



What it Really Means to Do EDI

How EDI processes support high-value, revenue-generating business outcomes

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Chapter One

The Modern Role of EDI

EDI: A Skeleton Key to Business Value

We'll just come right out and say it: APIs are good. APIs are important. But APIs will NOT eliminate EDI.

EDI's origins date to the late 1940s, and it continues to be the most trusted B2B communication standard in the world. But every new data exchange innovation, notably the API, is believed to be the death knell for EDI. While exciting and useful technologies that complement EDI, APIs cannot adequately replace EDI because they can't deliver the valuable business processes that come with it.



Application programming interfaces give developers a way of systematically interacting with a program. EDI is a language used by companies to represent common business documents, such as purchase orders, shipping notices, and functional acknowledgments. EDI by itself, however, isn't all that useful.

It's the business processes and orchestrations that enable companies to exchange EDI documents with partners in a well-governed, secured, and managed way that are extremely valuable.

That's not to say APIs don't have a place in EDI workflows. APIs augment EDI and help give deeper context to B2B integration. In conjunction with an evocation of an ERP's API – for an item lookup, for instance – APIs can tell you where in the store you can find the products you want, while EDI lets you buy them. It's these orchestrated, EDI-based interactions form the essence of revenue-driving business processes.

But too many technology vendors, especially the API-led varieties, are muddying the waters on EDI, minimizing EDI's complexities and reducing it to a simple connection tool. These organizations end up peddling an expensive API development platform that enables modern connectivity but fails to support the EDI processes – the governance, the control, the trading partner management – that global businesses really demand.

With competing definitions and growing uncertainty as to what's required in modern EDI and B2B technologies, it's time to understand what EDI really is and what it means to be “doing EDI” in today's hyper-digital business economies.

Chapter Two

What We Know EDI to Be

EDI Drives Revenue-Generating Business Processes

Electronic data interchange (EDI) is a way of solving a problem. The problem is that companies need a standardized way to exchange common business documents.

These documents include purchase orders, acknowledgments, receipts, payment notifications, and inventory statuses. Such documents are best represented using schemas based on EDI and that conform to EDI standards.



EDI solved the standardization problem, and it promised to help manage large volumes of transactions, improve efficiency across the value chain, and reduce costs by streamlining daily business processes. Companies ultimately could be more responsive to customers and make more money using EDI.

It's easy to see why EDI caught on, then, given the rise of a global and digital ecosystem featuring new consumer markets.

Now, organizations in retail, healthcare, transportation and logistics, manufacturing, financial services, telecommunications, and others rely on EDI to facilitate countless daily B2B transactions, such as order-to-cash, procure-to-pay, and plan-to-produce processes.

By the Numbers

84

84 percent of leading companies send electronic purchase orders, according to 2009 research by Aberdeen Group. ¹

80

For certain industries, more than 80 percent of their sales orders, order changes, purchase orders, and goods receipts is done through EDI. ²

20

According to Forrester Research, "the annual volume of global EDI transactions exceeds 20 billion per year and is still growing." ³

78

When a shipment is received without an ASN, it will cost the average company an additional \$78 to process each purchase order. ⁴

1. "E-Payables: Invoice Receipt and Workflow," Aberdeen Group, 2009. 2. "The World Without Us, Results from the EDI Professionals Survey," ChainLink Research, 2013. 3. "The Future of EDI," Forrester Research, 2011. 4. "EDI: Workhorse of the Value Chain," Supply Chain Insights, 2013.

The Benefits of EDI

The business benefits of EDI, by most accounts, are unquestioned. In addition to its role as a standard business language that speeds up the onboarding of partners, we know EDI to be the technology that delivers cost savings, speed, accuracy, efficiency, and security.



Cost savings

The Aberdeen Group says the cost of manually processing a purchase order is 35 percent higher than the cost of processing a PO with EDI, due to reduced manual data entry and associated errors.



