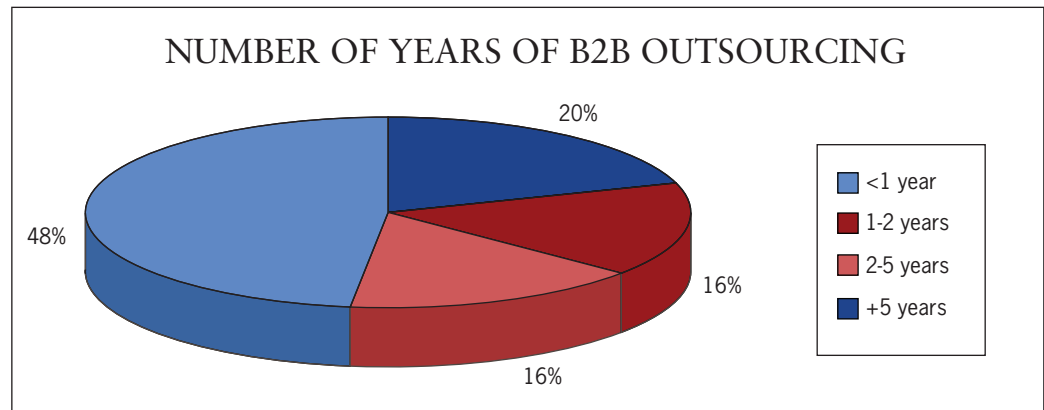
Length of B2B Outsourcing History

In order to better interpret survey responses, we asked companies to specify the number of years for which they outsourced some or all of their B2B operations. It turned out that 48 percent of the participating companies have been outsourcing at least a portion of their B2B operations to an external service provider for longer than 5 years; 16 percent have used this practice for 2-5 years, and another 16 percent have used this practice for 1-2 years. The remaining 20 percent of participants have been working with a B2B service provider for less than a year.

Three of the companies who began to outsource their B2B operations less than a year ago indicated that their survey responses were based mainly on their expected benefits rather than realized benefits, since it was too early for them to evaluate and quantify the actual impact of the outsourced B2B solutions on their business processes. Still, we decided to include their responses in the analysis together with the responses received from all other participants. This was based on the assumption that since these companies have already started working with a B2B service provider and were able to start observing the impact this move had on their business, then most likely their future measured benefits will not deviate too much from their current expectations.

Diagram 3.3: Number of Years Companies Outsourced Some/All of their B2B Operations

Diagram 3.3: Number of Years Companies Outsourced Some/All of Their B2B Operations



Current Use of In-house vs. Outsourced B2B Solutions

Prior to B2B outsourcing, many of the participants used B2B solutions such as standard EDI, non-standard proprietary VMI, and web-based solutions, which were managed in-house. At least 18 of 25 companies confirmed the existence of in-house solutions preceding B2B outsourcing, while the rest mainly used manual means, such as email, phone, and fax, to connect with trading partners.

Moving to work with an external B2B service provider did not mean obsolescence of the in-house solutions. Rather, when companies were asked about the current solutions that they use to connect with their trading partners, many of them reported that they use both in-house and outsourced solutions to support B2B e-commerce.

Diverse responses from companies failed to show any particular preference of one solution over the other. Some companies tended for various reasons to divide their use of outsourced vs. in-house solutions based on the type of trading partner they connect to (e.g., use the outsourced solution only to connect to their customers, or only to connect to their suppliers, logistics partners, or financial institutions, and use the in-house solutions only to connect to the other types of trading partners). For example, one company maintained using in-house solutions with logistics partners because the delivery of their products is considered as a core operation in the business. Other companies split the use of in-house vs. outsourced solutions for each type of trading partner (e.g., one of the participants used their in-house solutions for 80 percent of all their trading partners, and used the outsourced solution for the remainder 20 percent of trading partners). Yet other participants use both in-house and outsourced B2B solutions to connect with the same trading partners. This seemed to be the case especially when trading partners had many different complex systems to connect to.

Diagram 3.4 shows the current use of in-house and outsourced B2B solutions by participating companies to connect with their different types of trading partners. It should be noted, however, that some of the responses are based on the sales volume or volume of transactions rather than the number of trading partners, when such measure is more appropriate. For instance, a retailer with more than 100 suppliers indicated that its

largest supplier accounted for nearly 30 percent of the total sales volume. In this case, it made more sense to use the percentage of the sales volume to answer the question.

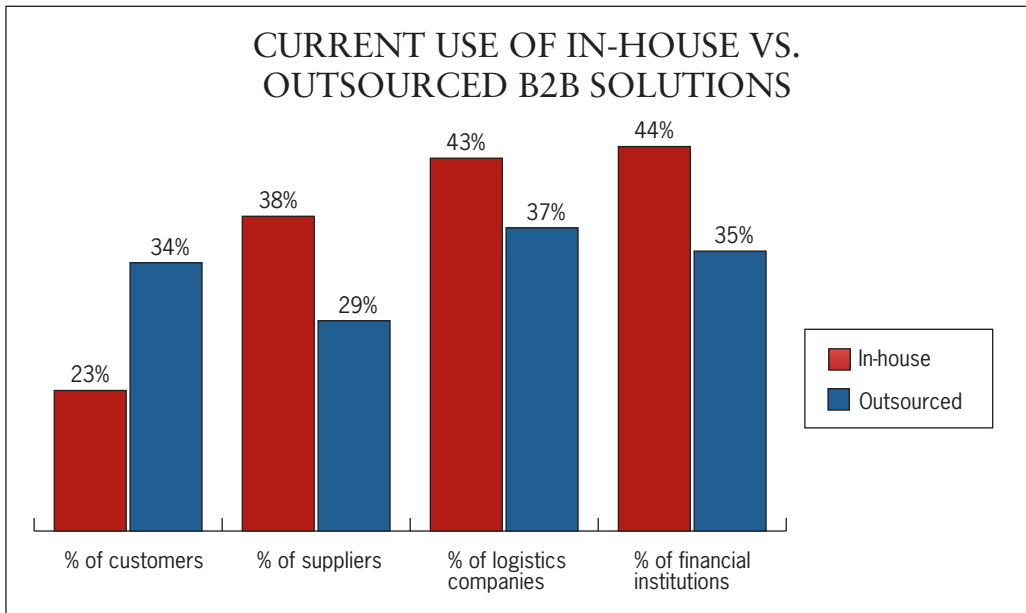


Diagram 3.4: Current Use of In-house vs. Outsourced B2B Solutions

Change in Use of B2B Solutions after Outsourcing

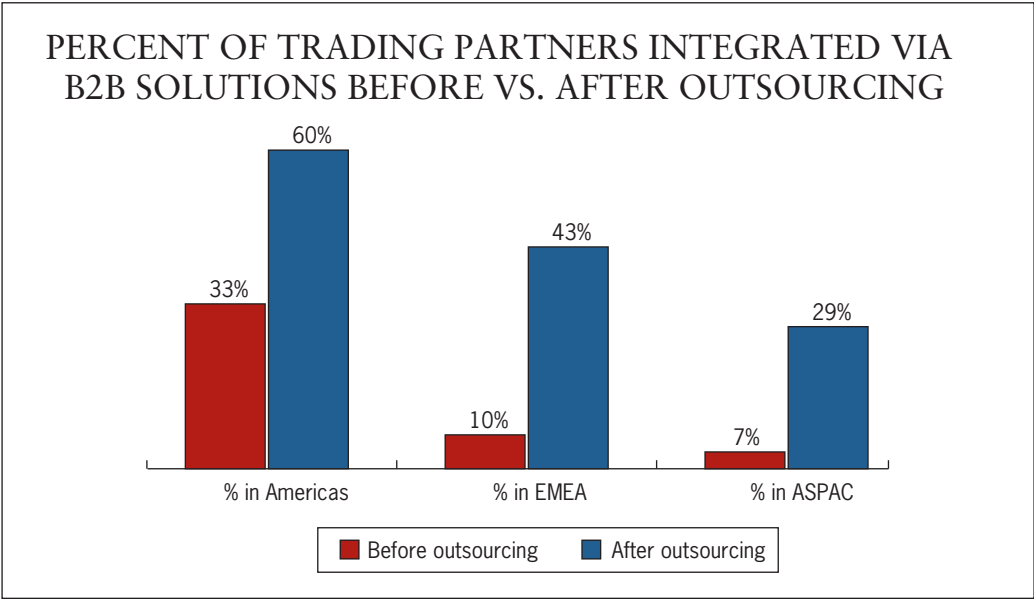
In the next set of questions, we asked companies to indicate what portion of their trading partners were integrated via B2B solutions before and after outsourcing. As illustrated in diagram 3.5, B2B outsourcing usually allowed companies to significantly expand the use of B2B solutions to additional trading partners.

For companies that did not have any in-house B2B solutions in the past, it is natural to expect a big jump in the number of trading partners that are now connected via B2B solutions. But this benefit was shared by many of the companies that were using in-house B2B solutions in the past. For some companies, this benefit came from the robustness of the outsourced solution, and the easiness to adopt it. For example, one of the participants had a proprietary, non-standard in-house solution that was not working very well and was used with only one of their suppliers. Now, with the outsourced solution in place, they plan to have dozens of additional suppliers connected within a few months.

For other companies, the increase in the number of trading partners connected via B2B solutions was mainly related to the capabilities the B2B service provider brought especially in emerging markets and in Europe. As can be observed in Diagram 3.5, B2B e-commerce solutions were less exploited in the past in Europe, the Middle East and Africa (EMEA) and in Asia-Pacific (ASPAC) regions. With B2B outsourcing, the use of B2B solutions in these regions more than quadrupled, from 10 percent to 43 percent in EMEA and from 7 percent to 29 percent in ASPAC. These results are consistent with information received during the phone interviews—a number of respondents mentioned that larger increase in the percentage of connected trading partners was observed outside of the

Americas because of long-established B2B connections in the United States and relatively stable American market growth.

