DESCARTES™

Improving Business with EDI

Agility in a Demanding Retail Market

In retail and e-tail, speed, cost efficiency, accuracy, and image are key differentiators. To meet the needs of demanding customers, smooth and seamless communication with chain partners is essential. This white paper explains how to make sure that an integrated system develops in line with your business growth. We will also compare cost and capability of on-premises and hosted EDI solutions.

Customers are more demanding than ever. They compare products and services right away on the Internet and social media. The supplier no longer drives the product, but consumers decide on product and company image. If the product, product information, product range, delivery terms and conditions, or services are not up to par, customers immediately turn to the competition and post reviews on social media. This has a tremendous impact on business models and logistics for traditional retailers as well as e-tailers.

The Customer Decides in a Complex World

The Internet and globalization provide customers with a market place far bigger than a few stores; customers can now enjoy buying opportunities from a worldwide variety of on-line and physical channels. Trade globalization makes chain management more complex than ever before. This new reality that also effects the collaboration between chain partners and consumers, requires not only efficient and seamless, but also very flexible communication in order to meet tomorrow's demand.

There is yet another important development: The increasing complexity of logistics. In the past, a store could order twenty boxes of deodorants and these were delivered to one supermarket. Today, a customer may order only one deodorant. Now, keeping cost down and still remain flexible leads to a smaller inventory. This largely contributes to a far more complex logistic process and warehousing. A completely different transport mechanism is now a prerequisite. Consumer and chain partners don't have a lot of patience or understanding. Cost reduction and running a (near) perfect business become very important. Customers will immediately run over to the competition if they spot a better price and supermarkets will not tolerate delivery mix-ups. Therefore, it is crucial to review processes and communication between trading partners, and make use of technology for optimization.

EDI Essential to Compete Effectively

Decades ago, chain partners and authorities, such as customs and tax authorities, used to exchange order information, invoices, and bills of lading on paper and by fax. Since 1971 Electronic Data Interchange (EDI) facilitates the automatic exchange of standard business documents in a digital format. Partners may use their own communication lines (VANx, FTP, AS2, etc.), and various file formats, such as XML, EDIX12, EDIFACT, HIPAA, and NSF. These file formats need to be adjusted and converted to EDI. Unfortunately, communication between ERP systems (e.g., SAP) and EDI solutions doesn't always go off without a hitch. Even though identical file formats are used, the data fields must match too. Expertise in types of communication lines and (conversion to) document standards is essential.

The average supermarket or DIY store has between 700 and 1,300 suppliers. The messages to be processed are that number many times over. Suppliers communicate with carriers and carriers then deal with customs, track shipments, and maintain contact with retailers. All of this information is sent automatically through EDI, which ensures fast and flawless communication and smooth delivery of goods.

With an increasing EDI integration level, retailers and e-tailers have several advantages, such as:

- Being able to operate 24/7 because of continuous order processing and automated processes without human interference.
- Higher customer satisfaction level because of, e.g., faster and more accurate delivery windows within the chain. A better view and tighter grip on processes and logistics, because all information is centrally accessible.
- Fewer errors because of automated processes.
- More timely appointments, deliveries, and payments due to automation.
- Higher productivity because information is more accessible.
- Time limits often mean that smaller companies make more document errors when hundreds of purchase orders, bills of lading, invoices, and proofs of delivery are processed manually. Smaller companies simply don't have the capacity. A well-designed EDI solution reduces the number of errors and ensures a business focus.
- A tighter grip on processes, less risk of being penalized by chain partners or customers for late delivery.
- Automation means a lower error margin and more efficient inventory control.
- Security improves with digital tracking of all chain transactions.
- Cash flow improves because electronic transactions allow for faster invoice and payment turn around. Many companies use Electronic Proof of Delivery and direct billing.