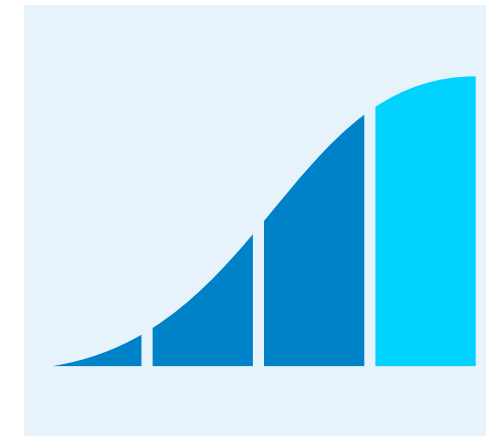
Speed

Automation via EDI speeds up business cycles. Comprehensive adoption of EDI that led to hands-free order processing was demonstrated to shorten the order-to-shipment cycle by 50 percent.



Accuracy

Manually rekeying data into ERP and order systems is prone to inaccuracy, and automation eliminates that problem and generates a 40 percent reduction in errors.



Efficiency

Reduced processing mean reduced manual data entry, fewer errors, and improved customer relationships, which can lead to improved delivery of goods and services and reduced customer churn.



Security

Data is shared securely across a wide variety of communications protocols and security standards, complying with mandates in global business today.

The Stickiness of EDI

EDI has been thoroughly embraced for the business benefits it delivers but also for several other important characteristics including its standards, the fact that it works, and its ability to integrate.

With so many great reasons for using EDI, why would people predict EDI to go away?

The answer can be traced to the false promises of emerging technologies and the misunderstanding of B2B integration needs.

Why EDI?

1

IT HAS STANDARDS

EDI's rigid standardization that technologists often complain about is also a huge reason for EDI's staying power. It's difficult to maintain and scale B2B data exchanges without standardization, and the absence of standards to dictate a universal format is why APIs haven't been able to replace EDI in the B2B world. An API is infinitely customizable to meet the requirements of the business for which it was produced, so connecting is in the hands of the developer.

2

IT WORKS

It's still the most widely accepted communication tool, and the largest companies in the world won't do business with you unless you support EDI. The marketplace isn't pushing for a technology change, but rather, is clamoring for better ways to do EDI. These include support for advanced protocols to move EDI data, EDI-as-a-service products, and fully managed EDI solutions that offer flexible licensing options and predictable costs.

3

IT INTEGRATES

EDI no longer exists in the isolated world it used to. Traditionally, EDI has been a way of moving data between suppliers and customers, into and out of their ERP systems. More and more, however, we're seeing the need to mix other applications into that flow. Companies need consolidated integration for CRM, WMS, and other cloud and on-premise applications. Modern integration solutions enable this holistic connectivity and business-wide visibility, and have propped up EDI's viability in digital ecosystems.

Chapter Three

The Death of EDI – and Why It's Never Going to Happen

The Symptoms of EDI’s Demise

Those predicting the death of EDI weren’t without cause, as there were a confluence of forces happening in IT departments and businesses that fueled fears.

EDI’s perceptions can be intimidating, but they only partially explain its predicted demise. The truth is, EDI gets complicated when you start to bring in the B2B processes surrounding them and there are few vendors that can deliver on all of them.

Perceptions of EDI

1**EXPENSIVE**

Large companies that could afford EDI saved tons of time and money, but EDI often was a big investment for its suppliers. They had to invest in costly software or use a value-added network (VAN), an intermediary that provided the technology to connect and transfer.

2**UNRELIABLE**

Transmitting data through the VAN was slow and unreliable, but that wasn’t EDI’s fault – that’s on the VAN. These tools often were costly pay-as-you-go, monthly, and annual pricing models and offered little visibility a company’s own data flows. Those calling for the end to EDI are likely still shell-shocked by a previous VAN relationship.

3**A DYING SKILL**

Given EDI’s maturity, the eventual exodus of EDI specialists within an organization can leave tremendous knowledge gaps within businesses that heavily depend on EDI. The loss of experienced EDI personnel internally raised doubts about its continued longevity.

4**REPLACEABLE**

The structured XML file was predicted to replace EDI, but its main selling point was that it could be read and understood by a human. In a digital world that clearly was shifting toward less human interaction – not more – this wasn’t a feature at all. Plus, EDI is still more standardized, is generally a smaller file size, and can include more than just text. And then APIs came along and promised advanced integration, real-time syncing, and customizable connectivity.

