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50 YEARS OF EDI: THIS IS WHERE WE STAND

The present and future of EDI in the supply chain

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Introduction: *good old* EDI

EDI, or electronic data interchange, you know it well or you have never heard of it. While it's not as well known, it's more common than you think. Perhaps you – without realizing it – also deal with it on a daily basis. For example, if you process an order in the system or pay an invoice to a supplier.

Without us all realizing it, this hidden gem has celebrated its fiftieth anniversary. The electronic data exchange protocol was first introduced in the 1970s. No one could imagine then that it would still be of service decades later. Numerous industries – from supermarkets, to logistics service providers to customs services – now use EDI. Order data is sent via an electronic file according to strict rules.

EDI is a staple when exchanging data. New technologies have of course come onto the market, but they are often used in addition. After fifty years of loyal service and probably many years ahead, it's time to take stock. What role does EDI play in organizations within the supply chain? What is it used for? And who works with EDI?

This research report provides insight into the world of EDI within the supply chain. In addition to sketching the current situation, we also look to the future. Will EDI prove its worth again in the next fifty years?

About the research
126 Dutch and Belgian respondents participated in this survey, who form a sample of supply chain professionals involved in EDI. The respondents are employed by organizations ranging from 1-50 employees to more than 500 employees, spread over different sectors. 43 percent work in trade and industry, 21 percent in retail/FMCG and 14 percent in transport and logistics. The research was conducted by Markteffect on behalf of Descartes.

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IT matter or business driver?

EDI is a kind of computer language. For most people, the number and letter sequences are hocus-pocus. However, the software systems of different companies can communicate effortlessly with each other through EDI. Because of these characteristics, EDI is often an IT thing. After all, they are IT specialists who understand software and codes. And yet, EDI is more than an IT matter. It ensures lightning-fast and error-free electronic data exchange. As such, it saves time and money with more efficiency as a result. This makes EDI suitable as a business driver. In this chapter, we will show you exactly how that works.
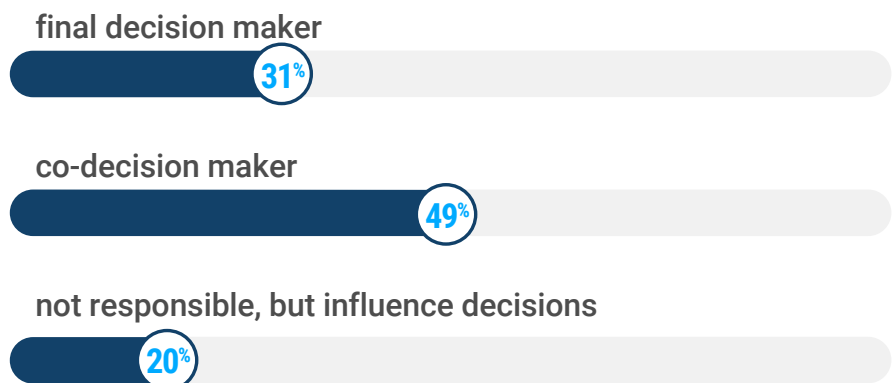
The people behind EDI

So, what is it like in practice? Does the business know all the ins and outs of EDI, or is it the IT specialists who have EDI in their portfolio?

Although EDI is more than an IT matter, logistics employees are responsible at only one in four companies. In three quarters of the cases it is therefore an IT matter.
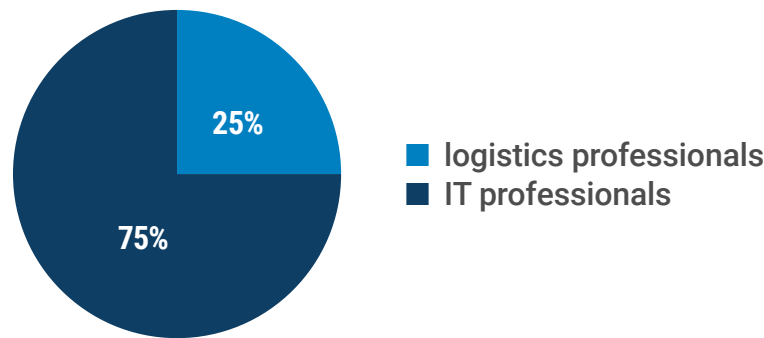
Looking at respondents' responsibility for EDI decisions, we see that the largest group of respondents (49%) are co-decision makers. They therefore make decisions about EDI together with other colleagues

25%

75%

■ logistics professionals
■ IT professionals

final decision maker
31%

co-decision maker
49%

not responsible, but influence decisions
20%

EDI knowledge

EDI requires specific knowledge due to the complexity of the technology. Not every organization has this knowledge in-house. 41 percent of companies believe that there are colleagues with sufficient knowledge of EDI. Companies with more than 500 employees have significantly more EDI knowledge: 65 percent say they know what they need.