Changing customer demands, shorter product life cycles, and company growth quite frequently change the communication lines because of the need to add new chain partners. Therefore, organizations will need to reconfigure their EDI solution often to accommodate new communication lines and different document formats, and adapt to their ERP system accordingly. With a rapidly developing technology, skills need to be kept sharp.
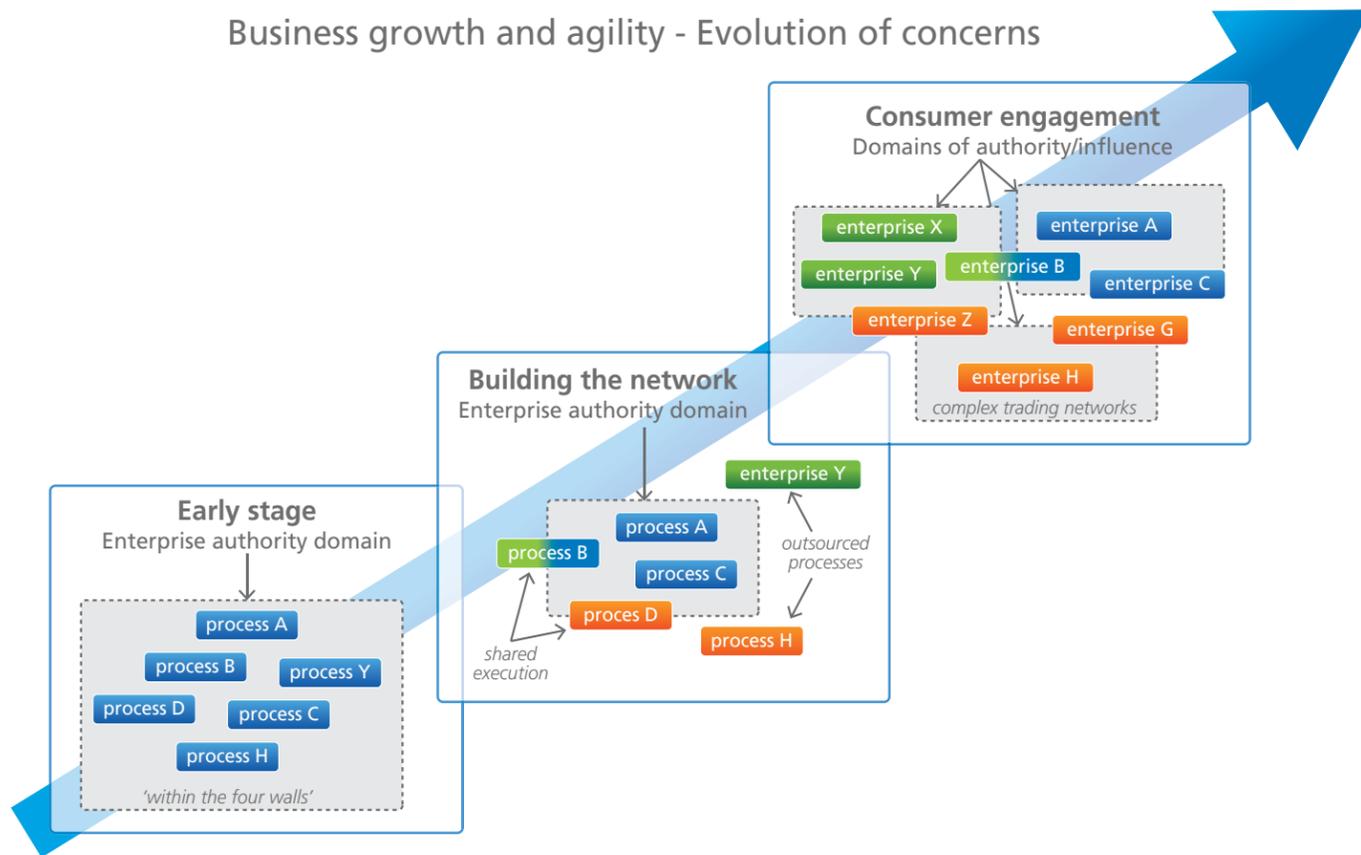
Growth May Disrupt Business

Growth is a positive thing for a company, but it also adds complexity. Upscaling will require more skill and expertise. Companies run the risk of acquiring either too much or too little expertise. It will also be difficult to deal with the extra requirements that go hand in hand with a growing customer base. Business may get disrupted when extra procedures and systems need to be added. It is not an easy task to achieve more and at the same time, stay focused on the business image. Moreover, it is essential that staff knowledge and skills keep pace with company growth.