Diagram 3.5: Trading Partners Integrated via B2B Solutions Before vs. After Outsourcing

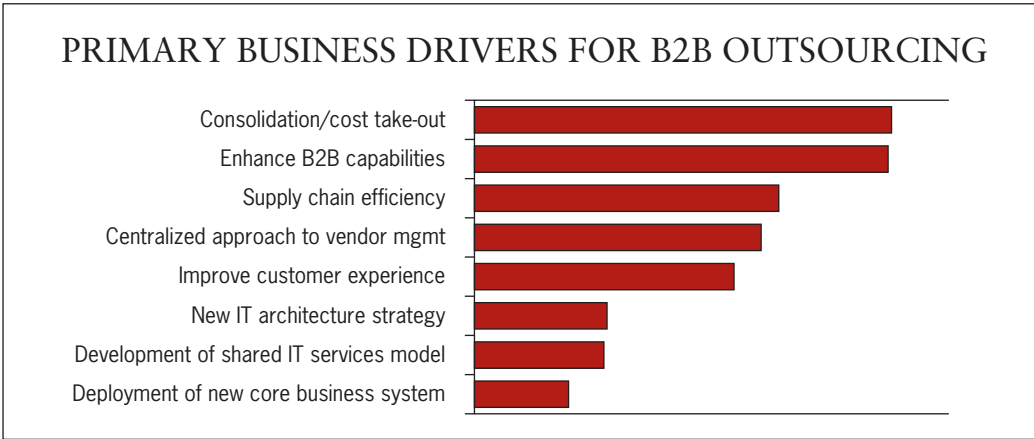


Although many companies were able to increase the number of trading partners connected via B2B solutions after outsourcing, there were several other drivers for their decision to outsource their B2B operations, as is discussed next.

Primary Business Drivers for B2B Outsourcing

To identify the major business drivers of B2B outsourcing, respondents were given a set of eight business objectives and were asked to choose and rank the ones that were important in their outsourcing decision.¹⁶ The results are summarized in Diagram 3.6.

Diagram 3.6: Primary Business Drivers for B2B Outsourcing



Participating companies identified consolidation/cost take-out as one of the two most important business objectives of outsourcing their B2B operations. Several companies explained that they could not justify the cost of managing B2B integration in-house and were convinced that outsourcing could reduce direct costs such as training and retaining IT staffs dedicated for B2B integration. This was true both for companies that already

¹⁶ Based on the response of each participant, we assigned a score of 8 to the company's most important business objective, a score of 7 to its second-most important business objective, etc. No score was given to the business objectives that were not influential in the decision process. We then calculated the aggregated score for each business driver by adding up the scores over all company responses. Diagram 3.6 is based on this aggregated score.

had in-house solutions in place and wanted to reduce the related maintenance cost, and for companies that did not have any such solutions in place, and were considering whether to make the required investment to build these capabilities in-house, or to work with an outsourced B2B service provider. In addition to direct cost savings, companies also suggested indirect cost savings through consolidation of complex B2B applications. For example, a global consumer product company emphasized that the number-one reason for its B2B outsourcing decision was to consolidate more than 20 different in-house solutions that it had previously been using. Another participant, from the high-tech industry, considered consolidation of B2B solutions as a strategic concern. It wanted to consolidate its complex B2B systems in a methodized way (i.e., through outsourcing) to better cope with a cyclical business environment.

Enhancement of B2B capabilities was the other foremost reason behind the B2B outsourcing decision for the participating companies. Some of the companies explained that their internal B2B capabilities were insufficient at the time, and they did not want to make the required investment, or did not have sufficient resources, to build the needed capabilities in-house. For example, one of the participating companies, which started operating close to 200 years ago, did not invest in building an EDI infrastructure when many other companies were making such investments. Rather, they chose to continue to rely on their old architecture. Later, when the available solutions could not provide the level of sophistication needed to handle the immense amount of data exchanged with large suppliers and global EDI capabilities became a must, nobody wanted to invest in EDI internally. Instead, they decided to work with an external service provider that already had all the needed capabilities.

Survey responses show supply chain efficiency as the third most important business driver for B2B outsourcing. This business driver was ranked high especially among companies that did not have any in-house B2B solutions in the past. Companies with a large number of trading partners faced inefficiencies in managing the high number of business transactions. When working with suppliers, companies often times had poor visibility to the status of purchase orders, faced inaccuracies in the data they received, and in general experienced a low level of collaboration and data sharing. This resulted in poor visibility to inventory status and long order processing and response time, leading overall to dissatisfactory inventory management and supply chain management. Companies felt that good B2B capabilities, which, as stated by one of the participants, can be considered as the “backbone of the supply chain,” could improve supply chain efficiency and visibility. And they felt that working with a third party service provider, that already has all the expertise and required capabilities in place, would make it easier to achieve this goal.

Centralized approach to vendor (or order) management, improvement of customer experience, new IT architecture strategy, development of shared IT services model, and deployment of new core business systems were other identified business drivers for B2B outsourcing, in decreasing order of importance.

In the previous paragraphs we discussed the improvements that companies *were looking* to achieve through B2B outsourcing. The next section summarizes the actual benefits participating companies realized through B2B outsourcing.

4. Benefits of B2B Outsourcing

This section summarizes the benefits that participating companies realized once they started using an external service provider to manage some or all of their B2B operations. The discussion is divided into four parts, three for the three identified areas of improvement—technology, business processes, and people—and a fourth for the companies’ overall satisfaction and return-on-investment related to their use of B2B outsourced services.

In each of the first three sections, the percent of the companies that reported each of the listed benefits is calculated based on the total number of companies that answered each question¹⁷.

4.1 Technology

Participating companies reported a number of technology-related improvements, which are summarized below:

IT INFRASTRUCTURE

- **B2B technical capabilities:** For 83 percent of participating companies, using outsourced B2B services allowed them to increase their technical capabilities and flexibilities, including, for example, the ability to support more document formats and communication protocols. The reported percent improvement in B2B technical capabilities was quite significant, reaching an average of 75 percent.
- **Spending on IT infrastructure:** To use any B2B systems, companies are required to make investments in hardware and software. B2B outsourcing provided companies with the following benefits:
 - **Hardware:** 38 percent of the participants reported reduction in one-time spending on purchase and setup cost, and 46 percent of the companies reported reduction in spending on ongoing maintenance costs, with an average percent improvement of 23 percent and 26 percent respectively.
 - **Software:** A third of the companies experienced a reduction in their spending on software purchasing, installation, and upgrades, with an average reduction of 12 percent in the initial costs and 17 percent in the cost of software upgrades.
 - **Network charges and spending on legacy systems:** 33 percent of the companies saw their network charges decline, and 26 percent of companies reduced their spending on legacy systems.

¹⁷ Not all 25 participants answered each question; in most cases we received 23-24 answers per question.

All companies that experienced these benefits were previously using in-house B2B solutions, as those who relied in the past on manual methods of communication had not invested in B2B-related IT infrastructure prior to outsourcing.

- **Data processing time:** 46 percent of companies were able to reduce their average data processing time, with an average improvement of 15 percent.
- **Overlapping B2B platforms:** A third of the companies reported a reduction in the number of redundant or overlapping B2B platforms. The percent improvement reported in this area was quite significant, averaging 63 percent. Naturally, only companies that used in-house B2B solutions in the past reported this benefit.

Diagram 4.1 shows the percent of Yes/No/Don't Know responses we received for each of the potential improvements related to IT infrastructure.

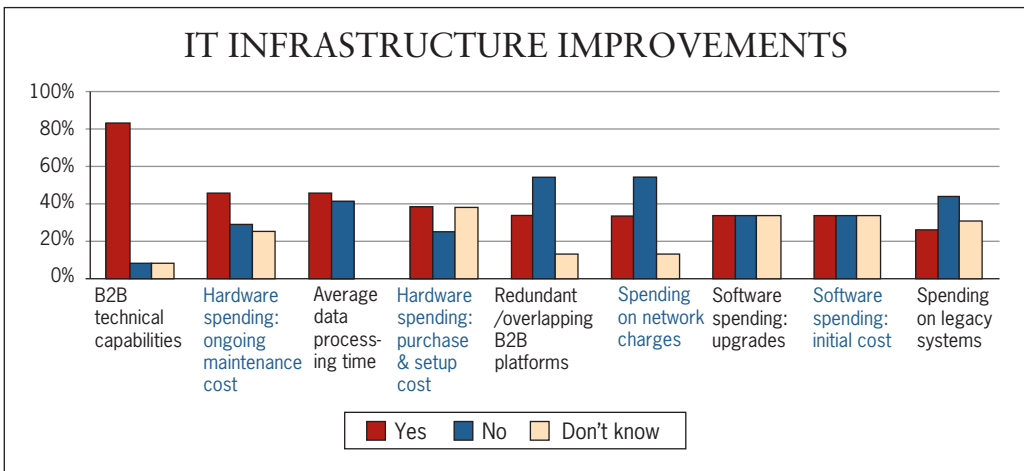


Diagram 4.1: Percent of Companies That Experienced Benefits in IT Infrastructure

Diagram 4.2 shows the average percent improvement related to IT infrastructure reported by those companies that were able to quantify the magnitude of these benefits¹⁸.