In more than half of the companies (53%) EDI is completely controlled by IT.
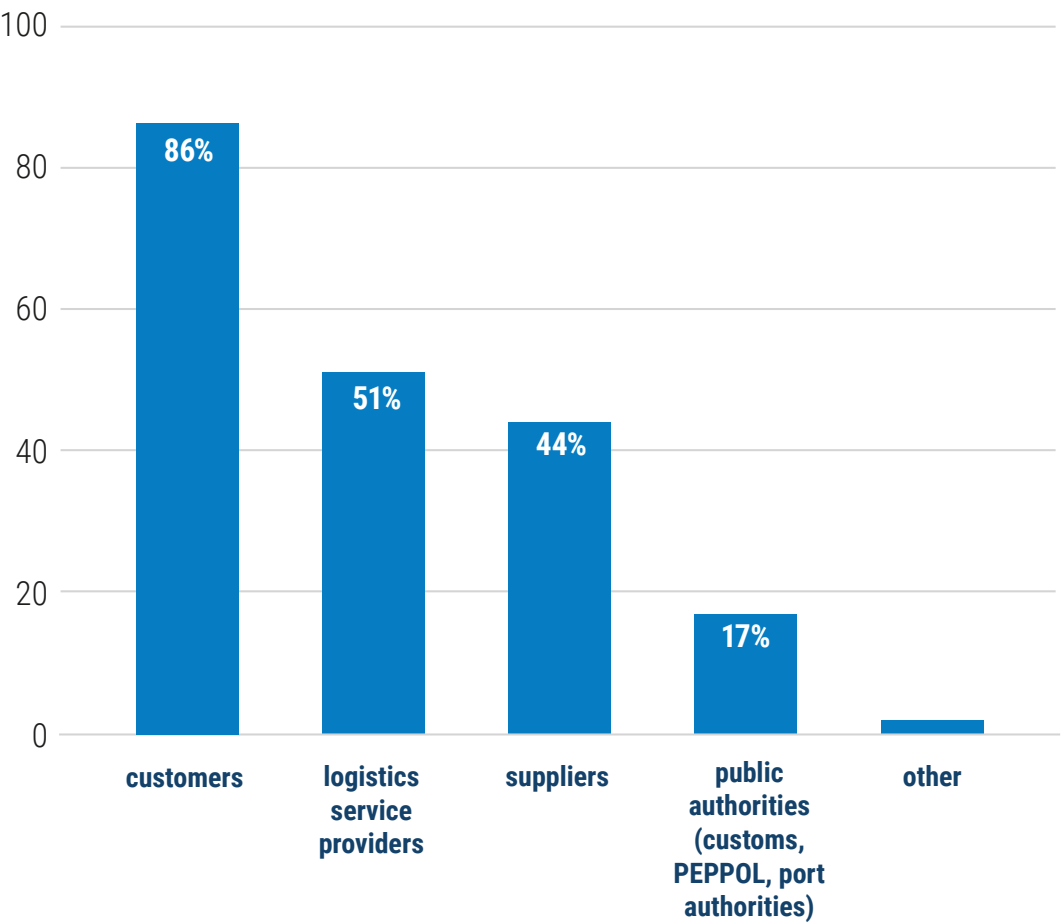
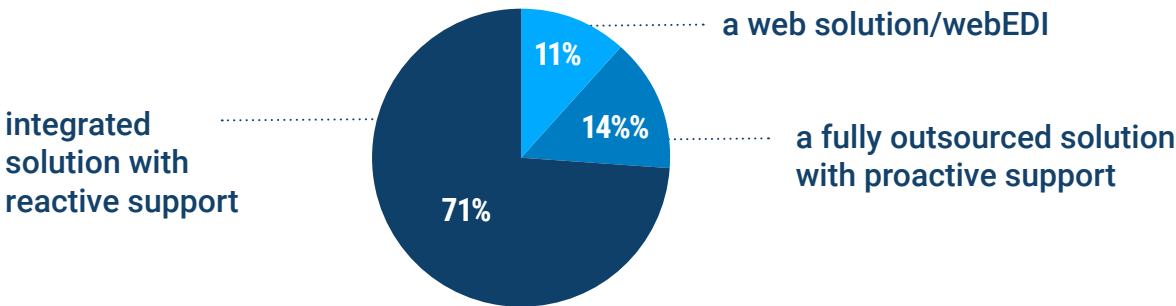DESCARTES™

IT matter or business driver? (continued)

This is how EDI is used

Various EDI solutions are available to companies to deploy to suit their wishes and needs. An EDI solution supports companies in communicating with different stakeholders, such as customers, suppliers or other partners. The most important things are listed below.

EDI communication with trade partners

- customers: 86%
- logistics service providers: 51%
- suppliers: 44%
- public authorities (customs, PEPPOL, port authorities): 17%
- other

Type of EDI solution

- a web solution/webEDI: 11%
- a fully outsourced solution with proactive support: 14%
- integrated solution with reactive support: 71%

A web solution for EDI is suitable for companies with a limited volume of EDI communication. Logically, it appears that the smaller the company, the more often a web solution is used. Another option is to completely outsource EDI. Almost one in three (29%) organizations opt for this.

