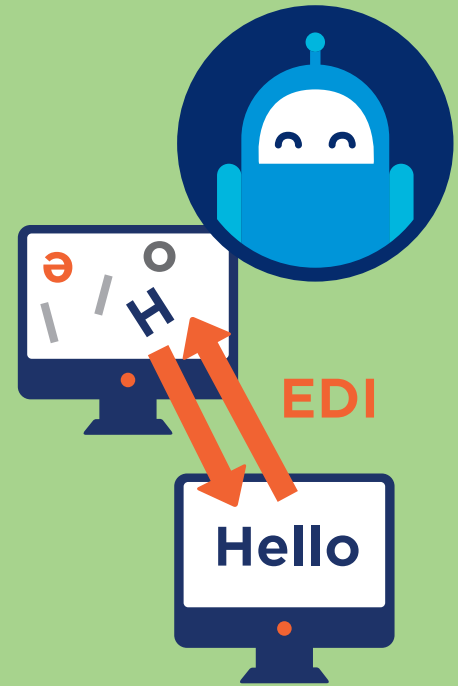A beginner's guide to
Electronic Data Interchange (EDI)

A non-technical overview for those new to EDI

Contents

What is EDI?

The letters "EDI" stand for "Electronic Data Interchange". EDI is the exchange of electronic documents (also referred to as messages) between businesses, such as a retailer and its supplier, using a standardised format that allows different computer systems to communicate with each other.

Two of the most common messages exchanged in this way are an "Order" from a customer to a supplier, and by return an "Invoice" from the supplier for the goods sold to a customer.

EDI replaces paper-based documents that were previously sent by post or fax with electronic equivalents.

What is the difference between EDI and sending a PDF by email?

Although PDF's are electronic files that are exchanged by computers, they do not have a standardised structure and are therefore not EDI messages.

Sending a PDF by email requires human intervention – to create and send the PDF on one side and then for the receiver to open it and process the information it contains.

EDI is a direct machine-to-machine communication which enables the automated exchange of documents, avoiding the need for manual processing, which is both time consuming and error prone.

Why do businesses use EDI?

EDI enables the fast, accurate, reliable and automated exchange of business documents, removing the need for manual paper-based processes.

There are many benefits of EDI for businesses of all sizes, operating in many sectors including retail, food, logistics, distribution, construction, manufacturing and many more.

