



Ten Questions to Ask Your Prospective EDI Outsource Vendor

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INTRODUCTION

Companies that buy and sell goods rightly concentrate on those activities that further their business objectives by increasing or maintaining its competitive advantage by improving its product line, pricing leverage, service delivery, go to market strategy or other activities that result in improved revenues and profits.

In the course of doing business, companies must also perform activities that are necessary to further the business' overall objectives, but not necessarily viewed as a core competency. These activities are numerous, spanning regulations and compliance requirements to functions such as payroll processing, tax preparation, and even tasks such as office cleaning and facilities maintenance. These secondary functions are outside the enterprise's core competencies, but may still be critically important to the company's success, or even to its day-to-day business.

Electronic Data Interchange (EDI) is another example of a function that is critical to the functioning of many businesses, but is often outside its core competencies. EDI allows organizations to electronically exchange critical business documents such as purchase orders, inventory status, shipping and packing information, sales forecasting data and invoices with its trading partners. This communication improves the visibility of items moving through a supply chain. Without this technology many businesses would not survive. This is particularly true if your company's customers require the use of EDI as the only method of exchanging supply chain data.

During the 70's, 80's and 90's, companies needing to implement EDI systems had few options other than to install and manage their own systems in-house using an EDI software package. EDI is a complex technology that requires expertise and attention to detail, during the initial setup and routine day-to-day processing. An EDI system is almost never stagnant. Changes are frequently introduced as a result of new trading partners, or when existing trading partners change or expand their EDI specifications. To effectively manage and maintain an EDI system, corporations require computer hardware, specialized EDI software, communications facilities, programming and customization of various software components, and daily application management of systems.

As the number of trading partners requiring EDI for exchanging supply chain data grows and the complexity of EDI implementations accelerate, companies are increasingly turning to outsourcing. The common driver behind the migration is to offload the activities of managing their EDI application to a third party. The trigger event can take on many forms including:

- Falling behind with the increasingly complex mapping requirements of Advanced Ship Notices (ASNs) and UCC-128 Labels,
- The complexity of fulfilling across an increasing number of complex shipping and packing models,
- Challenges of sourcing and transporting products directly from Asia,
- Losing a key EDI technical resource,
- Continued challenges of maintaining service levels for an application that must run 24X7, or
- The frustration of having to dedicate key technical resources to a business function that is viewed as important, but not a core competency.

In the end, companies want to run their business, not an EDI department.

For those organizations looking to outsource their EDI operations, the vendor selection process can become confusing and lengthy. They are faced with a wide range of EDI outsourcing providers, each of which purport to provide products and services equal to or better than their competitors. Their outsourced solutions can be very different — from low-priced staff from developing countries, to multi-tenant Software as a Service (SaaS) providers, to a mixture of outsourcing staffing and systems hosting. This document provides a road map for companies facing the prospect of selecting an EDI outsourcing provider that can and will meet their total needs.

The 10 Questions

Each of the following questions is designed to probe the outsourced EDI service provider regarding a specific aspect of its offering and elicit a thoughtful response that speaks not to the vendor's capabilities, but to the client company's needs and concerns. Companies that employ these *10 Questions* as a standard set of criteria in their vendor selection process have an advantage in that they are able to develop their own independent evaluation of each provider's offering and compare them based on their organization's needs and goals.

Question #1:

Is the EDI service capable of performing the requirements with all of my trading?

The first step in any decision making process is to “weed out” vendors that clearly can not fulfill the basic business need. For EDI outsourcing, it means that their service can create; map; render labels, price tags, tickets; test; manage; monitor and update all EDI transactions required to do business with your trading partners within the time parameters set by you or your trading partner(s).

By providing a list of your required transactions by trading partner, EDI outsourcers must prove their service’s feature and/or functional capabilities can manage your EDI operations with their existing service. Beware, it may surprise you how many vendors are not readily able to manage your core EDI needs.

Nearly every provider can support purchase orders, simple ASNs and invoices. Beyond that, however, common vacancies within outsourced offerings exist that you will need to unveil. The following questions will help you understand the outsourcer’s ability (or lack of) to offer capabilities beyond the basics:

- Are complex ASNs supported? For example, when there are multiple “ship to” locations, or boxes must be packed by store to support retailer drop shipping.
- Are UCC-128 labels supported? Many solutions require you to purchase an additional label software package.
- Are “drop ship” labels and documents supported? Does the offering include information about where the consumer’s shipping address labels, packing slips, return documents, and gift cards, must be produced with the retailer’s logo?