What’s Going On

When you start considering EDI – and more importantly, EDI-driven B2B processes – as a piece of a broader B2B integration strategy, things get complicated.

It’s part of the reason so many businesses had such little faith in EDI, because they always assumed EDI delivered the entire B2B process, which is a common misunderstanding.



In the chart to the right, most vendors can provide EDI, data transformation, and data orchestration capabilities (Nos. 1, 2, and 3). But very few organizations can deliver the surrounding B2B and integration layers to execute Nos. 4 and 5. And modern companies, which need to execute all five in today’s digital business ecosystem, are catching on to the fact that they are only getting some of the capabilities they require.

Because of these vendor and technology shortcomings, organizations desperately wanted to believe APIs were the silver bullet to solving these communication needs. What they were really looking for, however, was a comprehensive B2B integration platform.

Why B2B + EDI is So Difficult

1

EDI itself is easy: It’s a language with well-known dictionaries, such as X12 or EDIFACT.

2

EDI transformation is tough: You have to keep track of internal data definitions, mapping, and partner configurations.

3

EDI transformation & orchestrations are tougher: You have to reconcile, associate, and maintain dependencies to keep data aligned and moving.

4

B2B data flows with EDI transformation & orchestrations are ridiculously tough: When EDI goes outside your four walls, you have to do all the above in foreign-controlled environments and it has to be fully governed.

5

Integration of B2B flows with EDI transformation & orchestrations is nearly impossible: You have to do all the above, and then construct, dismantle, and reconstruct EDI into transactions that are integrated seamlessly into business applications and cloud services, such as Shopify, Magento, and Salesforce.

Why APIs Can’t Shoulder the B2B Burden

One of the main threats to continued EDI adoption was the rise of APIs, which were developed to support system connectivity and program interaction in the cloud era. While API-led vendors promised a brave new world of cloud and B2B integration, an EDI trading partner connection and an API are not the same thing.



APIs are more static. They tend to be built to spec from the beginning, and changes to communications between two organizations are not easily accepted without breaking functionality. Thus, partner provisioning and change management options are limited burden because modifying an API requires further development.

With trading partners, however, the interactions are more dynamic. Security certificates expire, IP addresses change, and SLAs are modified to adjust to business needs and market expectations. These trading partner interactions are part of the standard integration offerings from B2B-led vendors.

API-led integration remains insufficient for large trading partner networks that require lots of onboarding, scale, governance and community management.

API Limitations

1**LITTLE LEGACY SUPPORT**

APIs are less compatible with legacy systems than other B2B technologies, making it extremely unlikely that businesses can exclusively communicate using APIs.

2**UNSTANDARDIZED**

Few APIs work right out of the box and require tweaks to the code, which can slow partner onboarding processes.

3**CODE-HEAVY**

APIs require development, and many companies don’t have the developers on staff or the money to pay consultants to make a change.

4**REUSABILITY**

Organizations often spend lots of money to build a single API, but that investment often doesn’t carry over to another partner API, which may require different specs.

5**SCALABILITY**

With so much custom development, an API-led infrastructure is difficult to maintain and scale for B2B processes with large volumes of trading partners.

6**SECURITY**

Every new API exposes another attack surface that can leave your organization vulnerable.

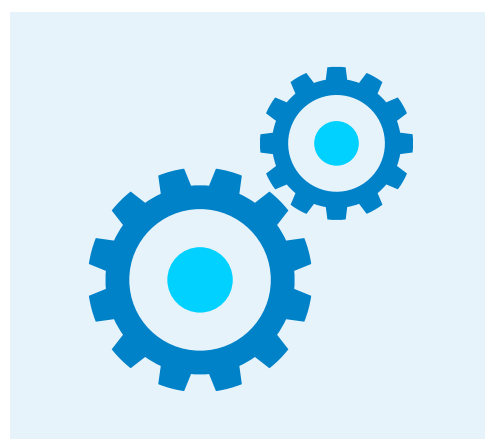
EDI Adoption is Actually Growing

New ways of accomplishing EDI, including directly connecting and leveraging the cloud, have paved the way for organizations to consume the benefits of EDI. The widespread adoption of protocols like AS2 and the continued innovation in data transformation technologies improved the efficiency of the EDI process and now enables organizations to leverage more cost-controlled connections. In fact, the use of **EDI is growing about 7 percent a year** worldwide, and that’s because every industry uses it.