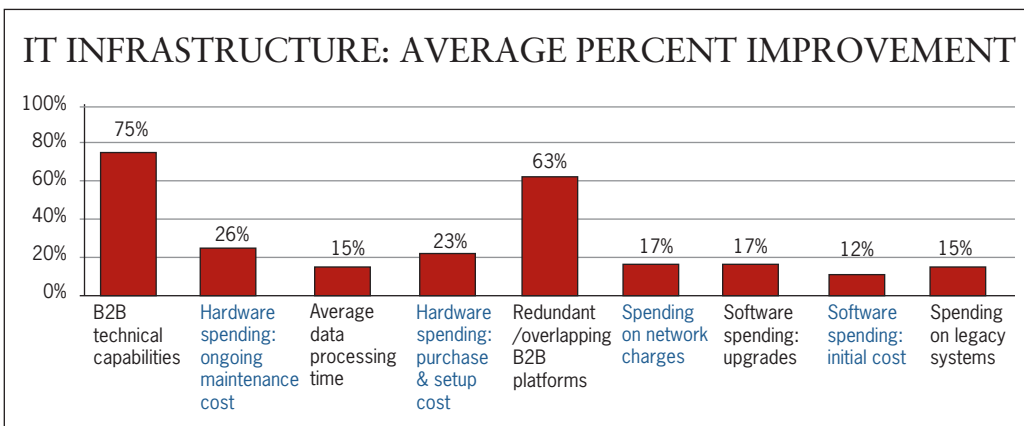


Diagram 4.2: Magnitude of Benefits Related to IT Infrastructure

The move to an outsourced B2B solution clearly improved companies' technical capabilities, as noted by many of the participants. For instance, one company, which has a diversified customer base, noted that through outsourcing it is now able to accept multiple tech-

¹⁸ Not all companies that realized the listed benefits were able to quantify their magnitude. This comment applies to the entire survey.

nologies, formats and standards to be implemented transparently so as to satisfy customers' needs without being required to develop the capabilities internally. A large number of participants noted that the move to an outsourced B2B service provider significantly simplified the process of managing B2B connections with their trading partners, and made it easier to support more trading partner connections. Several companies mentioned the benefits associated with having to manage only a single connection with a single format with the outsourced service provider, rather than multiple connections with each of their trading partners. One company noted that in the past, when their EDI connections were managed in-house, the internal IT team was more willing to support new formats with new trading partners, and so they ended up having close to 300 maps to support their supply base. Once they moved to work with an external B2B service provider, they redesigned the whole program so that they now have only 30 maps—that is, they were able to achieve a 90 percent reduction in complexity. The company noted that while the outsourced service provider allows them to support new formats as needed, they value the current low level of complexity, and therefore would prefer to keep complexity as low as possible.

When considering spending on hardware and software, several of the companies noted that while they still had to make some investments to be able to use the outsourced B2B solution, the magnitude was somewhat lower compared to the level of investment required for an in-house solution. Other companies noted a reduction in their network charges, either because now they get better rates from their outsourcing partner due to volume discount, or because the network traffic is reduced under the outsourced solution.

Participants also mentioned the improved timeliness of the information they receive. For example, one company noted that its previous B2B platform used batch processing, whereas the new (outsourced) system is virtually real-time. Some of the companies that used manual means of communication in the past experienced a reduction in the average data processing time with the elimination of manual processes and the move to direct B2B connection.

RISK MANAGEMENT

- **Cost predictability:** 71 percent of the participating companies reported an increase in the predictability of their B2B IT-related costs with the move to an outsourced B2B solution. The percent improvement was quite significant, reaching an average of 55 percent.
- **System availability:** More than half of the participating companies (58 percent) experienced an improvement in their B2B system uptime/availability, disaster recovery capability, and system redundancy, with an average percent improvement of 41 percent.

Diagram 4.3 shows the percent of Yes/No/Don't Know responses we received for each of the potential improvements in risk management, while diagram 4.4 shows the average percent improvement related to risk management reported by those companies that were able to quantify the magnitude of these benefits.

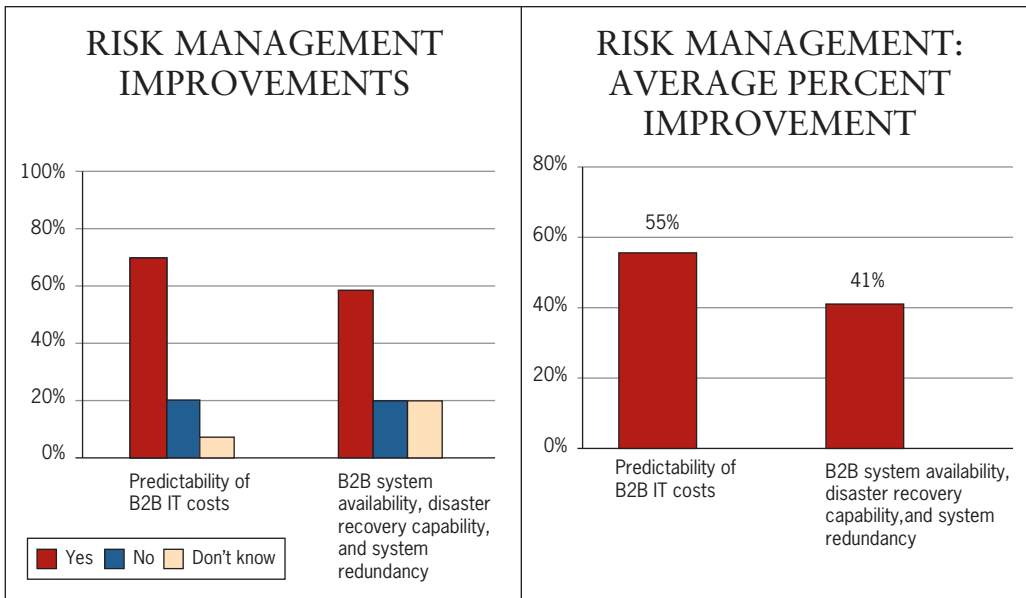


Diagram 4.3: Percent of Companies That Experienced Benefits in Risk Management

Diagram 4.4: Magnitude of Benefits Related to Risk Management

A significant number of the participating companies were able to increase the predictability of their B2B IT-related costs. For most participants, their monthly fee to the B2B service provider is based on the number of transactions. And since the cost structure is clearly set in advance with the B2B service provider and the number of transactions is relatively easy to predict, overall it became much easier to anticipate B2B-related costs. Furthermore, an outsourced solution reduces the variability in costs associated with supporting trading partners and settling technical issues. For one of the participants, their monthly payment to the B2B service provider is based on the number of trading partners connected rather than the number of transactions, and so those payments are extremely predictable.

Improvements in system availability depended on the robustness of the system companies used prior to moving to an outsourced B2B solution. While several companies saw no improvement in this area, others reported an increase in the robustness and availability of the system. One company mentioned that even though their in-house system had a backup system, still the B2B service provider, with their backup system and data recovery center, is able to provide much better system availability, with an average of 99.9 percent uptime. Other companies pointed out the higher reliability and improved data quality of the outsourced solution, noting, for example, a significant reduction in the percent of failing messages.

ROLL-OUT OF B2B E-COMMERCE

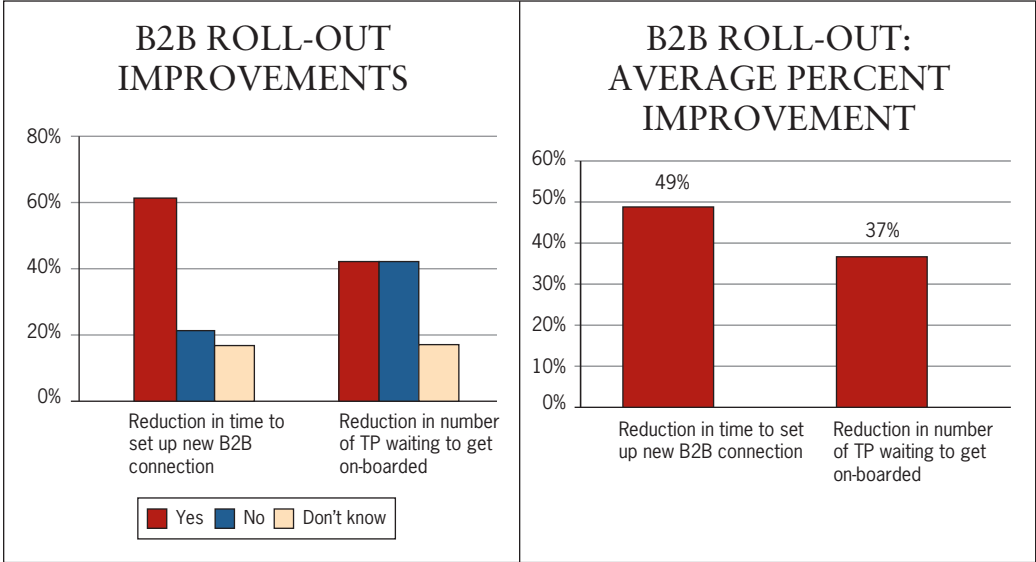
- **Time to set up a new B2B connection:** 63 percent of the companies reported a reduction in the average duration of setting up a B2B connection with a new trading partner (including document specification, mapping, and implementation and testing time), with an average percent improvement of 49 percent.
- **Trading partners waiting to get on-boarded:** 42 percent of participating companies saw a reduction in the number of trading partners waiting to get on-boarded, thus

reducing trading partner integration backlog. The average percent improvement reported in this area was 37 percent.

Diagram 4.5 shows the percent of Yes/No/Don't Know responses we received for each of the potential improvements related to rolling-out of B2B connections, while diagram 4.6 shows the average percent improvement in this area as reported by those companies that were able to quantify the magnitude of these benefits.

Diagram 4.5: Percent of Companies That Experienced Benefits in B2B Roll-Out

Diagram 4.6: Magnitude of Benefits Related to B2B Roll-Out



Benefits related to the rolling-out of B2B e-commerce were reported by companies that in the past used in-house solutions, at least with a few of their trading partners. They explained that with the new system it became much easier and faster for them to connect to new trading partners. For example, one of the participants had a proprietary, non-standard in-house B2B system that was used to connect with only one of its suppliers. The system was not working very well, which is why they decided to switch to an outsourced solution. Now, with the new system in place, they plan to extend the use of the B2B solution to many additional suppliers. Several companies saw improvements in the time to set up a new connection due to the fact that the B2B service provider became in charge of conducting at least some, if not all of such activities as testing and mapping, which previously had to be taken care of internally. Consequently, adding a new trading partner became a much easier and faster process. Another participant experienced a reduction in the time to set up a new connection due to reduction in internal delays which were a result of limited availability of human resources.