- Are price tickets and hang tags supported, especially when goods must be shipped “pre-labeled” per your retail customer’s requirements?
- Is controlled, secure, collaborative use by your business partners supported? Many companies outsource activities like inventory management, distribution, and logistics to third parties that need to process EDI transactions on behalf of the supplier.
- Are *periphery* EDI transactions — used by a small, but growing number of retailers — supported? Such documents include purchase order changes, product activity reports, inventory inquiry and reports, order inquiry and reports, transportation documents (*200 series of transactions*), distribution documents (*900 series of transactions*), and logistics documents (*700 series of transactions*).

Although most documents are still transacted using traditional EDI formats, occasionally a customer may require their data to be formatted in alternative structures such as XML and flat files. Be sure to validate that the outsourcer can support such formats if needed by your business.

Lastly, depending on your retail customers, you may need to transport the transactions across a number of different network types. Some require data sent via a VAN, others require data to be sent via the Internet using a protocol called AS2, while others may prefer a feed via FTP. Make sure your service provider can support each method that your community of trading partners requires.





Question #2:

What infrastructure is included by the outsourcer's solution?

Outsourcing can take many forms. It can be as simple as changing out an employee for a contracted position, or it can be complete changeover which replaces an entire function with remotely located infrastructure. It is critical to develop a clear understanding of what components are being addressed by the outsourcing proposal. The best way to answer this question is to ask which components are covered by the outsourcer and which ones remain your responsibility.

The good news is that the list of components is defined and a few focused questions can help you assess each outsourcer's offering.

- **System Hardware and Software.** Is the server (whether it is a PC, NT Server, Unix, AS/400) included? By their nature, EDI applications require strong system software in two areas:
 - **Security.** The application is in use with other company's systems outside the firewall.
 - **Backup and Recovery.** The application must be operational 24x7 since orders can arrive at anytime.
- **Application Software.** Is the license for the EDI translator included?
- **Mapping & Labeling Development Tools.** Is the license for developing EDI transaction maps, labels, tickets and tags included?
- **Application Management Tools.** Does the license for the administration tools include the monitoring of data processing and flow as well as application maintenance?

			
<p>Connectivity Software/Networking for transporting data between you and trading partners.</p>	<p>Mapping Software for reconciling data between you and your trading partners</p>	<p>Translator/Inf. Software & hardware for converting data into and out of EDI.</p>	<p>App. Integration Software for exchanging data into and out of your accounting system.</p>
<p>VAN Mailbox & VAN AS2 Software FTP/Other software</p>	<p>Mapping Kits</p>	<p>Hardware System Software • Security • Backup & Recovery Application Software • Translator • Mapping Tool Testing Tools Data Monitoring Tools Reporting Tools</p>	<p>Integration Tool</p>

- **Network.** Are the mailbox and an agreement with commercial VANs included? Is the license to the AS2 software included?
- **Application Integration.** If applicable, is the license for the tool being used to integrate the EDI application with your accounting and shipping systems included?

Question #3:
What implementation tasks are included in the outsourcer's solution ?

The EDI infrastructure only identifies the necessary prerequisites to get started. Once all the components and services have been contracted, it is still necessary to implement the system. Like most business applications, EDI does not work “out of the box.” Each company’s EDI application needs to be implemented in a unique manner to meet the needs of a specific business. In many cases these are the time consuming tasks that require the skills of experienced people.

Again, you need to understand which of these tasks will be part of the outsourcer's responsibilities, and which will remain the responsibility of the enterprise. Once the division of duties has been defined, determine the skill sets, costs, and times required by each, and factor the findings into the overall decision process. Again, the good news is that implementation tasks are defined and a few focused questions can help provide you with a picture of whether they are covered by the outsourcer or belong to you.

- **Design and Installation.** Is the design (sizing of hardware, etc.) of the application included? Is provisioning of all hardware, software, network subscriptions, and admin tools included? Is installation of all hardware, system software, EDI software, and application administration tools included?
- **Mapping Development.** Is the provisioning of the EDI specifications for each trading partner included? Is developing each transaction for each trading partner included (i.e., the purchase order, ASN and invoice for Wal-Mart; the purchase order, ASN and invoice for Sears, etc.)? Is developing labels, tickets and tags included? Is managing the test cycle for each transaction, label, ticket and tag included?