EDI is now the standard way in which most larger organisations trade with their supply chain partners and, as a result, suppliers of goods and services are at a real competitive advantage if they can trade electronically via EDI with their customers. In fact, many companies insist that their suppliers trade with them via EDI.
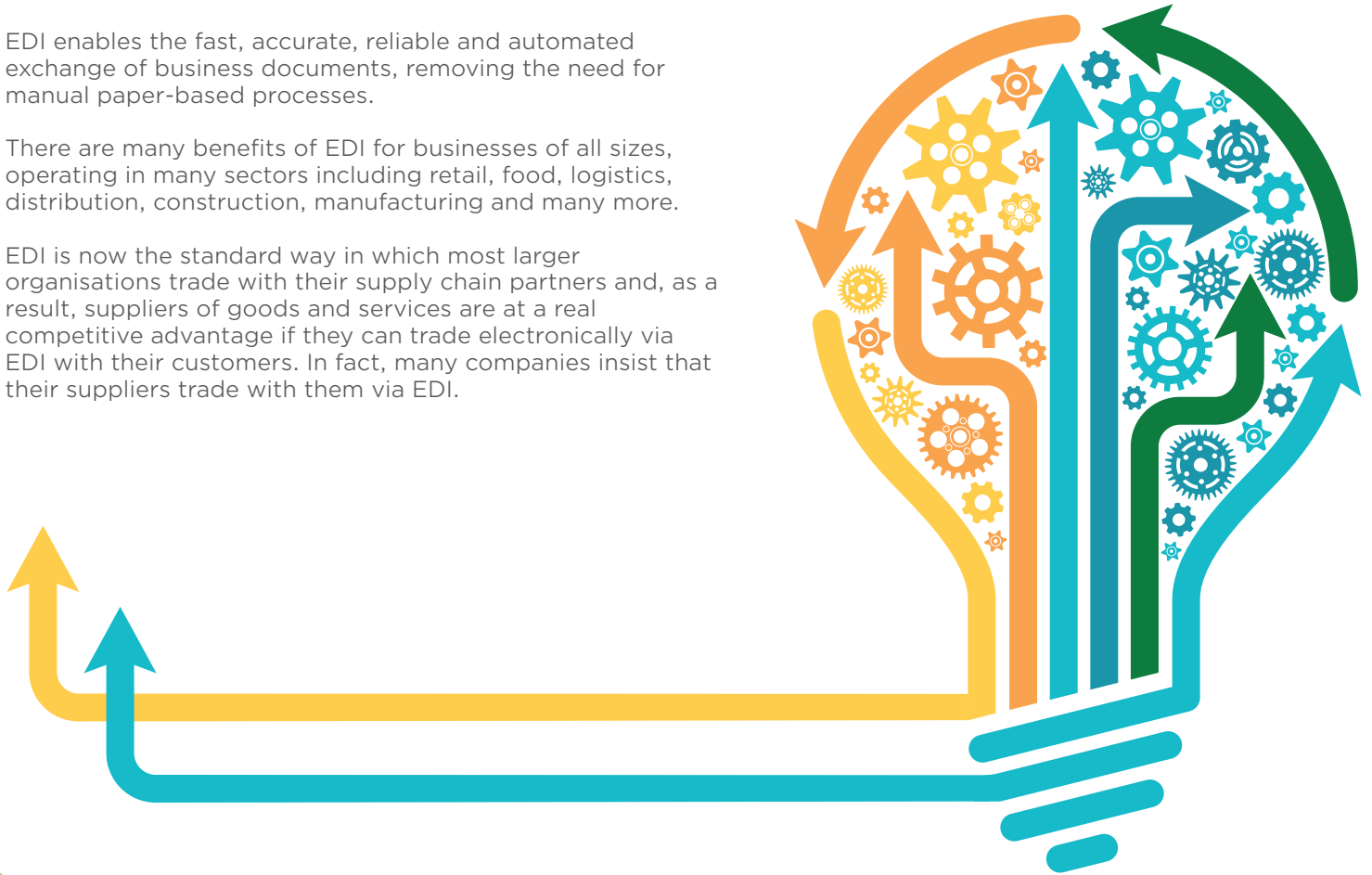
How does EDI work?
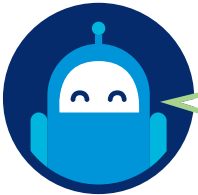
In taking a very simplistic view of EDI it is a coded conversation between two computer systems regarding the ordering, delivery and payment of goods or services.

1. On one side, a customer sends an order to a supplier.

2. The supplier's system acknowledges receipt of the order and confirms what goods will be delivered.

3. When the delivery arrives, the customer acknowledges receiving the goods and the supplier forwards the invoice for payment.

Whilst exchanging orders and invoices electronically delivers substantial benefits, EDI can be used for so much more.

Today many companies are expanding their use of EDI to include additional messages including advanced shipping notifications (ASNs), proof of delivery (PODs), receipts and forecasts.

Purchase Order

Delivery Docket

Invoice

Payment

Customer

Supplier
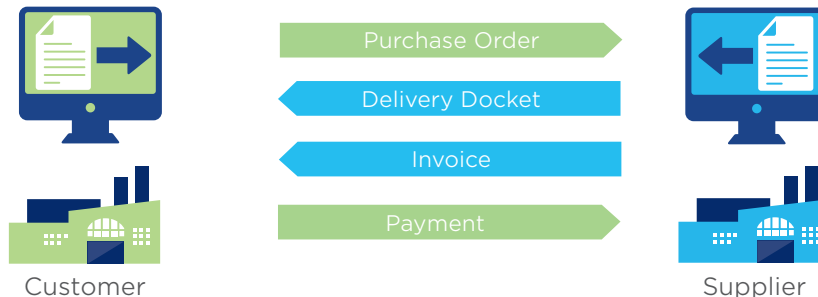
Standardising business information

GS1 standards begin with GS1 Identification Numbers, used to uniquely distinguish products, logistics units, locations, assets and relationships across the supply chain. GS1 Identification Numbers provide the link between an item and information about it and are the foundation for all GS1 standards. Two of the most common used in EDI are:

GLN – Global Location Number – an identifier for a trading partner (business) or location (address). GLNs are used to identify the sender and receiver of a message. For this reason GLNs are also referred to as "EDI Mailbox Numbers" and are licenced by users from GS1 Ireland.

GTIN – Global Trade Item Number – an identifier for a product (or a barcode number in layman's terms). Trading Partners use GTINs to communicate about items that they price, order or invoice.