'Chief EDI' within the organization is often someone from the IT department with insufficient knowledge of EDI.
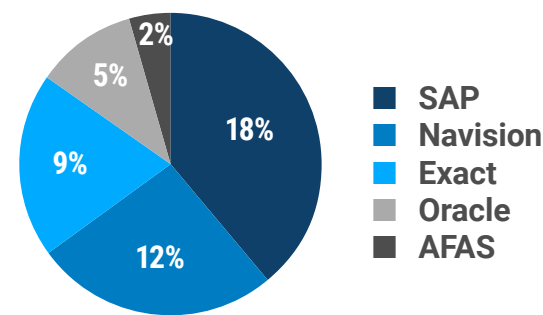
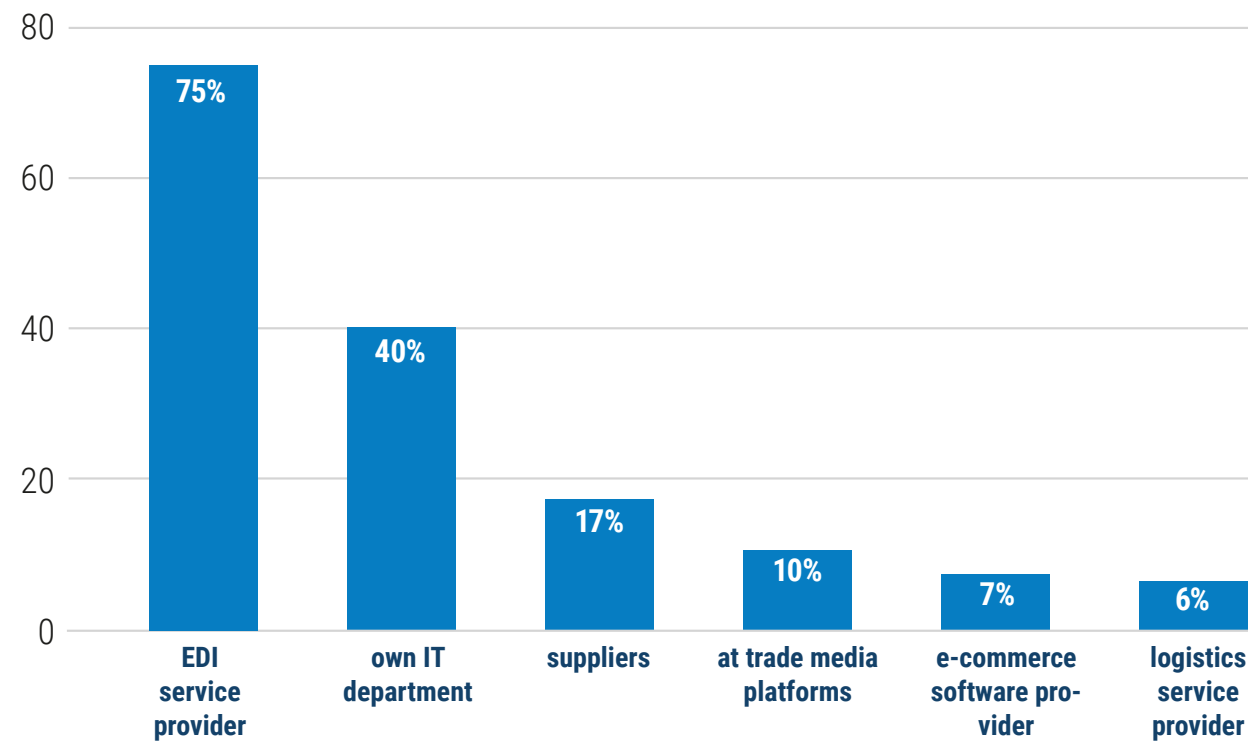DESCARTES™

IT matter or business driver? (continued)

ERP systems

For the right support, it is important that the EDI solution is integrated with the ERP system, so that information is linked quickly and error-free. Organizations mainly work with the following ERP systems:

Legend:
- SAP — 18%
- Navision — 12%
- Exact — 9%
- Oracle — 5%
- AFAS — 2%

Just ask

Sufficient knowledge of EDI is important to properly organize communication. If the business does not have the necessary knowledge, organizations in particular (75%) turn to their EDI service provider for advice..

Category	Percentage
EDI service provider	75%
own IT department	40%
suppliers	17%
at trade media platforms	10%
e-commerce software provider	7%
logistics service provider	6%