- **Network Implementation.** Is the provisioning of VAN agreements included? Is provisioning AS2 software included? Is setting up the mail boxes for the VAN(s) included? Is writing communication scripts to interact with the VAN(s) included? Is the installation of the AS2 software included?
- **Application Maintenance Implementation.** Are provisioning tools for monitoring data processing, flow and maintenance included? Is installation of the tool(s) included? Is setup of monitoring processes and alerts included? Is setup of any ad-hoc or standard transaction or operational report included?
- **Application Integration.** If applicable, is provisioning of an application integration tool included? Is development and testing of the software used to post and extract data to the appropriate application database included?

Question #4:

What on-going, application management tasks are included in the outsourcer's solution ?

Once implemented, the day-to-day tasks of managing the EDI application take over. There are lots of moving parts to watch, fix and take care of when you have a system that is transforming data into multiple formats and moving it between multiple locations and applications.

To complicate matters, diagnosing and resolving problems often involves cooperatively working with your customer's EDI staff. Sometimes the problems are caused by you. Other times, they are caused by your customers. Playing the "finger pointing" game when this occurs requires a tricky balance of diplomacy and technical expertise.

Thankfully, the daily tasks of managing an EDI application are well defined and a few focused questions can help provide you with a picture whether they are covered by the outsourcer or are your responsibility.

- **Infrastructure Maintenance.** Are fixes, upgrades and maintenance fees to the hardware, system software and network included? Are VAN or other networking fees included?
- **Application Maintenance.** Are fixes, upgrades and maintenance fees to the EDI application software included?
- **Mapping Maintenance.** Are the updates that keep the maps, labels, tickets and tags in sync with the changing specifications of your trading partners included?
- **Application Monitoring.** Are automated processes that monitor data processing and flow included? Is the staffing that investigates potential problems, identifies them and resolves them included?
- **Trading Partner Management.** Is the staff that contacts trading partners to jointly resolve issues (including helping a trading partner to make fixes on their end and resend transactions) included? Is the staff that takes inquiries from trading partners when they need to make a correction with you included?
- **Reporting.** Are fixes, upgrades and maintenance fees for the reporting tools included? Is setup, maintenance and changes to ad-hoc, on-demand and scheduled reports tailored to your business included?

At this point, you are now in position to validate if the outsourcer's solution can meet your needs. In addition, you know exactly what the outsourcer's services covers and what activities, tasks and/or investments are or remain your company's responsibility. Now, you can

begin the process of differentiating each qualified outsourcer's solution from one another.

Selection criteria for a business software application will vary from one application to another. For example, ease of use is typically at the top of a list for a Sales Force Automation tool since sales force acceptance and use is so critical to the success of its deployment.

For EDI, the criteria are different. A recent study by the **Clement Group** researched the importance of numerous criteria for an EDI application and found that the top three criteria were as follows:

1. **Reliability.** This application needs to work. No hiccups in data translation, no problems with mapping data and no problems with label quality.
2. **Availability.** The application needs to run 24x7, 365 days a year. Orders can come in at any time day or night. Missing an order due to unscheduled down time or losing an order due to a poor back up and recovery process is unacceptable.
3. **Serviceability.** In the rare case when problems do arise, things need to be fixed ASAP. Direct access to knowledgeable technical people who are responsive, can diagnose the problem, determine a quick solution with or without the assistance of a trading partner, and implement the correction is high on the priority list.

Question #5:
*How does the
outsourcer assure
reliability?*

There are a number of approaches to outsourcing. Most involve some type of staffing model where some of the infrastructure and day-to-day activities and tasks are outsourced to a skilled contractor(s) who runs a unique implementation on behalf of the customer. However, the fastest growing and emerging outsourcing preference is to utilize a service provider that leverages a common infrastructure, common trading partner maps and labels, and common monitoring and administration tools and staff across hundreds and/or thousands of customers. This type of offering is called “**multi-tenant.**” Providers of this type of outsourcing often refer to their solution as “**Software as a Service**” or **SaaS**.

The growth in the SaaS model is fueled by how this particular outsourcing model maximizes the leverage of reuse. *When it comes to software, nothing ensures reliability better than reuse.* And the more that software is used in a battle tested environment, the better.

In addition to the software itself, eliminating the number of infrastructure and/or environmental variables on which the software is implemented extends the reliability driven by reuse to the next level.