EDI Standards

EDI standards define the format and structure of EDI messages to ensure that the computer systems of all parties involved in the exchange of messages can receive and process the messages.

EANCOM, based on EDIFACT, and GS1 XML are the two GS1 EDI standards. Others used internationally include Tradacoms, ANSI X12 and UBL XML.

How are EDI messages formatted?

Basic business documents, when printed on paper, follow a similar layout and format, with related information grouped on the page, to help humans read and interpret them.

Typical information groups include:
• Name and address of message sender
• Name and address of receiver
• Product details – name and quantity being ordered or invoiced
• Delivery details e.g. date and location

If you look at a printed invoice you'll see these basic groups of information. The same is true of EDI messages.

Types of EDI

There are two main types of EDI:

Web EDI
Web EDI is perfect for companies that are new to EDI that only need to trade electronically with one or two customers, exchanging a relatively low number of documents.

Web EDI is also ideal for companies with limited technical capabilities and that require a quick and easy-to-use solution to comply with their customers' EDI requirements.

It is important to note that Web EDI does require manual processing, which is one of the reasons why many companies progress to implementing an integrated EDI solution.

Integrated EDI
Integrated EDI is for those companies that want to take full advantage of the benefits of EDI by removing manual processes and completely automating the exchange of business documents.

An integrated EDI solution is connected to a company's back office system, removing the need for manual re-keying which is both time consuming and error prone.
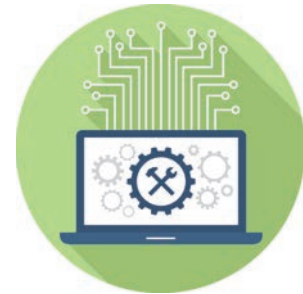
EDI delivery models

There are two main EDI delivery models:

On-premise EDI

On-premise EDI or in-house EDI as it is also known is a solution that is hosted locally and maintained by internal IT resources.

An increasing number of companies are moving away from on-premise EDI solutions as they are notoriously difficult, expensive and time-consuming for in-house IT staff to manage. Multiple connectivity protocols such as AS2, FTP and SFTP create complexity and keeping up with this great variety of formats is a daunting prospect.

Companies can also be left exposed if internal IT resources leave the company as the solutions are often bespoke.

Outsourced EDI

Outsourced EDI solutions are hosted by a third party provider meaning that no costly hardware or software is required and elements such as disaster recovery are dealt with by the provider.

With basic outsourced solutions the management of the EDI solution, for example resolving EDI issues, is still the responsibility of the company. However, more advanced outsourced solutions that are delivered as a managed service, remove the burden from internal resources and the day-to-day running of the EDI solution is looked after by the third party provider.

The managed service model is becoming increasingly popular as companies continue to realise that a basic outsourced solution can still be a considerable drain on internal IT resources.

Selecting an EDI service provider

There are certain factors that are important to consider when looking for an EDI provider to ensure that you choose the right partner for your organisation.

Whether you are new to EDI or looking to migrate from an existing EDI provider you should ask the following questions:

1. Are existing customers of the provider willing to speak to prospective new clients? Are case studies available?

2. Can the solution integrate you with your trading partners, irrespective of their technical capabilities, connection protocols, data formats and back-office systems? For example, do they offer Web EDI and Integrated EDI options?

3. How scalable is the solution in terms of usage, volume and functionality?

4. Are you signing up to an on-premise or outsourced solution? If outsourced, is it delivered as a managed service? What is included in the service?

5. Is the implementation and onboarding process managed on your behalf? If so, will you receive a project plan, including time-lines?

6. What levels of support are available? Is full support available 24/7? What are the costs?

7. How stable and reliable is the solution? What SLA is guaranteed?

8. How secure is the solution? Does it meet the necessary EDI message and security standards?

9. Is the price fixed or variable? What does it include? Are there any upfront or hidden costs?

10. Does the provider simply offer basic EDI or is there any additional functionality, for example, business activity monitoring (BAM) and supplier performance management?
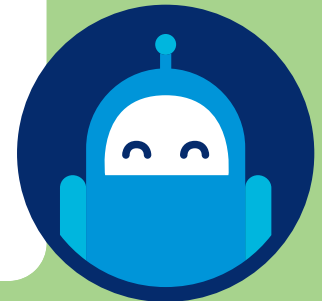
Frequently used terms explained

A short glossary of terms often heard when talking about EDI.