Covid-19 has no impact

The impact of the corona pandemic was major throughout the supply chain. Think of shortages of raw materials, higher transport costs or lack of capacity. Still, Covid-19 has generally had no effect on trade relationships for which companies have set up EDI (90%).
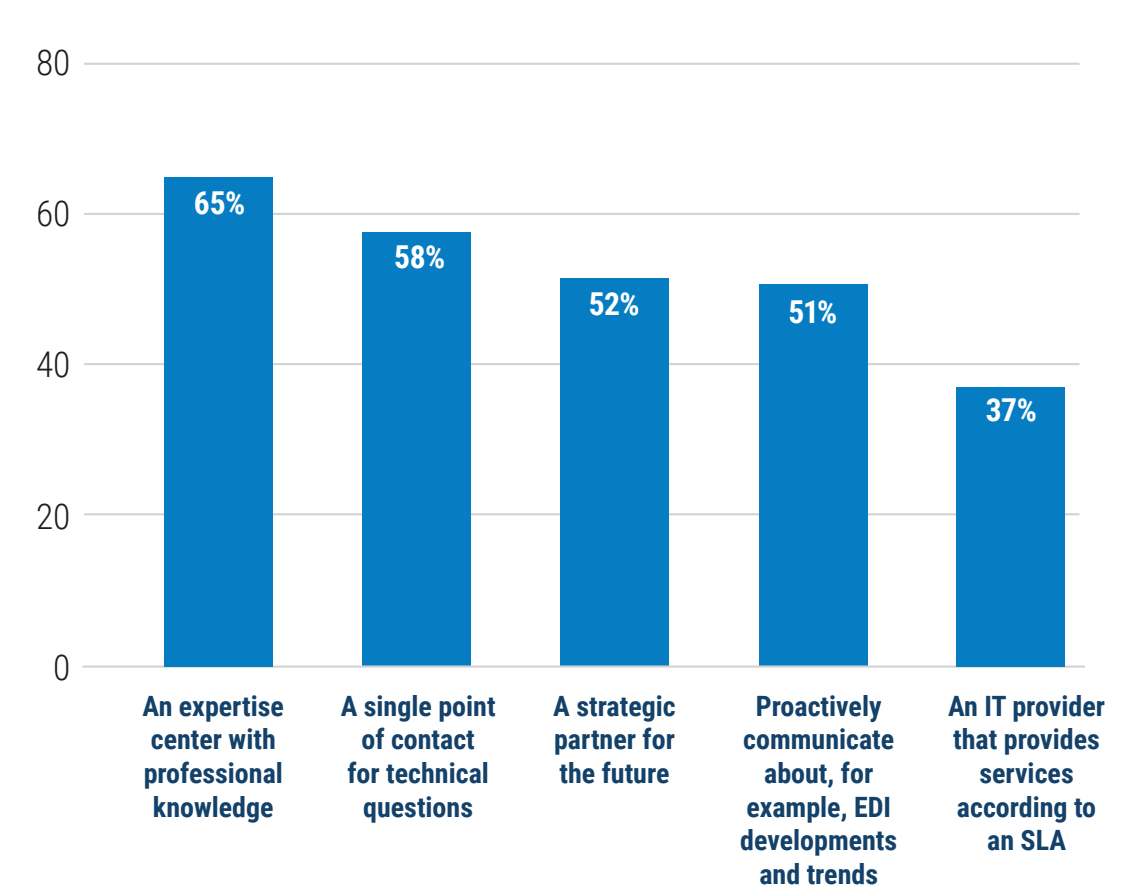
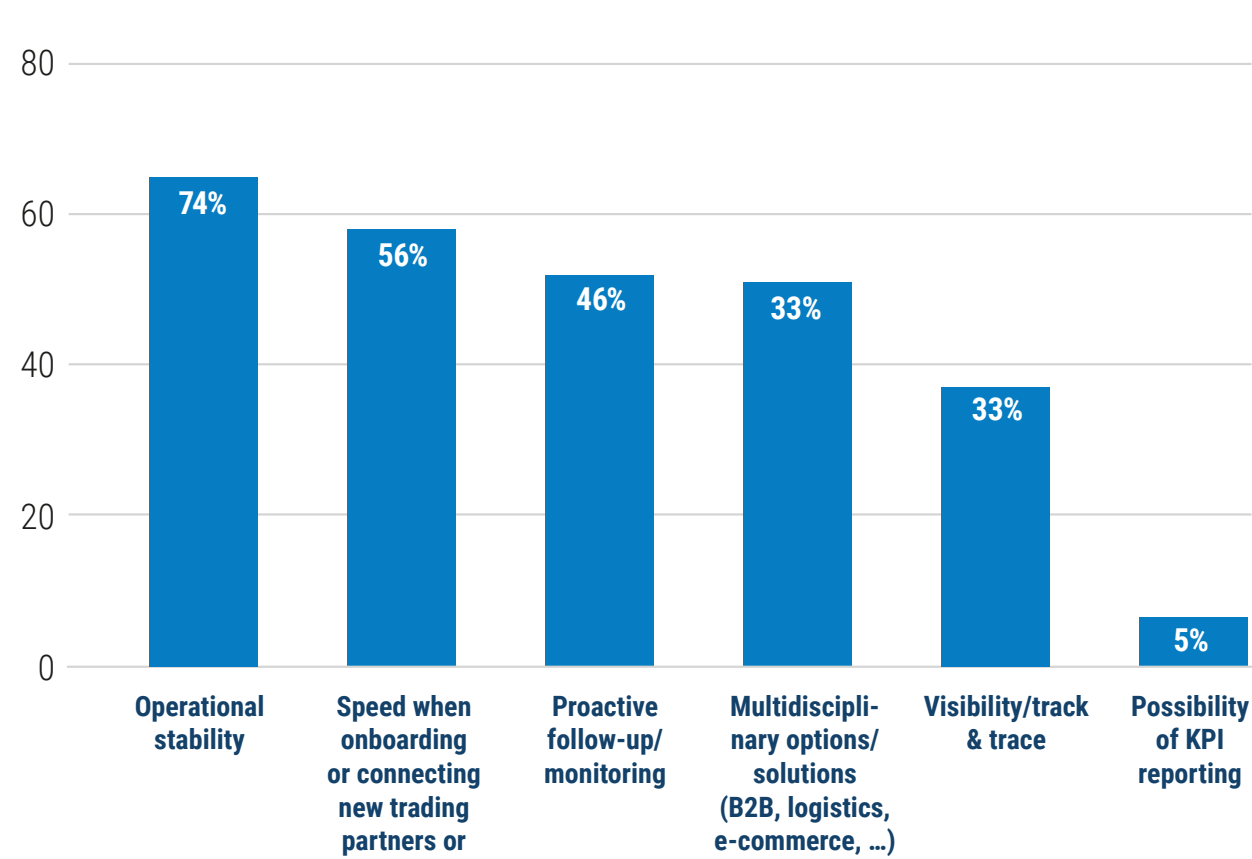DESCARTES