Lastly, reuse of expertise in the form of staff used to implement and support the EDI application also increases the odds that systems will be implemented without error and easily repaired when they occur.

Therefore, if reliability is important to you and reuse is tied directly to reliability, a set of questions focused on how an outsource solution provider leverages reuse can be a key way to differentiate one provider from another.

- **Infrastructure.** Are any of the infrastructure components shared with other customer implementations? Or, will my application be implemented on a platform that is unique to my business? If shared, what infrastructure components are shared? Hardware? Database server? Web server? Backup and recovery software? Security software? EDI translator? EDI mapping tool? EDI application monitoring tools? Reporting tools? Networking?
- **Implementation.** Are any of the maps and labels reused with other customers? If so, how many of the maps and labels I need are already in use with other customers? If not, how are my maps and labels developed? How are they tested? What happens when they need to be updated?
- **Monitoring and Administration.** Are the tools used to monitor the operation of the EDI application reused with other customers? Are the tools used to administer and make updates and modifications to the application reused with other customers?
- **Staffing.** Is the person(s) responsible for managing the relationship with the EDI staff of one of my trading partners (i.e., Sears, Wal-mart, etc.) the same individual(s) responsible for managing that same relationship with other customers of the outsourcer? If so, how are any changes in requirements, specifications, etc., communicated from your customer's EDI staff to them?

Question #6:
***How does the
outsourcer assure
availability?***

It is one thing for an EDI application to be reliable and as error-free as possible. In other words, *it just works*. Another requirement is that it also be available to receive and process orders at any time (day or night) or any day during the week. In particular, since many retailers require acknowledgement of orders or a receipt of ASNs within specified time windows, assurance that the application is always available is a must.

Where reliability is primarily achieved by leveraging reuse, availability is usually achieved by systems architecture and facilities. In many ways, practices that ensure availability with other business software applications are applicable to EDI. However, three key areas require the special attention by your EDI outsourcer:

- **Security.** By definition, EDI is an application that exchanges business data with one or more company's business applications. As a result, make sure your EDI outsourcer has a way of ensuring a secure environment that protects you from hackers and viruses. Keep this question open ended and simply ask, what measures do you take to ensure my application is secure?
- **24x7 Availability.** EDI applications need to be operating all the time. Typical data center questions should be asked to verify whether your outsourcer is up to the task. What Service Level Agreement (SLAs) do you have? Do they cover availability? Do they cover data processing performance? How did they perform on those SLAs during the past 12 months? Do they have a documented disaster recovery plan? Is redundancy built into the application? If so, how? Describe the data center's facility? Is it secure?

Does it cover HVAC? Is their data center readily audited by a third party? Do they have a backup facility?

- **Scalability.** In the case of a multi-tenant EDI service provider, the need for extremely scalable systems is paramount. These outsourcers run the EDI applications for tens of thousands of companies everyday. Make sure you verify if the outsourcer has the architecture and horsepower to operate an environment of this magnitude. How many customers is their system designed to support? How many trading relationships? How many transactions? How easy is it to add horsepower to the environment if your business expands? What does the overall architecture of the system look like? What types of servers? Load balancing capabilities?

Question #7:
How does the outsourcer assure serviceability?

After reliability and availability, the Clement Group survey found that responsive, knowledgeable customer support ranked in a close third. Put another way -- *an EDI application should never break, but when it does, it needs to be taken care of ASAP.*

Of course, nearly every hardware, software and technology provider will claim to have “superior customer service.” Sometimes, that’s good enough. However, in the case of EDI, support on par with phone and cable companies won’t cut it — rather a commitment to customer service must be genuine.

Since all outsourcers claim to provide great customer service, how can you prove it before you buy? The key is asking a few questions that hone in on how customer support is measured by the outsourcer. At one end of the spectrum there will be outsourcers that measure their

support team for efficiency while at the other end of the spectrum outsourcers will measure their support team by customer satisfaction. *Hint, look for the latter.*

- **Is it about Me or the Outsourcer?** What method of interaction is available? Phone? Email? Chat? Are all methods included? Do I choose what vehicles to use? Am I charged extra? How quickly can I get to a live person?
- **Anonymous or Personal?** Do I call a 1-800 number and get the next available person, or do I have a person assigned to my business? Does the support person simply log my issue or do they take ownership and take responsibility for resolving my issue on my behalf? Do I need to reach out to receive a status update, or does support proactively keep me in the loop?
- **Knowledgeable or Uneducated?** Is the support staff knowledgeable about EDI and supply chain, or are they new to the technology and industry? Do they understand why getting problems resolved is important to my business and act accordingly? Or, are they following an internal process for resolving problems? How many problems are solved on the first call?
- **Customer Satisfaction Driven or Expense Driven?** How is the support team measured? How are top performers identified? Are issues closed by the support team? Or, are issues closed when the customer says the issue has been closed? If the support team is measured by customer satisfaction, how are those measurements taken?