Retailers

Retailers embraced e-commerce early on by prioritizing connections with business partners and automating data flows, and Walmart now mandates AS2 for its EDI communications.



Manufacturers

Manufacturers use EDI to source parts, take and process orders, and track deliveries to retail outlets and fulfillment centers.



Logistics

Logistics organizations rely on EDI for partner management and visibility into the extended supply chain.



Healthcare

The healthcare industry mandates that insurance claims be done in EDI to comply with HIPAA requirements and improve payment efficiency.



Financial Services

Financial services organizations rely on EDI to securely exchange and automate complex payment processes.

New Ways to Accomplish EDI

When its use is so prevalent and often mandated, it’s difficult to argue that EDI is obsolete. And that’s why the best EDI providers, instead of packing up shop and moving on, are working to enhance and innovate solutions that integrate EDI into other workflows.



What businesses are seeing, then, is a shift in ways to accomplish EDI and what it means to be “doing EDI.” But some vendors try to pretend they know what it means to be doing EDI, only to sell you something that can’t meet your needs or the needs of your trading partners.

Current architectural approaches peppered with outdated legacy solutions and custom scripting cannot help you manage the entire life cycle of your value chain.

BIG EDI

vs. little edi

EDI’s image problem stems from what too many technology vendors try to define as EDI, and the reason so many people are calling for EDI’s head is that there are too many businesses selling things under the guise of EDI that aren’t really EDI.

Companies traditionally did EDI through a VAN or directly via AS2 and other protocols if they had the skills and budget. Somehow, though, building an EDI capability into a development environment became commonplace. This supposedly eliminated the need to architect EDI ever again because every service you build would already have EDI in it. But that “EDI” often is just data transformation and can’t scale and support the processes surrounding EDI exchanges.

That’s the difference between “big” EDI – a set of B2B processes that support high-value outcomes – and “little” edi – technology that only serves a fraction of the B2B capabilities modern companies need to do EDI effectively.

The perceived death of EDI, then, is the growing agreement of organizations that don’t know what it’s like to be doing “big” EDI. They’ve never experienced EDI to its full extent because their previous vendors could not deliver it. Thus, EDI becomes unwieldy and complex – and wished away – because the wholly inadequate “little” edi is the only type of EDI companies know.

Chapter Four

What Others Think EDI Is

“Little” edi Rears Its Ugly Head

EDI is a set of processes that support high-value business outcomes, yet too many technology companies still view it as a standalone process that’s easy to solve, or worse, as an unnecessary step when APIs are available. Reducing EDI to a line item on an RFP or as a legacy technology no one wants to support does a critical disservice to global organizations that require real partner onboarding, partner management, and visibility.

Some of the EDI myths these organizations tend to propagate:



Myth 1: EDI is easy and self-serviceable

It should be, but it’s not what the marketplace is saying or what expert EDI companies are seeing. EDI is the workhorse of the supply chain, and it’s a process that requires specialized expertise and integration with other business processes.



Myth 2: EDI is pure transformation

Claiming that EDI is an individual transformation reduces it to something like this: “I have a translator. I have a map. I know when I put the letter A in, the number 1 comes out and my system can accept it. That’s EDI.” That’s not EDI; that’s a simple mapping exercise and a fraction of the overall B2B integration process.