The number of companies that reported an improvement in the number of trading partners waiting to get on-boarded is smaller than the number of companies that experienced a reduction in the time to set up a new B2B connection. The main reason for this is that not all companies used to have a problem of trading partners waiting to get on-boarded.

4.2 Business Processes

For many of the participants, B2B outsourcing had a positive impact on their business processes, resulting in a number of benefits related to the efficiency of B2B operations, trading partner satisfaction, and supply chain management.

EFFICIENCY

- **Quality of B2B transactions:** Participating companies were able to realize a number of benefits related to the quality of their B2B transactions. These benefits included higher traceability and accuracy of B2B transaction, reported by 70 percent of the participants; and increase in data quality, reported by 48 percent of the participants. The magnitude of the percent increase for these two benefits was 49 percent and 31 percent respectively. In addition, 26 percent of the participants gained access to data that was previously not available or difficult to gather, with the average magnitude of improvement reaching 40 percent.
- **Support for new B2B technologies/standards:** 64 percent of the participants observed a reduction in the time it takes them to develop and introduce support for new B2B technologies and/or standards, with the percent improvement reaching an average level of 41 percent.
- **Improved operational efficiency:** 57 percent of the participants reported a reduction in the time spent on manual B2B processes (e.g. to conduct transactions by phone, fax, or email), with an average percent reduction of 48 percent. Moreover, B2B outsourcing provided 48 percent of the participants with the ability to focus on higher value business objectives, with a reported average improvement of 31 percent.
- **Extended capabilities of core systems:** For 45 percent of the participants, B2B outsourcing provided them with the ability to increase utilization and extend B2B capabilities of their core business systems (e.g. ERP and CRM systems), with an average improvement of 41 percent.
- **Payment cycle time:** 18 percent of the participants experienced a reduction in the payment cycle time (e.g. shorter time from invoice to payment), with an average improvement of 45 percent.

Diagram 4.7 shows the percent of Yes/No/Don't Know responses we received for each of the potential improvements in efficiency.

Diagram 4.8 shows the average percent improvement related to business efficiency reported by those companies that were able to quantify the magnitude of these benefits.

Diagram 4.7: Percent of Companies That Experienced Benefits in Business Efficiency

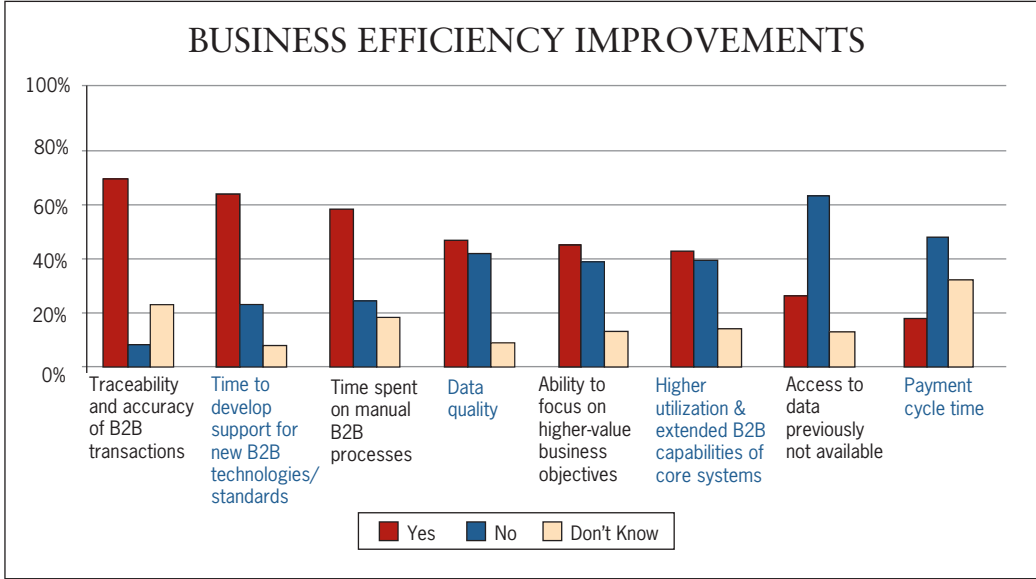
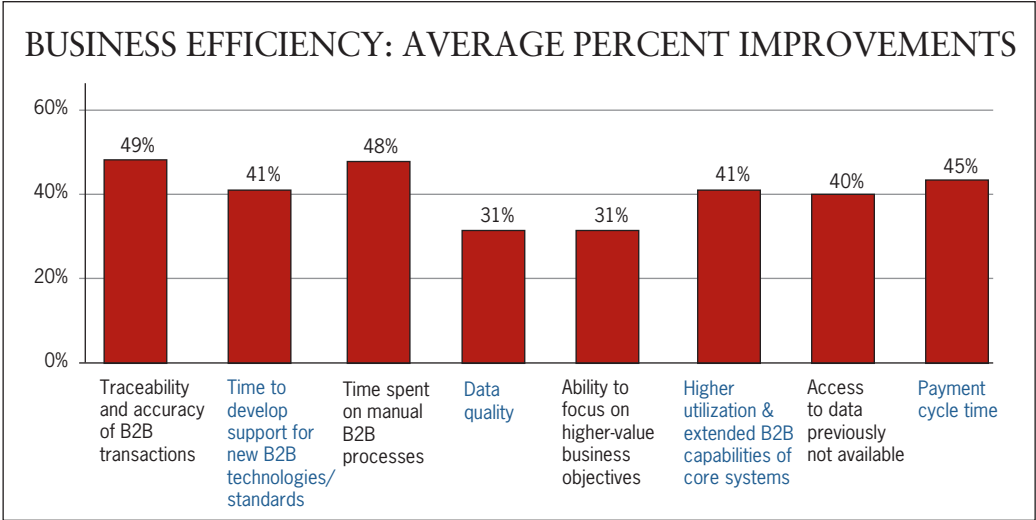


Diagram 4.8: Magnitude of Benefits Related to Business Efficiency



All companies that in the past used manual means such as phone, email, or fax to connect with their trading partners were able to increase the quality of their transactions—with the exception of one of these companies that did not experience any increase in access to data that was previously not available. This is not surprising, since any move from manual to B2B solutions, whether outsourced or not, is likely to reduce errors, improve traceability of transactions, and make it easier to access data that may have been harder to gather in the past. However as the results of the study indicate, these benefits are not limited only to companies that did not use any B2B solutions in the past; several of the participants who relied in the past on in-house solutions were also able to realize similar benefits, especially those related to improved traceability and accuracy of B2B transactions, and to a lesser degree, improvements related to data accuracy. For example, one of the participants who used an in-house B2B solution in the past explained that previously some transactions were not traceable, but that now things are better maintained since the outsourced system includes tools that help trace transactions back and forth. The same company mentioned that its B2B service provider conducts checks on the content and structure of the data, thus improving data accuracy to a certain degree. It is

important to note that the level of benefits realized is, at least in part, a function of the quality of the in-house solutions companies used in the past. For example, one of the participants explained that they did not experience any improvement in traceability since with the outsourced solution, the data retention period is shorter compared to the in-house solution.

Examples provided by some of the companies that relied in the past on manual modes of communication include the ability to receive faster feedback from suppliers regarding problems to fully deliver a purchase order on time; and the ability to receive advance shipping notices from suppliers, which help the company to better manage its inventory and reduce shortages.

When considering support for new B2B technologies and standards, companies mentioned the experience and expertise of the B2B service provider as a contributor to the reduction in time to develop and introduce such support, which for some participants was quite high, reaching up to 80 percent improvement.

All companies that used in the past manual means to exchange data in the past, and some of the other participants, were able to reduce the time spent on manual B2B processes. While close to half of the participants were able to focus on higher value business objectives, some did not realize this benefit either because their IT people left the company once it moved to an outsourced B2B solution, or because they were not able to free up their IT resources (this latter comment was made by a company that is still in early stages of implementation, so it is possible that the situation may change after the initial phase of implementation is complete).

TRADING PARTNER SATISFACTION

- **Value-added services:** 57 percent of the participants were able to increase the number of value-added services they provide to their trading partners. The average percent improvement reported is 51 percent.
- **Trading partner satisfaction:** 50 percent of participants experienced an increase in customer satisfaction, and 35 percent of all participants reported an increase in supplier satisfaction. The average magnitude of the improvement for these benefits was 62 percent and 29 percent respectively. One should note that since not all participants used the outsourced solution to connect with all their trading partners, the percentage of companies that experienced an increase in customer/supplier satisfaction was higher when considering only those participants that used the outsourced B2B solution to connect with their customers/suppliers.

Diagram 4.9 shows the percent of Yes/No/Don't Know responses we received for each of the potential improvements related to trading partner satisfaction.