ANSI ASC X12: Also referred to as ANSI X12, is the most common EDI standard used in North America.

AS2: Applicability Statement 2 - a specification for transporting data securely and reliably over the internet using Hypertext Transfer Protocol (HTTP). Security is achieved by using digital certificates and encryption.

ASN: Advanced Shipping Notice is an electronic notification of an upcoming delivery which is sent directly from a supplier or third-party logistics company to a buyer, and indicates when a shipment was sent, the carrier used to ship it, and how it was packed.

Connectivity: The ability to make and maintain a connection between two or more points in a telecommunications system. The typical mechanism for establishing connectivity in an EDI system is a Value Added Network (VAN).

Data Element: The smallest unit of information in an EDI transaction set, such as quantity. Data elements combine to make data segments.

Data Segment: A group of information in an EDI message, made up of data elements.

DESADV: This is the Despatch Advice EDI message. It is sent by a supplier and details the products that have been shipped or are due to be shipped.

EANCOM: GS1 EDI Message Standard.

EDIFACT: United Nations/Electronic Data Interchange For Administration, Commerce, and Transport (UN/EDIFACT or EDIFACT) is the international EDI standard developed under the United Nations.

GLN: Global Location Number – a code identifying the sender or receiver of a message or a physical location for a delivery. A GS1 standard identification number.

GTIN: Global Trade Item Number – a unique identifier for a product.

Integration: Integration refers to the process of exchanging data between two different applications in an automated fashion (with little or no manual intervention). In the case of EDI integration, solutions are most commonly integrated with accounts, ERP or WMS systems.

Mailbox: An EDI mailbox is a file storage area within a computer which can be uniquely identified from connected mailboxes and VANs in other locations, and where EDI messages are consolidated and stored for retrieval by a vendor or supplier.

Mapping: The process of converting data into the required EDI format.

TRADACOM: An EDI standard introduced in 1982 as a precursor to EDIFACT in the UK. The development of Tradacoms ended in 1995 in favour of the EDIFACT EANCOM subsets.

Translation: The act of converting a business document from one EDI standard to another so it can be understood by the receiver.

Value Added Network (VAN): A secure private network which acts as an intermediary to enable EDI connectivity between trading partners and other VANs.

XML: eXtensible Markup Language.

TrueCommerce EDI Managed Service

TrueCommerce helps businesses transform EDI from a potentially expensive but unavoidable overhead into a business opportunity, by providing the necessary experience, skills and infrastructure, allowing companies to concentrate on their core competencies.

As a fully managed service, those outsourcing to TrueCommerce are free from the burden and risks associated with technical issues, maintenance costs and the need to keep abreast of advancing technology.

The TrueCommerce global trading partner network connects seamlessly with the leading ERP and business systems, whilst the TrueCommerce Managed Service provides you with all the components needed to implement EDI with your customers and suppliers:

* A fully hosted solution — no additional infrastructure is required

* A complete EDI service covering the implementation and on-boarding process as well as the day-to-day running of the EDI service

* The pro-active monitoring of the platform for message validation errors

* Dedicated support from the TrueCommerce UK and Ireland-based managed service team

The TrueCommerce offering ranges from fully integrated EDI to simple EDI using a web portal, with a solution to suit all requirements.

Connect.   Integrate.   Accelerate.

About GS1 Ireland

GS1 develops, maintains and licenses global standards that are used to improve the efficiency, safety and visibility of supply chains across physical and digital channels.

Together, GS1 standards form a common language that facilitates the identification, capture, sharing, and use of key information about products, locations, and assets between trading partners. GS1 standards are used daily in supply chains in more than 25 sectors, including Retail, Consumer Goods, Food, and Healthcare.

About TrueCommerce Europe

TrueCommerce gives organisations the competitive edge with a flexible and cost effective solution that harnesses the scale of our global commerce network underpinned by our best of breed managed service, delivered by locally based service consultants.

With TrueCommerce, organisations of any size can easily connect with any trading partner while enjoying the peace of mind of a proven platform that reliably handles tens of millions of transactions annually.

GS1 Ireland
2nd Floor The Merrion Centre,
Nutley Lane, Donnybrook,
Dublin 4, Ireland.

T +353 1 208 0660
E info@gs1ie.org
www.gs1ie.org

Connect with us

TrueCommerce Europe
The Digital Depot
Thomas Street
Dublin 8, Ireland

T +353 1 511 1263
E infoie@truecommerce.com
www.truecommerce.com/uk-en

Connect with us