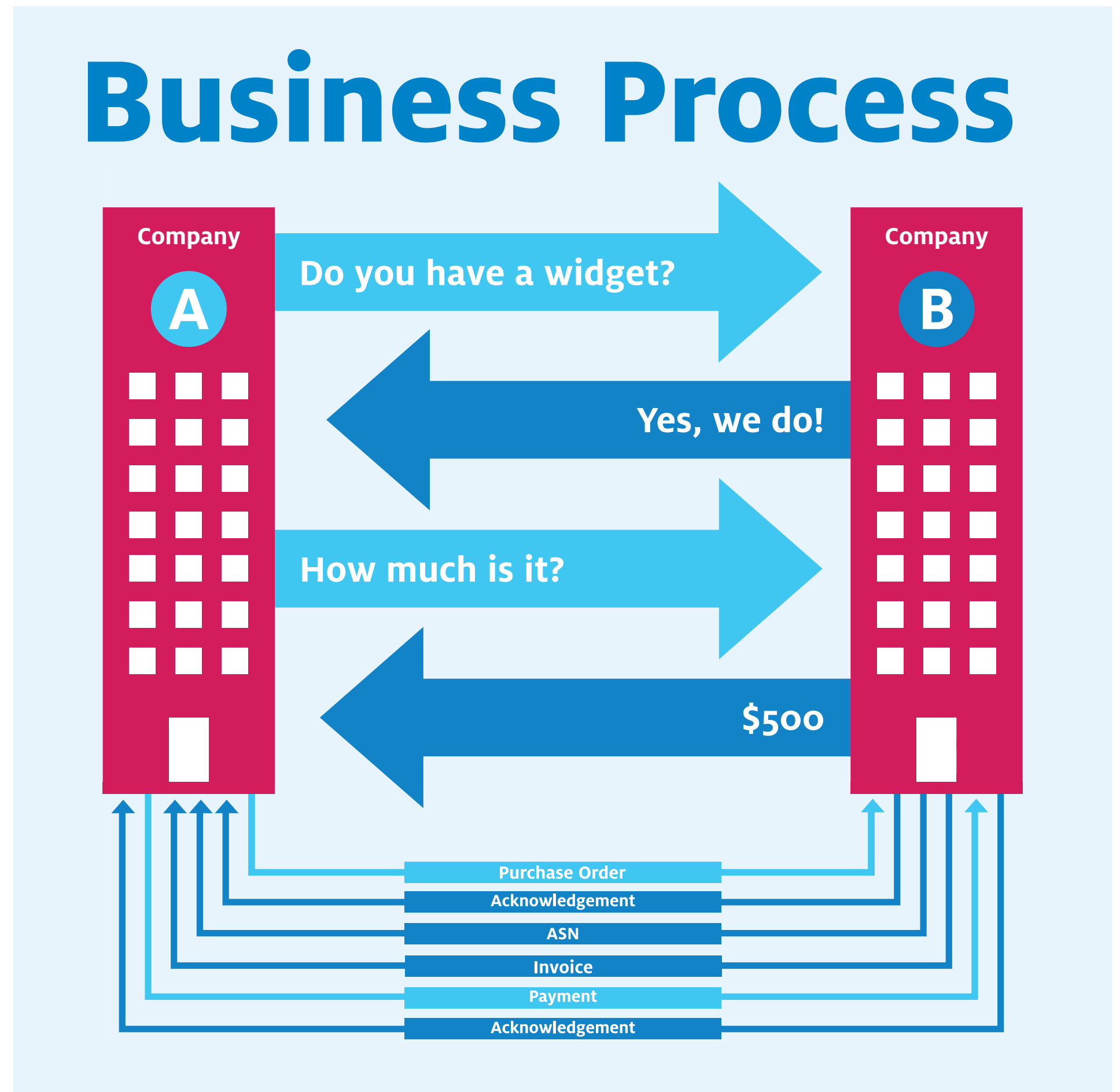
Myth 3: EDI is commodifiable

Treating EDI as a widely available and interchangeable commodity negatively affects its importance and reduces it to something less than it is. EDI workflows are difficult and complex, and many so-called experts don’t understand the full scope of what EDI means to a business.

A Small Piece of the Process

EDI affects value and alignment to business outcomes, and the supposed EDI companies telling customers and prospects that it's anything less is a flawed story.

What companies really mean when they talk about EDI – and the need to do EDI – is the overall set of EDI processes and their roles in reliable B2B integration.



Chapter Five

What EDI Really Is

This Isn't Your Grandfather's EDI

In the modern digital business ecosystem, EDI has grown beyond the simple exchange of standard electronic documents.

The inherent complexity of billion-dollar companies doing business with thousands of vendors, suppliers, customers, and other trading partners around the world means the ability to govern and manage these data flows is needed now more than ever.



That's why "doing EDI" is more than just mapping and translation. It's more than just secure file transfer. When customers talk about EDI, they aren't talking about the format or its standards. They're talking about a broader set of B2B processes that support high-value business outcomes.