Diagram 4.9: Percent of Companies That Experienced Higher Trading Partner Satisfaction

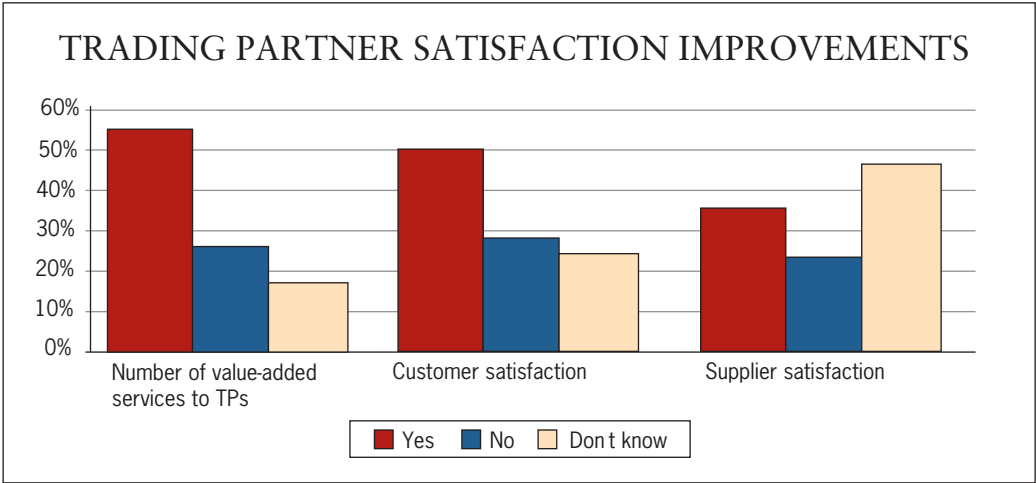
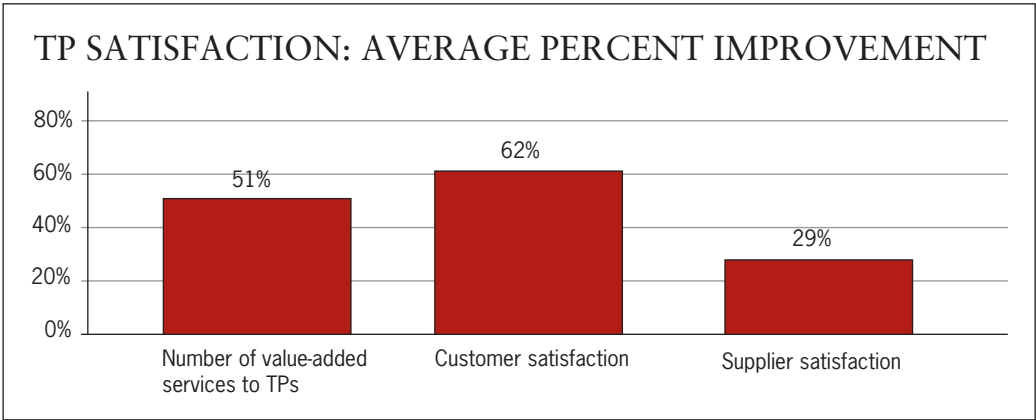


Diagram 4.10 shows the average percent improvement related to trading partner satisfaction reported by those companies that were able to quantify the magnitude of these benefits.

Diagram 4.10: Magnitude of Benefits Related to Trading Partner Satisfaction



Examples of value-added services provided by companies that use the B2B solution to connect with their customers include providing customers with more detailed information regarding the status of their orders, and a better response to customer forecasts. One of the participants, who uses the outsourced solution to connect with its suppliers, explained that while in the past suppliers who did not have an EDI connection could not use a web portal to connect with the company, now this option is available to them. With the portal, suppliers can download all their new purchase orders and better manage them. This reduces the chances for errors on pricing and order quantities, and provides suppliers with better visibility to their overall commitments. This service was of much value, especially for smaller suppliers.

Interestingly, 92 percent of the companies that were able to increase the number of value-added services they can provide to their trading partners also experienced higher trading partner satisfaction (either supplier and/or customer satisfaction). Hence, there seems to be a high correlation between the two results.

However, not all participants felt that the adoption of a B2B solution by itself was the factor that led to improved trading partner satisfaction. For one of the participants, the high-

er supplier satisfaction was the result of changes in business processes that accompanied the move to outsource the management of their B2B solutions. A couple of other companies that used in-house B2B solutions in the past, did not feel that B2B outsourcing had any impact on trading partner satisfaction. One of them even felt that B2B outsourcing may have had a negative impact on trading partner satisfaction, since the new system created extra work for them.

SUPPLY CHAIN MANAGEMENT

- **Inventory management:** 39 percent of the participants were able to increase inventory visibility, including visibility to on-hand and/or in-transit inventories, with an average percent improvement reaching a significant level of 58 percent. Twenty-six percent of the participants reduced their excess inventory, while 13 percent experienced a reduction in the frequency of shortages/stock-outs/back orders. The average improvement for these two categories was 45 percent and 30 percent, respectively.
- **Inbound/outbound shipping delays:** 30 percent of the participants were able to reduce the frequency and/or duration of shipping delays, with an average improvement of 28 percent.
- **Cancelled/returned orders:** 22 percent of the participants saw a reduction in the frequency of cancelled or returned orders, with an average decline of 15 percent.

Diagram 4.11 shows the percent of Yes/No/Don't Know responses we received for each of the potential improvements related to supply chain management.

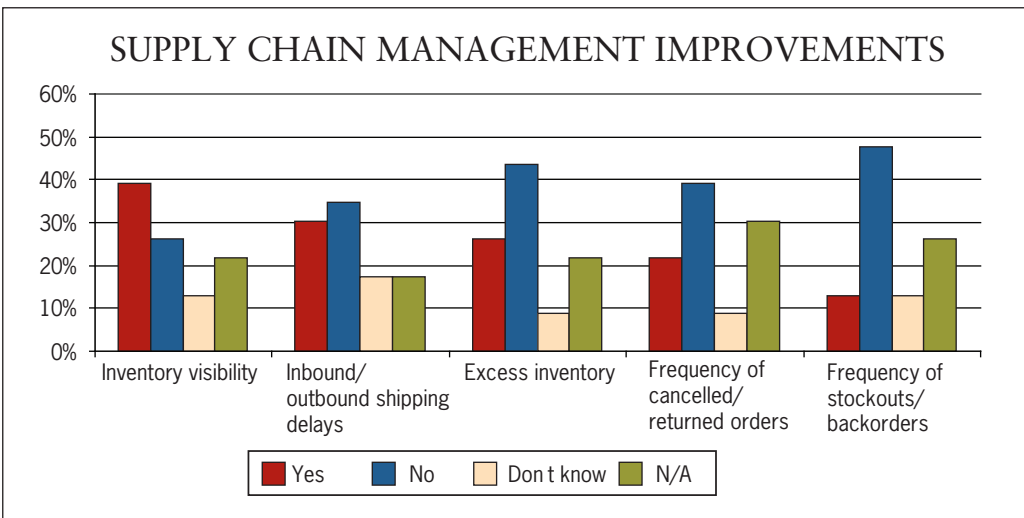
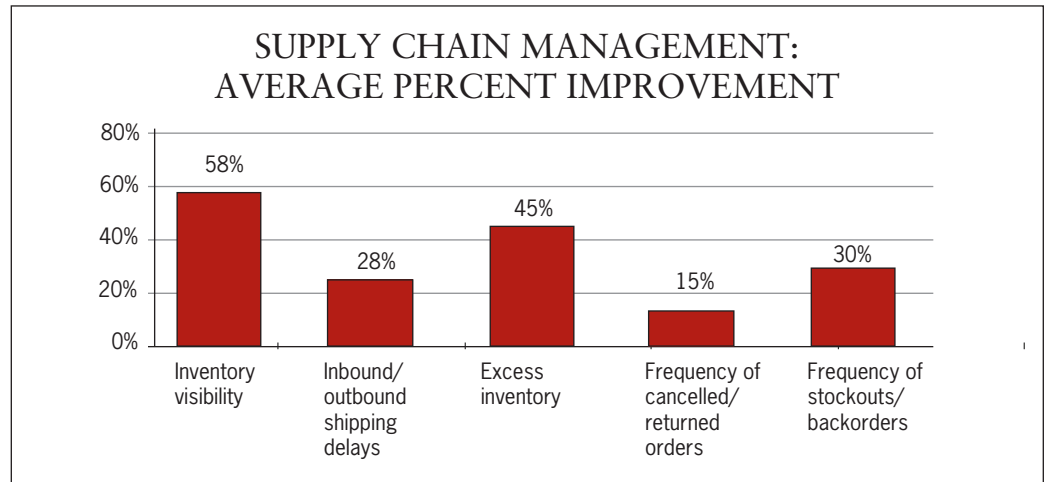


Diagram 4.11: Percent of Companies That Experienced Supply Chain Management Improvements

Diagram 4.12 shows the average percent improvement related to supply chain management reported by those companies that were able to quantify the magnitude of these benefits.

Diagram 4.12: Magnitude of Benefits Related to Supply Chain Management



Several companies mentioned the improved inventory visibility, especially for goods in-transit, as an important benefit they were able to obtain, which led to more flexible operations with their suppliers. A couple of them mentioned the Advanced Ship Notices that they now receive from their suppliers, which provide better visibility into the location of the items while in transit, as a contributor to the reduction they experienced in excess inventory, and in the need for expediting. Furthermore, with advanced notice about shipping delays, companies may now proactively respond to such delays by seeking to purchase the needed goods from alternative suppliers. This is likely to reduce instances of shortages. One of the other participants explained that since their forecasts are not very accurate, their ability to connect faster and more accurately with their suppliers helped improve inventory management and reduce the bullwhip effect, thus reducing excess inventory and the frequency of stock-outs. This change was also appreciated by their suppliers.

Other benefits related to supply chain management reported by participating companies were related to supply chain data quality, including increased accuracy of purchase orders and improved order delivery from suppliers (e.g. fewer purchase orders that are not delivered by suppliers on time).

As for shipping delays, one of the participants expects to see improvements in this area by using the outsourced solution to connect directly with its carriers. At the moment only a few of the carriers are connected through the new system while the rest still receive their orders by email or through the web. However, once a larger number of carriers are connected through the B2B solution, shipping delays are expected to be reduced.

4.3 People

The last potential area of improvement identified is related to the human resources required to maintain the B2B solutions and connections, and to provide technical support. The following benefits, many of them quite significant, were reported by participating companies:

- **IT resources:** participating companies reported reduction in Full Time Equivalents for the following technical functions: internal development of B2B solutions/connections (reported by 59 percent of the participants); trading partner support

(reported by 55 percent of the participants); and internal operations/support (reported by 50 percent of the participants). The magnitude of benefits realized was 56 percent, 50 percent, and 50 percent, respectively. Furthermore, 57 percent of the participants saw an increase in the productivity of their internal IT resources, with the average level of improvement reaching 24 percent.