IT matter or business driver? (continued)

The perfect EDI solution provider

Companies often seek advice from their EDI solution provider. Expertise is therefore at the top of the list of expectations of such a partner. In addition, companies expect the following:

Larger companies are mainly looking for an IT provider that delivers services according to an SLA, while smaller companies expect their EDI solution provider to communicate proactively about EDI developments and trends.

When selecting a suitable EDI solution provider, companies consider the following:

Chart 1: The perfect EDI solution provider

Expectation	Percentage
An expertise center with professional knowledge	65%
A single point of contact for technical questions	58%
A strategic partner for the future	52%
Proactively communicate about, for example, EDI developments and trends	51%
An IT provider that provides services according to an SLA	37%

Chart 2: When selecting a suitable EDI solution provider

Consideration	Percentage
Operational stability	74%
Speed when onboarding or connecting new trading partners or	56%
Proactive follow-up/ monitoring	46%
Multidiscipli-nary options/ solutions (B2B, logistics, e-commerce, …)	33%
Visibility/track & trace	33%
Possibility of KPI reporting	5%

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Necessary evil or business-critical

The way companies look at EDI varies widely. Where one company sees EDI as a necessary evil, another sees it as business-critical. It is often one of these two extremes. In the first case, EDI is usually assigned to the IT department. It is something that comes with the territory or that has to be done' and there is little to worry about. Attention is only paid to EDI when something goes wrong. These companies are insufficiently aware of the importance of EDI. Organizations that do have this awareness realize that EDI is a business-critical component. EDI is often assigned to the business here because it is used as a business driver. After all, it ensures that orders come in. In other words, the added value of EDI is realized.

The question now is: which situation prevails in business? And to what extent is EDI actually used to support processes?

This is how things stand for EDI

The flag is flying at the majority of companies. 84 percent say EDI is a business-critical part of the organization. Employees who influence decisions about EDI agree more than final decision makers (96% and 77% respectively).

If we zoom in on how management views EDI, we see that more than half (56%) of the respondents indicate that management sees EDI as a strategic component.

EDI is a business-critical component for most (84%) companies.
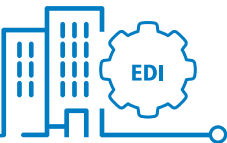
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# Necessary evil or business-critical (continued)

Business process support

Despite the fact that the flag is flying well, EDI is not yet widely used to support business processes. At one in three companies, less than twenty percent of the processes are supported with EDI. Only one in ten companies uses EDI for more than eighty percent of the business processes. EDI is most often used for the transport process with logistics service providers. EDI is the least popular for PEPPOL (Pan-European Public Procurement On-Line) processes.
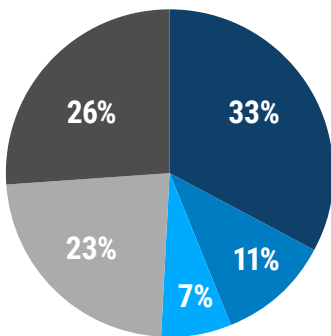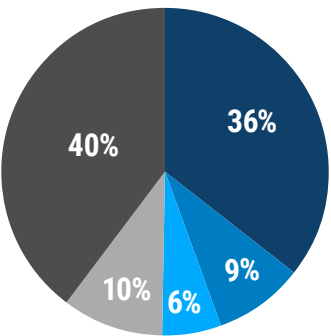
Order-to-cash process with customers