That's why true EDI must be articulated as a set of governance, management, visibility, and onboarding processes. What we're really talking about, then, is the idea that EDI is part of a broader B2B integration strategy.

B2B integration is more than the EDI processes themselves. It's the accumulation of EDI workflows and the onboarding, orchestration, trading partner management, visibility, and other capabilities that support them.

EDI, Partner Enablement, and Increased Business Value

How soon can we start ...?

How can I guarantee ...?

Who can I connect with ...?

How can I see that ...?

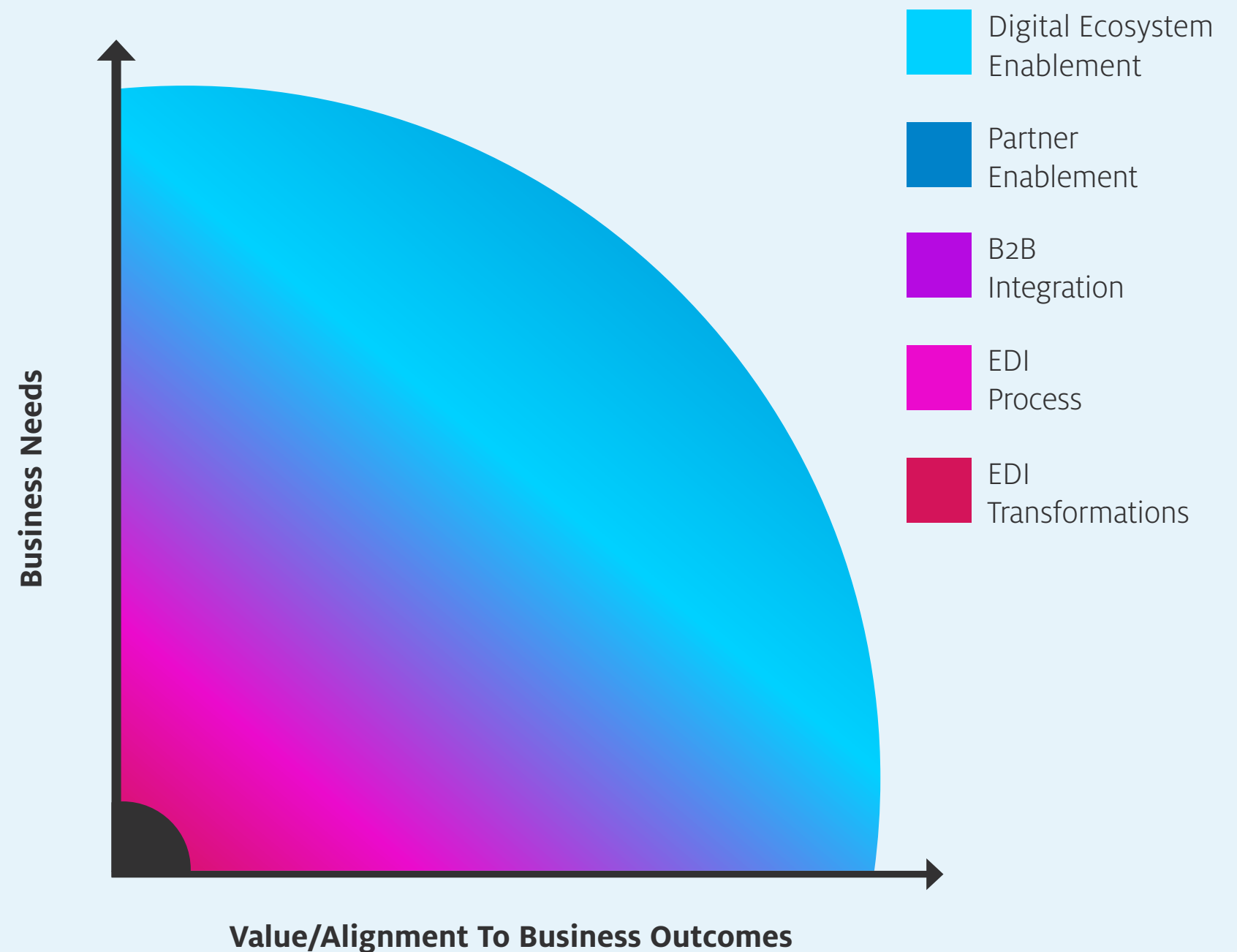
When organizations start asking questions like this, they are asking for information about their EDI processes, namely partner enablement. These partner enablement requirements matter to organizations because they represent business revenue, and that's extremely powerful.