- **Global B2B support:** 52 percent of the participants were able to increase the availability of B2B support around the globe (e.g. by having local language support, or regional B2B standards support), with an average percent improvement of 68 percent.
- **Internal training costs:** 32 percent of the participants saw a reduction in their internal training costs related to B2B e-commerce solutions, with an average improvement of 45 percent.

Diagram 4.13 shows the percent of Yes/No/Don't Know responses we received for each of the potential improvements related to human resources.

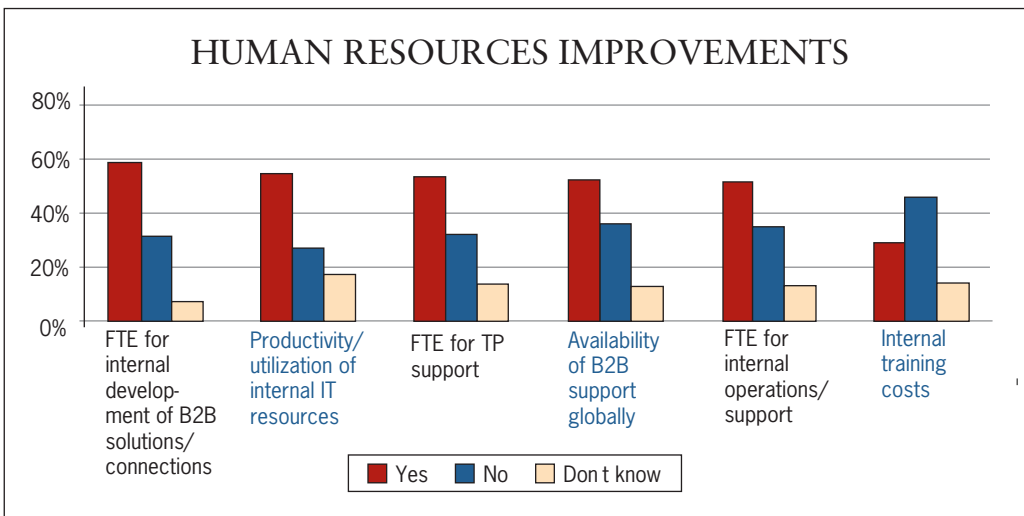


Diagram 4.13: Percent of Companies That Experienced Improvements Related to Human Resources

Diagram 4.14 shows the average percent improvement related to human resources reported by those companies that were able to quantify the magnitude of these benefits.

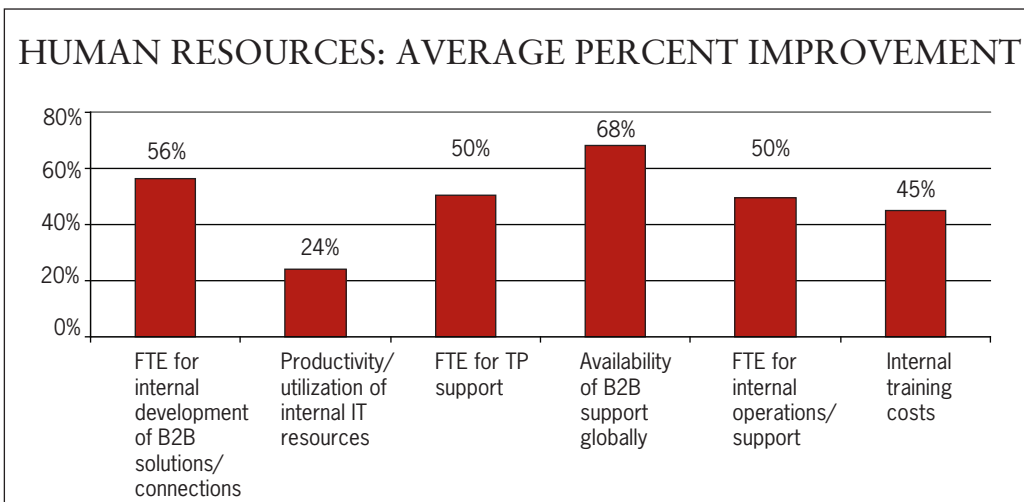


Diagram 4.14: Magnitude of Benefits Related to Human Resources

As expected, reduction in IT personnel was experienced mostly by companies that in the past used in-house B2B solutions. Those that did not have any B2B capabilities also did not have any IT resources dedicated to this area, and so clearly could not observe any reduction in headcount. Many of the companies that used in-house B2B solutions in the past, especially those that have been outsourcing the management of these solutions for a number of years already, were able to reduce the time their IT people spent on setting up and supporting these solutions. This resulted in either a reduction in headcount, or in the ability to divert IT personnel to spend more time on other value-added activities. Consequently, many of the companies also experienced an increase in the productivity of their internal IT resources. One company pointed out the high costs associated with hiring IT people with specific skills, who may only need to make use of these skills a few times throughout the year. For an external service provider, who supports a large number of customers, making such investments is easier to justify and thus more feasible. Still, it seems that it takes time for companies to realize these benefits. Companies in early stages of implementation of the outsourced solution still spend a lot of time implementing and stabilizing the new system, and so cannot afford any reduction in IT personnel for now. These companies do feel that a reduction may be possible in the future. In addition, at least one of the participants, who already started the initiative with a very small number of IT people, did not plan to further reduce the size of the IT team with the outsourced solution in place.

More than half of all participating companies were able to improve B2B support around the globe. Some of them did not have global language support in the past, and so working with a B2B service provider, who has global capabilities and so can provide global support in local language, resulted in a significant improvement in this area. But one of the participants noted that the local language support they put in place when their in-house B2B solution was first implemented was functioning properly, and so they did not experience any improvement when moving to an outsourced solution.

Several of the participants experienced a reduction in their internal training cost, due to fewer or no EDI skills that were required from their internal IT team once the management of these solutions was outsourced. For other companies, the savings were a result of having the external service provider in charge of providing training to their internal IT people.

4.4 Overall ROI

The last part of the survey focused on the overall value that companies were able to realize by outsourcing the management of their B2B solutions to an external service provider.

ANNUAL COSTS VS. BENEFITS

In the first question in this part of the survey, companies were asked to provide us with the ratio of their annual benefits and/or cost savings associated B2B outsourcing, compared to their average annual investment, including annual fees to the external service provider plus any other relevant expenses. That is, we asked companies to provide us with the value of the following ratio for their organization:

$$\frac{\text{Average annual benefits and/or cost savings associated with B2B outsourcing}}{\text{Average annual investment and/or fees associated with B2B outsourcing}}$$

This ratio provides a good representation of the ROI that participating companies were able to realize following their move to work with an external service provider to manage their B2B solutions.

We received responses from 13 of the participants, with values ranging from 1.4 to 4, and an average value of 2.45. That is, on average, the benefits/cost savings that participating companies see from B2B outsourcing is 2.45 times the value of the annual cost associated with B2B outsourcing. Even though for most participants the response was an estimate rather than a measured value, this is still a clear indication of the value of B2B outsourcing.

Diagram 4.15 includes a histogram, which shows the distribution of all responses regarding the ratio of annual benefits compared to annual costs associated with B2B outsourcing.

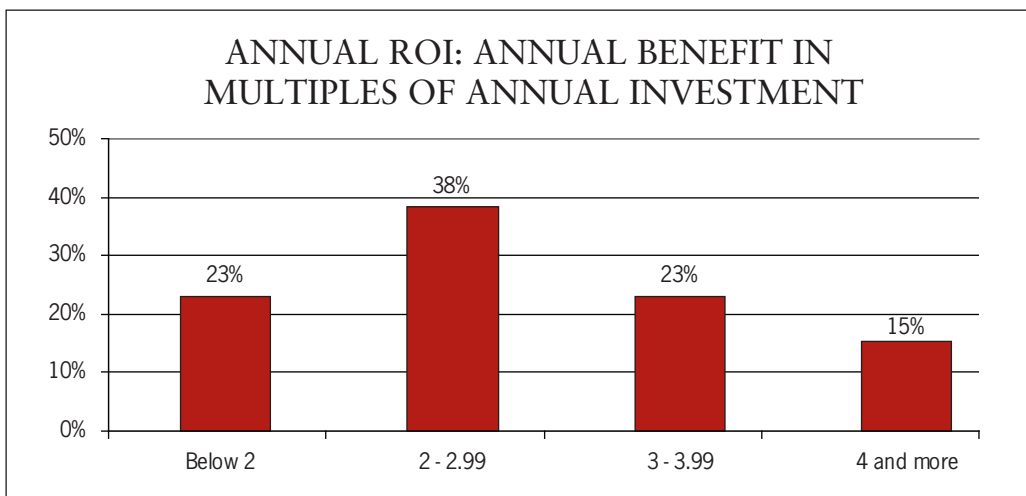


Diagram 4.15: Annual Benefits vs. Annual Investment in B2B Outsourcing

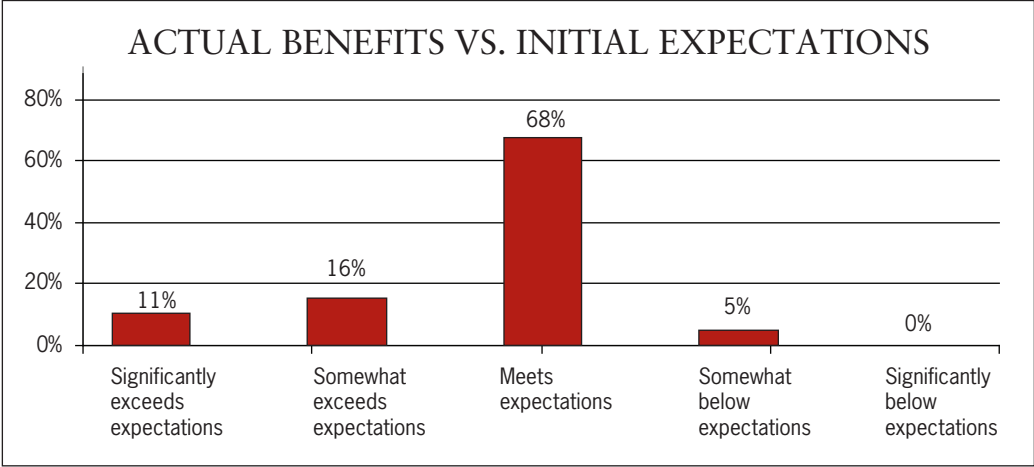
It is important to note that at least for some of the companies, the major driver for B2B outsourcing was not to achieve cost reduction. Rather, and as demonstrated in the results provided in Section 3 of this report, some companies may be more interested in such goals as enhancing their B2B capabilities, and in being able to better serve their customers. For such companies, the expected ROI may not be the best factor to consider when deciding whether to make such a move or not.