33%
14%
10%
13%
29%
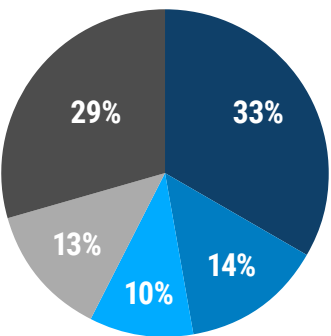
Purchase-to-Pay process with suppliers

32%
19%
13%
11%
25%

Transport process with logistics service providers

33%
11%
7%
23%
26%
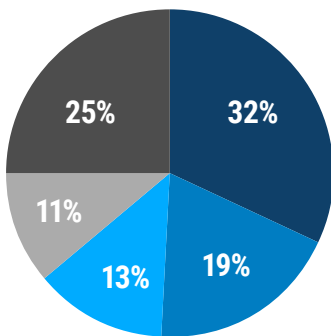
E-commerce processes/ Warehouse Management System processes

36%
9%
6%
10%
40%

Customs processes

37%
2%
2%
12%
48%
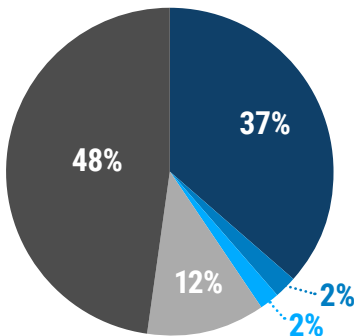
PEPPOL-processes (a.o. electronic invoicing)

36%
6%
9%
6%
44%
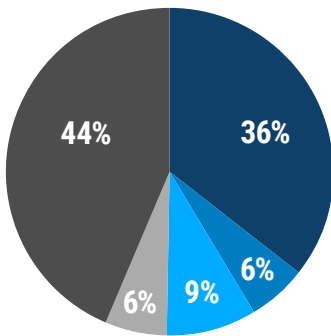
- ■ 20% or less
- ■ 21% to 50%
- ■ 51% to 80%
- ■ 81% or more
- ■ Don't know/not applicable

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EDI in the world of e-commerce

We all know that e-commerce really took off in 2020. Whether it concerns large marketplaces, local entrepreneurs, or online newcomers; everyone benefited from the enormous rise of online shopping due to the corona pandemic. This has allowed e-commerce to mature quickly.

The more mature a market is, the more professional processes are set up. That's when EDI comes into play. Although good old EDI has been around for half a century, it is also still used as a means of communication in new markets. In this chapter, we zoom in on how companies view e-commerce. It also becomes clear what role EDI plays in this and what the plans are for the coming period.
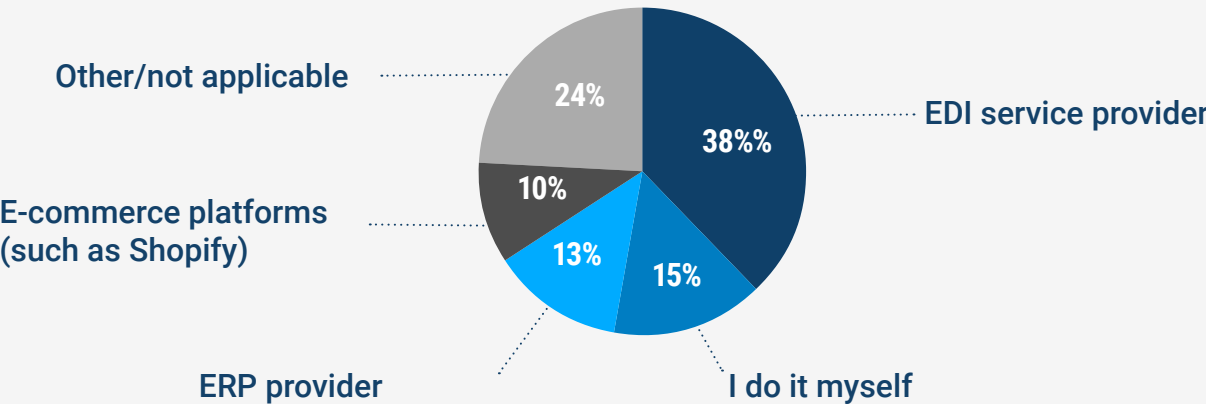
E-commerce is booming

We said it before: e-commerce is booming. Growing or additional e-commerce activities are therefore a (very) important trend for half (51%) of the companies. Due to the growth of e-commerce, 41 percent of companies have a greater need for knowledge about EDI.

EDI for e-commerce

Will EDI play a role in e-commerce? If so, how do companies approach this? In the future, 13 percent of organizations want to set up EDI for e-commerce. This is even half among small companies with fewer than ten employees.

This is how companies set up EDI for e-commerce

Other/not applicable — 24%
E-commerce platforms (such as Shopify) — 10%
ERP provider — 13%
I do it myself — 15%
EDI service provider — 38%%

Half of the very small businesses want to set up EDI for e-commerce.

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50 years and counting

EDI has proven its worth over the past fifty years. As mentioned in the previous chapter, EDI is valuable for new markets as well. The expectation is that EDI will remain of permanent value. That is why we asked the respondents about their plans for EDI in the future.