It's also why EDI cannot be reduced to a simple mapping exercise or data transformation.

Savvy organizations leverage “big” EDI integration to answer the aforementioned partner enablement questions and improve relationships, build a high-functioning digital ecosystem, and gain business value.

Ecosystem Enablement & Business Outcomes



Chapter Six

EDI and the Future

New Ways to Deliver “Big” EDI

So, what’s this all mean for EDI and companies looking to do “big” EDI? It certainly means they must consider technology that integrates EDI workflows with other business workflows and delivers the broader B2B integration required. But it also means the technology to accomplish it also must fit their businesses.



EDI Deployment

New ways of accomplishing EDI, then, must also be complemented by new ways to deploy EDI. Leading vendors who understand the technology it takes to deliver EDI also will support EDI in the cloud, managed EDI, and fully-outsourced EDI.

When it comes to EDI and its surrounding B2B processes, businesses understanding what they need and how they need it are quickly gaining a competitive advantage because they understand EDI's importance and the value to the business now and in the future.



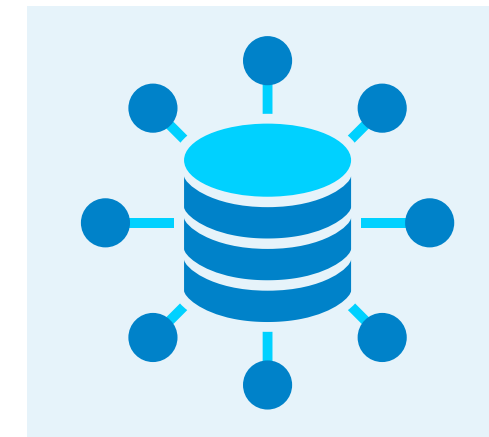
EDI in the cloud

Companies can leverage the -as-a-service model to manage their EDI processes from anywhere and keep a lightweight IT footprint.



Managed EDI

Organizations looking to mitigate rising complexity, costs, and strain on IT staff choose experts to professionally manage their EDI processes.



Fully-outsourced EDI

Vendors host and deliver all the EDI services a business needs, taking the time and resource burden off the business.

The Data About Data

With EDI delivering so much information on core revenue-generating business transactions, accomplishing EDI in a modern way also promises to deliver value down the road as companies embrace “data about the data.”

EDI will continue to be this set of processes that exist, but the data and visibility around the execution of those processes becomes incredibly valuable. When companies buy into big data and data analytics, what they end up with is a mountain of transactional data between the company and the community.



When you run analytics on such data it will tell you:

- Who your important partners are
- How much and what type of business they do
- How happy they are in doing business with you
- When they're upset – and when they might get upset in the future
- When they don't want to do anymore business

Consolidating and streamlining EDI processes delivers an integrated cache of data to better understand partner relationships and how they drive your business.