ACTUAL BENEFITS VS. INITIAL EXPECTATIONS

In the second question in this section we asked companies to rate the actual benefits their company was able to realize by switching to an outsourced B2B solution, compared to their initial expectations. The results obtained are summarized in Diagram 4.16. The diagram clearly demonstrates that most of the participating companies were satisfied with the level of benefits they were able to realize, as the benefits either met or exceeded their expectations. Only one out of the 19 companies that answered this question described the

level of benefits realized as somewhat below expectations. For all others, the benefits either met or exceeded their expectations.

Diagram 4.16: Actual Benefits of B2B Outsourcing vs. Initial Expectations



Most companies decided to start working with an external B2B managed service provider to reduce costs, enhance B2B capabilities, and/or improve operational efficiency. Based on feedback from participating companies, it seems that overall most of them were able to realize those benefits. Furthermore, companies were also able to realize some additional intangible benefits. For example, one of the participating companies recently merged with another company, located in a different continent. Having all parts of the new organization use the same B2B solution strengthens the feeling of everyone belonging to the same company.

Still, at least some of the participants would like to see some improvements in the capabilities and services offered by the external service provider. For example, one of the participants pointed out that while good infrastructure exists for traditional EDI outsourcing, the B2B service provider they are working with is slow to adapt to the RosettaNet standard, and cannot provide this service at a low cost and short lead time. Another company would like to see the B2B service provider leading companies to use new B2B technologies. One of the participants felt that some capabilities provided by their B2B vendor, such as supply chain visibility, still needed improvement.

SUPERIOR CAPABILITIES B2B THROUGH OUTSOURCING

In the last question in this section, we asked the participants to let us know whether they agree with the following statement: “Using an outsourced approach for B2B has offered me superior capabilities that differentiated my business from competitors in the marketplace.” As can be seen from Diagram 4.17, we received a wide range of responses.

Based on the phone interviews, it seems that the companies that strongly agreed or agreed with the statement focused mainly on the increased capabilities that the external B2B vendor provided them with. By working with an external B2B service provider, companies gained access to new communications technologies, and were able to increase their

capabilities, productivity, and efficiency, and to offer better services to their customers. The B2B vendor provides a universal gateway to all trading partners, and allows all partners to communicate using a variety of standards without worrying about dealing with multiple standards.

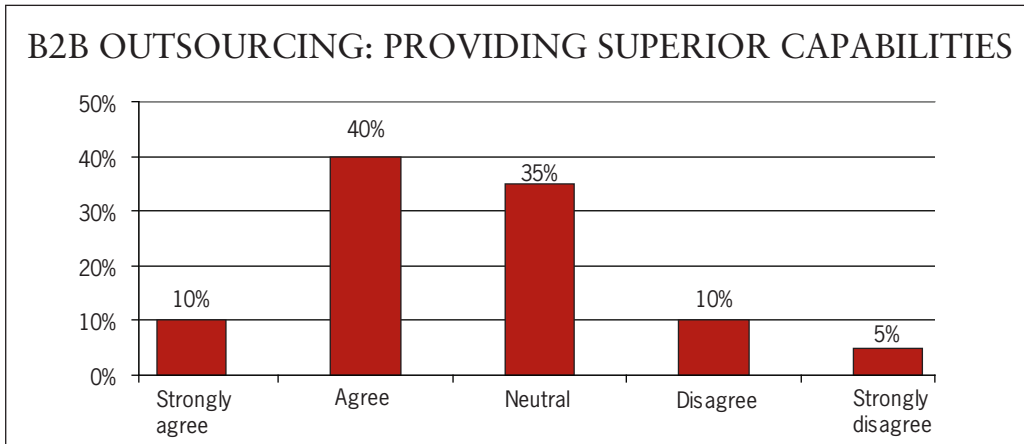


Diagram 4.17: B2B Outsourcing Offers Superior Capabilities That Differentiate the Business

Had they not worked with a B2B service provider, these companies would have been required to invest heavily internally to build these capabilities. Given that B2B solutions is not one of their core competencies, they do not have the required focus and resources to build these B2B capabilities, and so they are happy to work with an external service provider, that can provide the capabilities and expertise as the need arises. In addition, B2B outsourcing frees up their resources to concentrate on the company’s core competencies, which in return may improve their position in the marketplace.

Furthermore, at least one of the participants mentioned that they hope that the improved capabilities achieved through B2B outsourcing, such as better supply chain visibility, will eventually provide them with a competitive advantage.

On the other hand, it seems that companies that were neutral or disagreed with the statement in the question, focused mainly on its second part—that the superior B2B capabilities helped them to differentiate their business from competitors in the marketplace. Since B2B outsourcing is growing in popularity and has a significant presence in certain industries, companies felt that adopting this practice by itself was not a differentiating factor.

In summary, we can conclude that B2B outsourcing is likely to enhance companies’ communication capabilities. However, given that many companies are choosing to work with an external B2B vendor, then this strategy by itself will most likely not be a differentiator in the marketplace. Improved position in the marketplace can be achieved indirectly, if companies use wisely the additional and higher-quality data they now have access to, and if they use the internal resources that were freed up through B2B outsourcing to focus on their core competencies and offer better products and services to their customers.

5. Summary and Conclusions

The goal of this study was to quantitatively assess the benefits attributed to B2B outsourcing, with a focus on benefits related to technology, business processes, and human resources, as well as the overall ROI and business value of B2B outsourcing.

The study was based on information received from 25 companies. All of them are currently outsourcing at least a portion of their B2B operations to an external service provider. The participating companies varied in terms of the industry they come from, their level of annual revenues, the number of years they have been outsourcing their B2B operations, the type of solutions they have been using prior to outsourcing, and their main business drivers for outsourcing.

Even though the information collected in the study cannot be considered as any type of industry average due to the relatively small number of participants, the inputs provided by the participating companies clearly demonstrate that B2B outsourcing can be of much value, regardless of the particular company characteristics. The majority of the participants saw improvements in a wide range of areas, with the level of improvement reaching significant levels at times. The benefits realized can be divided into two major categories. The first one includes those benefits directly related to the switch from manual means of communication or in-house solutions to an outsourced solution. This category includes such benefits as enhanced B2B capabilities, lower spending on IT infrastructure and personnel, reduction in time spent on manual activities, and lower exposure to the risk associated with relying on B2B solutions. The second category includes more indirect benefits, such as improved operational efficiency, better inventory management capabilities, stronger relationship with trading partners, higher trading partner satisfaction, and improved position in the marketplace.

It is important to note that the ability to realize the more indirect benefits depend on how well a company makes use of the resources that were freed up and the additional information it gained access to with the move to work with an external B2B service provider.

Overall, B2B outsourcing was a positive experience for the vast majority of the participating companies. For all but one of the participants the benefits they realized met or exceeded their expectations. Furthermore, for all the participants the annual cost savings they realized associated with B2B outsourcing was higher than the required annual investment, with the average level of annual benefits being 2.45 times higher than the annual costs. Moreover, in addition to the tangible benefits, many of which were captured in the survey and summarized in this report, companies were also able to realize some intangible benefits.

While most participants could predict ahead of time the value in B2B outsourcing, the transition to work with an external B2B service provider was not always an easy one to make—as was pointed out during some of the phone interviews. For example, one of the respondents pointed out the challenges he was facing to convince top management to

make the investment in outsourced B2B solutions, because of insufficient awareness to the B2B-related challenges the company was facing. Another participant pointed out a major challenge it faced after outsourcing; namely, its customers' weak dedication toward building advanced B2B connections. These and other potential obstacles should be taken into consideration by companies when planning their B2B strategies.

As noted by one of the participants, B2B outsourcing is an infrastructure type of a project similar to building roads. When B2B outsourcing does not exist, people find other ways to communicate; but once the infrastructure is there, more and more people start using it, and with time they learn how to make the most of it. Our hope is that companies that are considering B2B outsourcing will find this report valuable for highlighting the potential benefits of such a move, and for making it easier to develop a business case to justify the required investment.

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About the Stanford Global Supply Chain Management Forum

The Stanford Global Supply Chain Management Forum is a leading research institute in partnership with industry and the School of Engineering and Graduate School of Business at Stanford University that advances the theory and practice of excellence in global supply chain management. Working with approximately 30 industrial organizations, the Forum is actively engaged with a broad cross-section of leading and emerging industries to identify, document, research, develop, and disseminate best practices in a dynamic and increasingly global economic business environment. For more information, please contact Dr. Lesley Sept, Associate Director, Global Supply Chain Management Forum, Stanford University, Graduate School of Business, Stanford, CA 94305-5015, phone: +1.650.723.4289, email: sept_lesley@gsb.stanford.edu.