Nearly two in five (19%) organizations have no plans to expand or renew EDI.
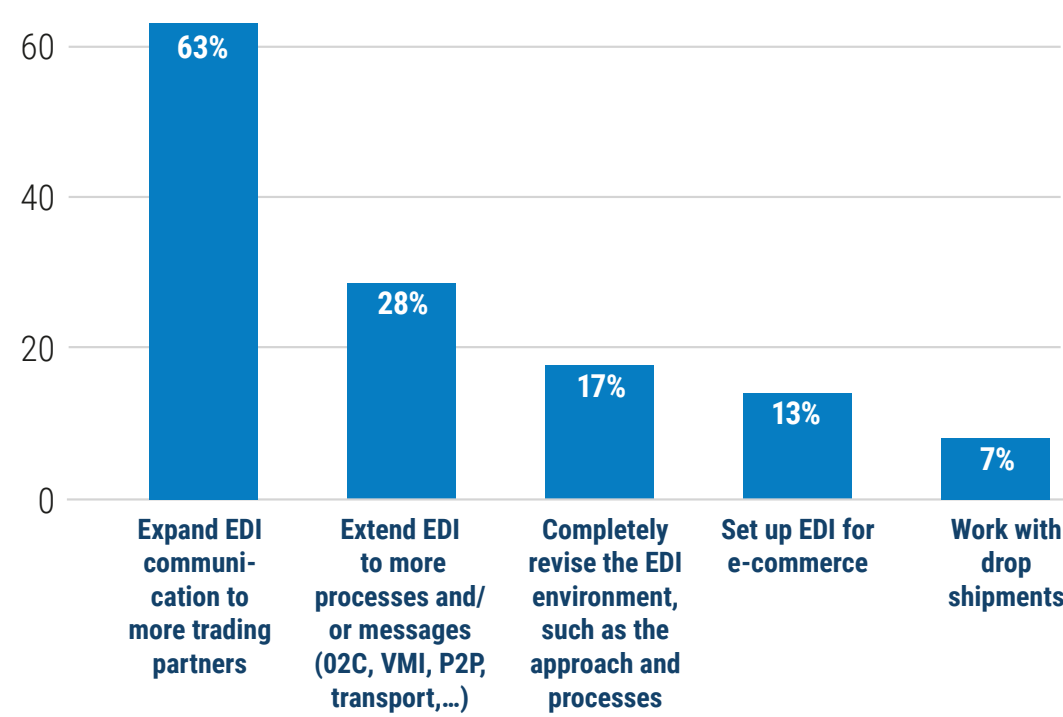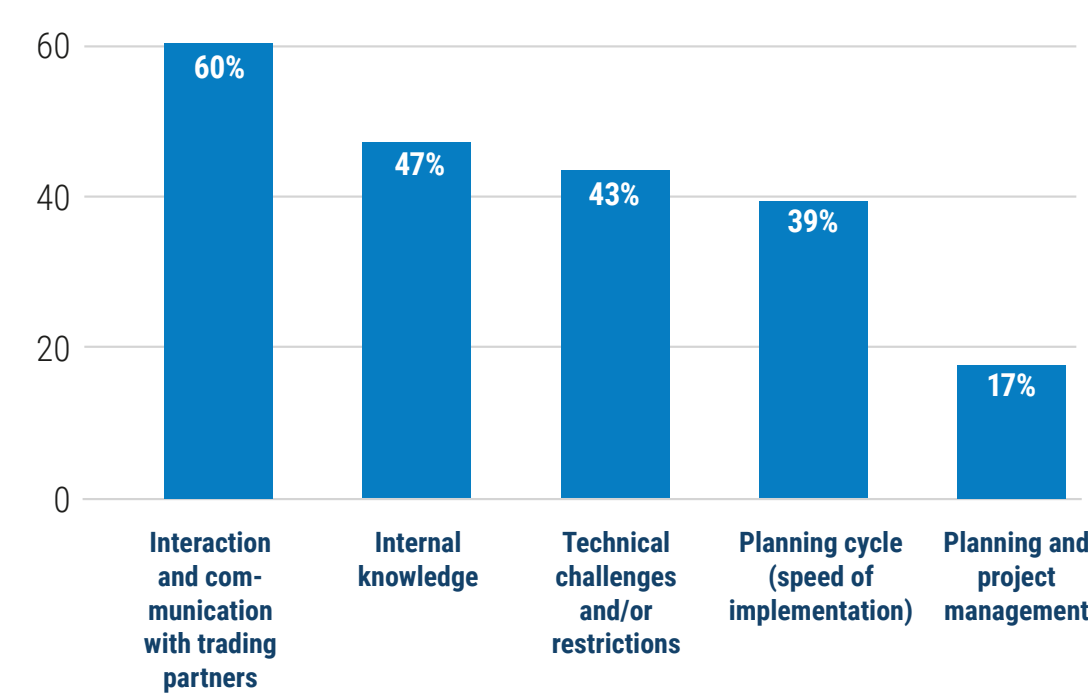
50 years and counting (continued)

EDI in the future

The use of EDI is a permanent item on the agenda for many companies. New trading partners, businesses, or markets are reasons to expand EDI. Despite its long existence, EDI still poses challenges for many organizations. Especially interaction and communication with trading partners is often difficult. The lack of internal knowledge does not help either.