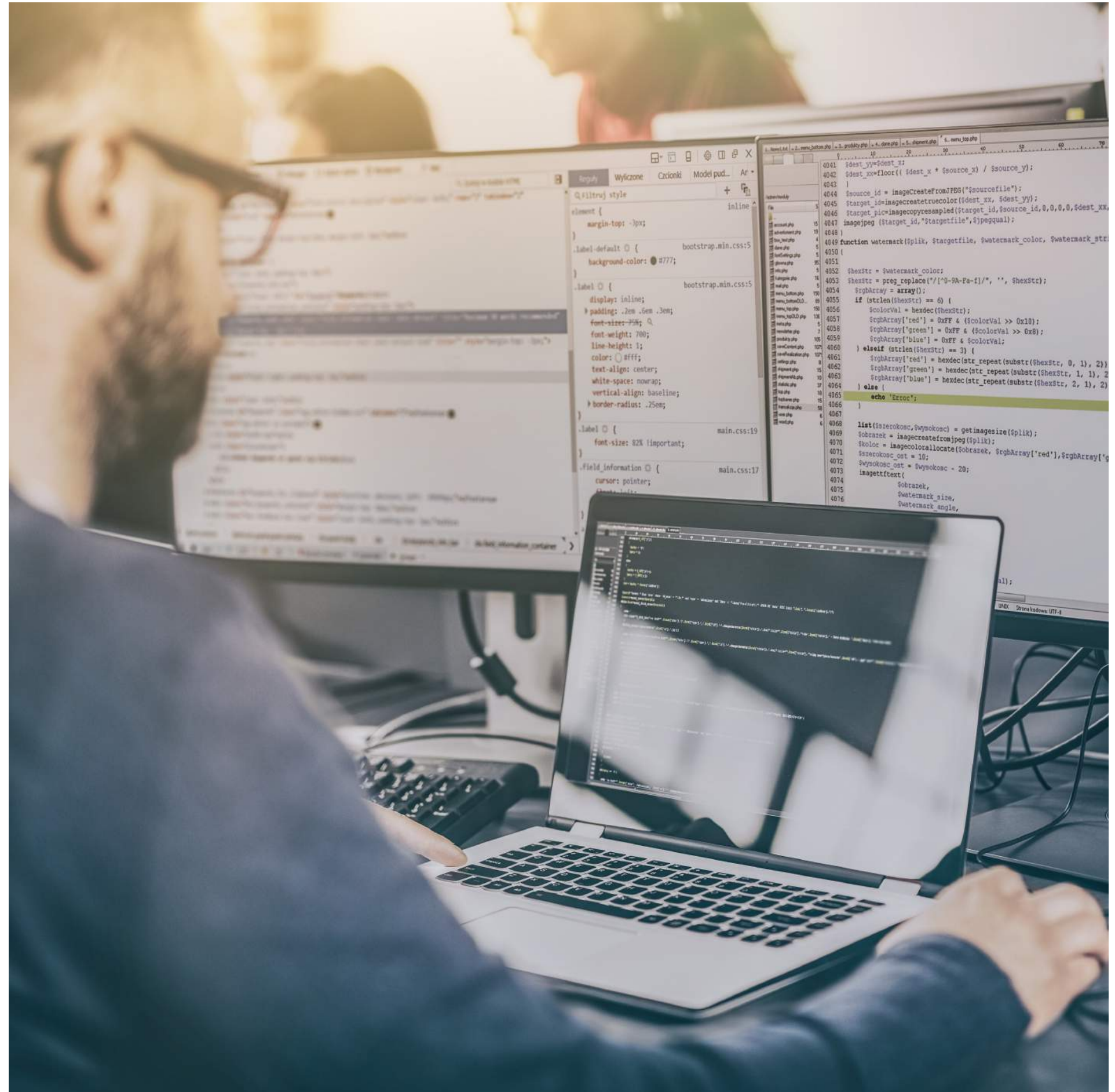


Chapter Seven

Conclusions

What It Really Means to Do EDI

EDI is more than just a standardized data format that's used in businesses all over the world. It's a set of processes that enables B2B communication with external trading partners in a way that supports broader business value.



Accomplishing EDI isn't just:

- Exchanging data. It's securing and governing the data flows that drive revenue.
- Transforming data. It's integrating that data into your broader IT infrastructure for comprehensive business control.
- Communicating with partners. It's understanding and managing those partner relationships to better meet SLAs and elevate customer service.
- Processing orders. It's monitoring and improving each part of the process through enhanced visibility and reporting.

While APIs increasingly will be used to complement EDI-based transfers and integrate with applications, they can't support the entire set of processes to facilitate modern B2B integration.

The need for standardized B2B communications isn't going away, and EDI will take on new shapes and deployments

to continue delivering high-value outcomes to organizations. The need for standardized B2B communications isn't going away, and EDI will take on new shapes and deployments to continue delivering high-value outcomes to organizations.

It's up to each business to have an honest evaluation of whether its EDI integration capabilities deliver the governance, management, visibility, and onboarding processes that enable the most important business outcomes.

When you're ready to execute the modern EDI required in today's digital business ecosystem, [contact Cleo](#) today.

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