Depending on the products sold (consumer goods, food, automotive, and industry), the complexity increase may involve complying with authorizations, filings, and trading partner administrative requirements. Transmitting all data synchronized and automated helps performance, compliance, and productivity. The facilitating technology also offers insight. Technological business support has become increasingly complex and more important. Over the past years, the retail market has changed drastically and along with it, the business processes that are supported by EDI. Many companies, however, have little or no IT expertise to keep this basis for operations up-to-date.

As a company grows, the complexity of the system may become an obstacle for companies. The EDI solution did not keep up with their business growth causing organizations to fail. If EDI is not considered a part of the internal strategy, EDI will fail. EDI should not be considered the umpteenth IT project. Speed and accuracy in data exchange are key business differentiators and they have a direct impact on pricing and image.

Business growth and agility - Evolution of concerns

	Emerging Business	Growth	Agility
Trading Network	Customer-Dominated	+ Collaboration with Partners	+ Sharing Knowledge
Competes On	Product	+ Supply Chain Performance	+ Multichannel/Effectiveness
Performance	Sales/Revenue	+ Profit and Risk	+ Optimization/ROI/ROA
EDI Systems Decisions/Options	Use cloud service provider to enable rapid on-boarding with little to no personnel and hardware investment	Cloud, in-house or hybrid: Options include on-premise translator with mapping and communications in the cloud	• in-house or hybrid? • Translator in-house or in the cloud? • Cloud-to-cloud integration between ERP and EDI • Creating compliance program/ portal for your trading partners

Focusing on Core Business by Outsourcing EDI

Maintaining an EDI solution is of growing importance, but is not exactly part of a retailer's core business. There are also significant costs involved with purchasing and maintaining servers, network devices, software, and links. Having the complete configuration on-premises is an option, but so is outsourcing. Maintaining EDI solutions is the core business of these outsourcing organizations and they are up-to-date with all EDI standards and landscape developments. In a 24/7 economy, on-going business requires guaranteed continuously operational systems. The example below compares the costs for your own EDI solution versus the costs for a hosted EDI system:

Medium-sized Company	solution and services	on-premise		hosted	
50 Trading Partners / 4 Document Standards / 2.000 Transactions per Month	Hardware, Operating System, and Maintenance	4,500	One-time	8,500	One-time
	Translator	15,000	One-time	320	Monthly
	Connectivity: Costs VAN+AS2	15,000	Annually		
	Staff, EDI and Mapping Expert	120,000	Annually		
	Mapping	8,000	One-time		
	On-going Upgrades, Support, and Maintenance	3,500	Annually		

Enterprise	dienstverlening	on-premise		hosted	
150 Trading Partners / 12 Document Standards / 35.000 Transactions per Month	Hardware, Operating System, and Maintenance	8,000	One-time	17,750	One-time
	Translator	27,000	One-time	4,000	Monthly
	Connectivity: Costs VAN+AS2	145,000	Annually		
	Staff, EDI and Mapping Expert € 120,000	180,000	Annually		
	Mapping	25,000	One-time		
	On-going Upgrades, Support and Maintenance	6,300	Annually		

Figure 2: Costs for on-premises EDI and hosted EDI. Amounts are in euros.

The example shows that outsourcing an EDI solution saves a considerable amount of money. It allows retailers to offer their products at a lower price which immediately gives a competitive advantage. In addition, the EDI provider does not only take care of hardware and maintenance, but also ensures continuity and in case of growth, the appropriate EDI connections. Outsourcing enables retailers and e-tailers to focus on their core business: Offering the customer the best possible services.

Conclusion

The retail market is undergoing change because of the ever increasing higher demands from customers and chain partners. Products need to be delivered faster, in perfect condition, and at the best price. Given the fierce competition, most companies put cost efficiency at the top of their priority list. Restructuring processes through implementation of a well-integrated EDI solution, prevents errors, speeds up processes, and allows retailers to operate 24/7. Business processes become more complex. Keeping knowledge and expertise for an EDI environment up-to-date is quite a challenge. It is also costly to manage the hardware and maintain the needed level of system know-how, especially when business is growing.

Outsourcing an EDI solution allows a company to work more efficiently, maintain operational stability, and monitor pro-actively. As companies grow, they are less likely to suffer a setback, because new trading partners will be connected without a hitch. Companies gain agility in a rapidly changing market and are better equipped to enter the competitive battle field.