Question #8:
How does the outsourcer integrate to my business application(s) and business partners?

Depending on your business, as many as three applications may need to be integrated with the outsourcer's EDI solution to offer a "hands off" application. Purchase orders and invoices are most commonly integrated to accounting applications like Microsoft Dynamics GP (formerly Great Plains), Peachtree, MAS90 and Oracle. ASNs are most commonly integrated to shipping applications like Agile, Descartes and Kewill. Popular carriers' systems from UPS and FedEx may also be integrated to provide shipment tracking numbers.

In addition, many manufacturers outsource internal supply chain functions such as product development to Asia, international logistics and importing to consolidators and expeditors, and warehousing and logistics to third party warehousing and logistics providers (3PLs). Since these business partners are performing the fulfillment tasks on behalf of their customers, integration with these business partners' systems is also needed to completely implement EDI.

Many EDI outsourcers fall short on this integration requirement. Numerous firms can deliver an outsourced EDI application via a web form. However, for many companies – especially those with multiple EDI trading partners and 50+ orders a month – data entry using a web form is not a viable option.

If integration is a requirement or if it may be a requirement in the future, be sure to inquire about the outsourcer's Application Programming Interface (API) by addressing the following topics:

- **Import/Export vs. Data Posting & Extraction.** What is the manner in which data can be integrated into my applications? Is it by producing a file that I can import and export into application, or can I post the data directly into and out the database tables of my application(s)? What documents can I integrate? Can I integrate an ASN?
- **Data Formats.** What formats does the API support? EDI? XML? Flat File? My application format (i.e., IDOCs)?
- **EDI Savvy.** How much of the complexity of EDI does your API “hide” for me? Do I need to understand EDI to integrate? Do I need to understand the trading partner mapping layer? Do I need to understand VANs, AS2 and Interconnects?
- **Application Bridge.** What integration tools can I use to write the bridge code from the outsourcer’s solution to my business application(s)? Do you have to use an integration tool that is EDI savvy (i.e., eBRIDGE)? Or, can I use a tool I already have such as BizTalk or Mercator? Are any “out of the box” bridges available?
- **Supported API.** Is the API defined and supported by the outsourcer? Is there a documented user manual that shows me how to write the bridge code to integrated my application(s), is it backward compatible? Is the support team for the API capable of assisting my programmers?

Question #9:

What other applications can the outsourcer provide your organization now or in the future?

Given EDI's role as a key infrastructure component of supply chain applications, you may be interested in outsourcing other related software applications to that service provider in the future. Related applications include electronic cataloging, item synchronization, shipping and packing applications, online B2B ordering sites for automating orders with non-EDI customers, and more.

If outsourcing these business applications may be in your future, be sure to inquire about the other products in the outsourcer's portfolio. You will be glad you selected an outsourcer that has what you need down the road versus a provider that results in a dead-end once your needs expand beyond EDI.

- Do you offer a catalog solution that can load and synchronize item data with my customers? Can the solution provide data via an organized spreadsheet? A simple 832 EDI transaction? A GS1 data pool such as 1Sync (formally UCCnet & Transora) and WWRE?
- Do you offer a solution where smaller retailers/customers can go online and place orders with me electronically?
- Do you provide an outsourced shipping and packing application that can assist me in fulfilling orders to my retail customers?
- What other business applications can you provide on an outsourced basis?

Question #10:

What evidence can you provide me of your company's leadership?

The technology euphoria of the late 90's brought many companies to the playing field, and customers of the companies that failed learned the importance of understanding a partner's long term plan, underlying business strategy, and financial strengths. Today's atmosphere is more stable, but each company's longevity is still subject to the successful execution of its business plan.