About GXS

GXS is a leading global provider of B2B e-commerce solutions that simplify and enhance business process integration, synchronization and collaboration among trading partners. Organizations worldwide, including 75 percent of the Fortune 500, leverage the GXS Trading Grid® to extend supply networks, optimize product launches, automate warehouse receiving, manage electronic payments and gain supply chain visibility. With an unmatched global presence, proven trading partner management and B2B outsourcing services, GXS's on-demand solutions maximize the benefits of integration for businesses.

Based in Gaithersburg, MD, GXS's extensive global network serves customers throughout the Americas, Europe, the Middle East and Africa and Asia Pacific regions. GXS can be found on the Web at www.gxs.com.

Appendix 1: Questionnaire

STANFORD UNIVERSITY
GLOBAL SUPPLY CHAIN MANAGEMENT FORUM
B2B Managed Services Questionnaire

RESPONDENT INFORMATION

Company Name:	
BU/Division (if your response is for a single BU/Division within your company):	
Respondent Name:	
Contact Information:	Email: Phone:

I. Company Background Information

Please answer as many questions as you can (you may also wish to forward the questions to other departments/groups in your company to obtain the information).

If the survey is completed based on the experience of a single division or business unit within your company, please provide us in this section the information relevant only to this BU/division.

1. What is your company's primary industry?					
<input type="checkbox"/> Consumer Products	<input type="checkbox"/> Retail	<input type="checkbox"/> General Manufacturing	<input type="checkbox"/> High Tech	<input type="checkbox"/> Automotive	
<input type="checkbox"/> Financial Services	<input type="checkbox"/> Energy	<input type="checkbox"/> Healthcare	<input type="checkbox"/> Logistics	<input type="checkbox"/> Other: _____	
2. What is your company's annual revenue?					
<input type="checkbox"/> < \$ 100 M	<input type="checkbox"/> \$ 100 – 500 M	<input type="checkbox"/> \$ 500M – 1B	<input type="checkbox"/> \$ 1B – 5B	<input type="checkbox"/> \$ 5B – 10B	<input type="checkbox"/> + \$ 10B
3. For how many years has your company been outsourcing some or all of its B2B operations*?					
<input type="checkbox"/> < 1 year	<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 2-5 years	<input type="checkbox"/> + 5years		
3b. Prior to B2B outsourcing, what means did you use to connect with your business partners?					
<input type="checkbox"/> In-house B2B solutions	<input type="checkbox"/> Manual means of communication (e.g. phone, fax, or email)			<input type="checkbox"/> Other	
4. What percentage of your trading partners is currently connected through in-house B2B solutions?					
<input type="checkbox"/> % of customers	<input type="checkbox"/> % of suppliers	<input type="checkbox"/> % of logistics companies	<input type="checkbox"/> % of financial institutions		
5. What percentage of your trading partners is currently connected through outsourced B2B solutions?					
<input type="checkbox"/> % of customers	<input type="checkbox"/> % of suppliers	<input type="checkbox"/> % of logistics companies	<input type="checkbox"/> % of financial institutions		
6. Prior to outsourcing , what portion of the total number of trading partners in each region was integrated via B2B e-commerce solutions? Please indicate the percent of all trading partners in each region, and the percent of them that were using B2B e-commerce solutions.					
<input type="checkbox"/> % Americas; <input type="checkbox"/> % B2B		<input type="checkbox"/> % EMEA; <input type="checkbox"/> % B2B		<input type="checkbox"/> % ASPAC; <input type="checkbox"/> % B2B	
7. After outsourcing , how much increase did you observe in the total number of trading partners integrated via B2B e-commerce solutions, both by region and function? (e.g., if the percent of trading partners integrated via B2B solutions has increased from 30 percent to 35 percent, enter "5 percent.")					
Americas; by <input type="checkbox"/> %		EMEA; by <input type="checkbox"/> %		ASPAC; by <input type="checkbox"/> %	
<input type="checkbox"/> Customers, by <input type="checkbox"/> %	<input type="checkbox"/> Suppliers, by <input type="checkbox"/> %	<input type="checkbox"/> Logistics partners, by <input type="checkbox"/> %	<input type="checkbox"/> Financial Institutions, by <input type="checkbox"/> %		
8. What was the primary business driver behind your company's B2B outsourcing decision? (Please choose all that apply and rank in order of importance.)					
<input type="checkbox"/> Consolidation/ Cost take-out	<input type="checkbox"/> Enhance B2B capabilities	<input type="checkbox"/> Improve customer experience	<input type="checkbox"/> Supply chain efficiency		
<input type="checkbox"/> Centralized approach to vendor management	<input type="checkbox"/> Development of shared IT services model	<input type="checkbox"/> New IT architecture strategy (e.g. shift away from mainframe)	<input type="checkbox"/> Deployment of new core business system (e.g. ERP, CRM)		

*Defined by Gartner as "multi-enterprise/business-to-business (B2B) infrastructure" used to exchange data and link business processes between a company's internal applications and systems and those of its external business partners – i.e., customers, suppliers, logistics providers, financial institutions, etc. B2B outsourcing is the combination of outsourcing your technical B2B infrastructure and the people and processes necessary to manage your B2B infrastructure and trading partner connections.

II. Benefits

Answer the questions by checking "Yes," "No," or "Don't Know." If you answer "Yes" to a question, please indicate by how much (estimated percentage, e.g., 10 percent reduction or 5 percent faster). We are interested in any improvements that you have been able to quantify. We realize that this information can be sensitive, and therefore we only ask for an estimated percent rather than absolute numbers.

A. Technology

Have your B2B outsourcing initiatives added value to the following areas of your business?

A.1 IT Infrastructure

1. Reduction in average annual spending on each of the following categories:			
o Hardware			
▪ One-time purchase cost plus setup cost	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
▪ On-going maintenance cost	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
o Software			
▪ Initial Software(e.g., databases and applications)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
▪ Upgrades (e.g., patches, version upgrades)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
o Legacy systems (retiring outdated or underperforming hardware and software)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
o Network charges (VAN costs)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
2. Increase in B2B technical capabilities and flexibilities (e.g., the ability to support more document formats, more communication protocols, more trading partner connections, etc.)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
3. Reduction in redundant or overlapping B2B platforms	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
4. Reduction in average data processing time	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know

A.2 Risk Management

1. Increase in predictability of B2B IT costs (e.g., predictable monthly payment to external B2B outsourcing service provider)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
2. Increase in B2B system uptime/availability, disaster recovery capability, and system redundancy	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know

A.3 Roll-out of B2B E-commerce

1. Reduction in average duration of setting up a B2B connection with a new trading partner (including document specification, mapping, and implementation and testing time)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
2. Reduction in number of trading partners waiting to get on-boarded (e.g., reducing trading partner integration backlog)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know

B. Business Processes

Have your B2B outsourcing initiatives added value to the following areas of your business?

B.1 Efficiency

1. Increase in data quality (e.g., fewer errors in data entered to the system; fewer discrepancies on purchase orders, invoices, shipping documents, etc)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
2. Increase in traceability and accuracy of B2B transactions for audit and/or compliance purposes	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
3. Increase in access to data that was previously not available or difficult to gather (e.g., supplier performance metrics, such as on-time deliveries, invoice accuracy, payment accuracy, etc.)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
4. Increase in ability to focus on higher-value business objectives (e.g., redeploying personnel previously assigned to B2B projects)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
5. Increase in utilization and extending B2B capabilities of core business system (e.g., ERP and CRM)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
6. Reduction in time spent on manual B2B processes (e.g., transactions conducted via phone, fax, or email)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
7. Reduction in payment cycle time (e.g., shorter time from invoice to payment)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
8. Reduction in time it takes to develop and introduce support for new B2B technologies and/or standards	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know

B.2 Trading Partner Satisfaction

1. Increase in number of value-added services you can provide your trading partners (e.g., systematic collaboration during new product introduction, sharing forecasting/planning information, etc.)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
2. Increase in customer satisfaction (e.g., supporting new file formats or transaction protocols, increasing speed of B2B problem resolution, higher system uptime/availability, etc.)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
3. Increase in supplier satisfaction (e.g., supporting new file formats or transaction protocols, increasing speed of B2B problem resolution, higher system uptime/availability, etc.)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know

B.3 Supply Chain Management

1. Increase in inventory visibility (including on-hand and in-transit inventories)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> N/A
2. Reduction in excess inventory	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> N/A
3. Reduction in frequency of shortages/stock-outs/backorders	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> N/A
4. Reduction in frequency of cancelled or returned orders	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> N/A
5. Reduction in inbound/outbound shipping delays	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> N/A

C. People

Have your B2B outsourcing initiatives added value to the following areas of your business?

1. Reduction in Full Time Equivalents in the following technical functions			
o Internal development of B2B solutions/connections	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
o Internal operations/support	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
o Trading partner support (e.g., help desk, map changes, protocol changes, document reprocessing, etc.)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
2. Reduction in internal training cost related to your B2B e-commerce solutions	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
3. Increase in productivity/utilization of internal IT resources	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
4. Increase in availability of B2B support around the globe (e.g., local language support, B2B expertise, regional B2B standards support, etc.)	<input type="checkbox"/> Yes, by _____%	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know

III. Return on Investment

1. If X is your company's (or BU/division's) average annual investment (or fees) associated with B2B managed services provided to your company, what, in multiples of X, is the average annual benefits/cost savings your company has realized, that are associated with B2B outsourcing? _____ Is this amount <input type="checkbox"/> an estimate or <input type="checkbox"/> a measured value?
2. Overall, how would you rate the benefits your company was able to realize by switching to outsourced B2B solutions compared to your initial expectations? <input type="checkbox"/> Significantly exceeds expectations <input type="checkbox"/> Somewhat exceeds expectations <input type="checkbox"/> Meets expectations <input type="checkbox"/> Somewhat below expectations <input type="checkbox"/> Significantly below expectations
3. How accurately do you think the following statement describes your experience with B2B outsourcing: "Using an outsourced approach for B2B has offered me superior capabilities that differentiated my business from competitors in the marketplace"? <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Neutral <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