You would expect EDI to be self-evident because it has already proven its worth. Nevertheless, the expansion and more efficient organization of EDI is still on the agenda.

Chart 1 (percentages):
- Interaction and communication with trading partners: 60%
- Internal knowledge: 47%
- Technical challenges and/or restrictions: 43%
- Planning cycle (speed of implementation): 39%
- Planning and project management: 17%

Chart 2 (percentages):
- Expand EDI communication to more trading partners: 63%
- Extend EDI to more processes and/or messages (02C, VMI, P2P, transport,...): 28%
- Completely revise the EDI environment, such as the approach and processes: 17%
- Set up EDI for e-commerce: 13%
- Work with drop shipments: 7%

This is how it works in practice

There are certainly plans for the future, but how are things actually going?

The respondents stated that in more than half (53%) of the situations new connections or processes are only set up after an application from trading partner(s). The question is, therefore, to what extent all these plans become reality.

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Main trends

Companies are influenced by various developments in the market. One trend has a major impact, the other has none at all. In this chapter, we map out which trends are important for organizations. These are trends in which EDI can play an important role.

Agile business operations

Agile has been high on the agenda of many companies for years. An agile business operation ensures that organizations are flexible to change. This enables them to respond quickly to changes in the outside world and to prioritize customer satisfaction.

Who doesn't want to be able to flexibly adapt the organization to the needs of the customer? Agile business management is therefore an important trend for three-quarters (76%) of the organizations. Especially in e-commerce, agile is of great importance, because the complexity of the supply chain in this market is great. EDI contributes to agile business operations because it enables automatic and error-free communication about, for example, orders.

Complexity of transactions

The rise of online commerce is also increasing the complexity of transactions. This plays an important role in 61 percent of companies. After all, things are different in the e-commerce world than in the supply of physical stores. Products are often sold through marketplaces or other third parties. As a result, transactions more often run through different parties, especially if a payment party such as PayPal or Klarna is also involved. Return flows and the associated refunds are also a lot more complex in the online world. With EDI, organizations can easily keep track of all these orders, invoices and transactions.

Reuse of data

Companies collect a lot of data. This data is very valuable, if you collect and combine it in the right way, and are able to extract information from it. In that case, data is very important for optimizing business processes. By implementing EDI, organizations are taking a big step in maturity when it comes to order data. Due to automation and structure, data is stored in the right way and it is immediately suitable for retrieving information. In this way, organizations can get started with their desire to reuse data for other processes, such as accounting or inventory. This is an important trend for 60% of organizations.

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Main trends (continued)

New technologies

If you want to stay ahead in this rapidly changing world and be able to continuously adapt, you cannot do without smart technologies. Implementing new technologies is also seen as a way to avoid being sidelined. New technologies include the use of application programming interfaces (APIs), artificial intelligence (AI), or robotic process automation (RPA). More than half of the organizations (57%) are involved in this. These technologies are a nice addition to existing EDI processes. This way, data can easily be shared between the different technologies.

Outsourcing EDI processes

Currently, nearly one in three (29%) companies have completely outsourced their EDI processes (see Chapter 1). More and more companies are taking this step to ensure that the process always runs smoothly and to always have ready knowledge of the most current developments. 39 percent of companies indicate that this is an important trend for the organization.

Trade Expansion

For many companies, tapping into new markets is a wish for the future. While this was impossible for some businesses years ago, the massive growth of e-commerce is opening doors. National borders are also increasingly blurred due to globalization. Expanding into new geographies or global trade is a key issue for 38 percent of organizations. Expanding means additional transactions. By setting up communication with EDI, organizations avoid creating a lot of extra work for themselves through all those extra transactions.

Vendor Management Inventory

Outsourcing inventory management to the supplier, or Vendor Management Inventory (VMI), is a less popular trend. It is important for one in four organizations. In this case, the supplier no longer receives orders to deliver, but information about the customer's inventory and sales level. Based on this information, he is responsible for creating and maintaining inventories at his customers. This ensures that companies can improve logistics processes and organize their supply chain more efficiently. With EDI, organizations ensure that they steer VMI in the right direction and that communication runs smoothly.

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About Descartes

Descartes is the global leader in on-demand software-as-a-service (SaaS) solutions that help improve productivity, performance, and security for enterprises where logistics play a key role. Customers use modular, cloud-based solutions to plan, control, track and measure deliveries. They can also plan, allocate and execute freight, prepare, verify and pay freight invoices, view global trade data, archive customs and security documents for import and export, and perform various other logistics processes.
All this by joining the world's largest multimodal logistics collaboration community. Descartes is headquartered in Waterloo, Canada, and the organization has offices and partners worldwide.

Learn more at www.descartes.com, and follow us on LinkedIn.

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