In most technology categories, only two or three vendors emerge as long term players. Those vendors are the ones that break from the pack, gain market share and become financially strong. This leadership enables them to continue making investments in infrastructure and technology, expand into new geographies and new markets, and keep its product line up-to-date with rapid change. The remaining players in the category either don't make it or eventually get acquired by one of the top firms in the market.

The harsh reality is that it takes more than a good product to become a long term player in the market. It takes a company that can paint a vision and execute across all aspects of the business including sales, marketing, operations, R&D and finance. Today, there are over 100 outsourcing providers of EDI. Many of them are new entrants into the highest growth segment of the market - multi-tenant outsourcers or SaaS. And, in all likelihood, the number of providers three to five years from now will be considerably smaller as the segment consolidates.

Assuming the top solution providers can deliver on your requirements, it makes sense to select a provider that will be in the EDI market for years to come. It is not only less disruptive to select a provider for the long term, but also lowers the risk that the outsourcer's solution may not keep up with your business needs and deliver on its SLAs.

Key questions that will help you identify the long term leaders from those firms that may not make it include:

- **Outsourcer Customer Base.** Many companies offering outsourcing also have customers using EDI software or other technology products. Make sure to ask the provider, how many companies it has using its *outsourced* service? Currently, a few firms already have more than 10,000 companies as customers of their outsourcing service. Providers with a few hundred outsourced customers have a lot of catching up to do if they plan to be a long term player in this market.
- **Growth Rate.** The SaaS category is the fastest growing segment in many software categories, and especially in EDI. Companies exhibiting growth rates faster than the market growth rate of 30%+ are more likely to put distance between themselves and providers growing at rates of less than 30% a year. Ask your potential outsourcing provider, what its annual growth rate was in its outsourcing business last year?
- **Partner Ecosystem.** Like many software applications that can be classified as “middleware” or “plumbing,” EDI applications need to interact with many applications and business processes. Outsourcing providers should have a network of business partners that have built turn key solutions around specific accounting, shipping and carrier systems. These outsourcers have the market presence to attract an ecosystem of related technology to work with their solution. In addition to software applications, other services such as 3PLs, 3PWs, logistics, and international fulfillment providers often tie their products to the top two or three EDI solutions in the marketplace. Therefore, be sure to inquire not only whether your outsourcer can work with all your systems, but what other systems and

services they have relationships with. Today's leaders already have much of this in place and are merely adding more and more partners each day.

- **Domestic & International Presence.** More often than not, supply chains are international. Leading EDI outsourcing providers already have a presence in both North America and Asia. Firms that have not established sales, marketing and support capabilities overseas have considerable catching up to do in order to make it in the long term.
- **Financials.** Obviously, the financials will tell a lot about a company's ability to make the proper investments over the long term. Overall size counts, but so does profit margin, debt, cash and access to capital. Today's leaders are profitable, not riddled with debt, have cash and/or have access to cash to make acquisitions, move into new markets or make significant upgrades to their infrastructure.

Your outsourcing success hinges on choosing the right provider.

Making a decision to outsource any aspect of your business operations can be difficult because it means trusting a third party to perform the activities and tasks as well as — or better — than you would do it yourself. In the case of EDI, making a decision can be even more difficult since there are a variety of outsourcing solutions available that are very different in their approaches. The first step toward making a decision is to understand the differences in the multiple types of outsourced solutions, and what type of outsourcing solution is right for you. From that point, you can begin a vendor selection process during which you can develop an apples-to-apples comparison.

Selecting the right EDI provider is critical. The right choice will make your outsourcing decision the best decision you ever made. You can go about your business, and trust your EDI to an experienced team of experts using industry-leading technology. These questions are designed as an aid to help you evaluate prospective providers carefully and enable you to make a wise decision that will be the right one for years to come.

About the Author

Jim Frome is the Chief Strategy Officer and EVP at SPS Commerce. He is responsible for setting the marketing, business development, sales and technology strategy for SPS Commerce. Since joining SPS in 2000, Mr. Frome has expanded and secured the company's leadership position in hosted (or software-as-a-service) EDI software.

Mr. Frome has more than 22 years of experience in technology marketing and management positions. Previously, he served as a divisional vice president of marketing at Sterling Software and was responsible for worldwide revenues of \$100 million. Prior to Sterling, Mr. Frome directed the product management efforts that grew revenues of the EUREKA business intelligence and B2B portal products lines from \$2 to \$70 million during his six year tenure at Information Advantage (later acquired by Sterling Software).

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