

Introduction

A common feature requested as part of an ERP project is EDI. EDI is somewhat misunderstood, and therefore this Whitepaper attempts to explain what EDI is, how it is both part of an ERP and completely separate from ERP, and the various “parts” that are needed to make it work.

What is EDI

EDI stands for Electronic Data Interchange, and was a technology that evolved from booking systems in the airline industry. As a mainstream ERP requirement, it was expanded primarily for the automotive industry and entered widespread use in the 1980s.

It is very important to understand that EDI was designed to work on very low speed modems, prior to the introduction of the Internet. It is therefore a very old technology. It involves sending and receiving special EDI “Files” that are intended to transfer data between companies.

EDI lack of “Standards”

When EDI began to be adopted around the world, different organizations tried to create “standards” to be used. For instance, a standard 850 Purchase Order (see side bar) sent from your trading partner (customer) to you was to be standardized.

What actually happened in real life is that every company adapted and “changed” the standard to suit their business. What this has meant is that handling a purchase order from one customer can still result in significant setup costs to be able to handle a purchase order from a second customer. This is one of the big “problems” with EDI.



Trading Partner

Any company that expects EDI documents as part of doing business with you is considered a Trading Partner. Usually for the SMB manufacturing company, their customers are their trading partners. For large manufacturing companies, the supplier base and customers would be trading partners.

The VAN

The VAN or Value Added Network is a legacy business process that is still in use today. A VAN transfers EDI documents between Trading Partners. Technically a VAN is provider of a form of secure, private Email.

Documents

EDI is driven by the idea of exchanging documents electronically instead of via paper, fax or PDF. The most frequently exchanged documents are the: 850 Purchase Order, 810 Invoice and the 856 ASN or Advance Shipping Notice. These documents are defined by a special “flat file structure” that is supposed to be universally used, but varies so dramatically that they really only serve as broad guidelines.

EDI Components

EDI starts with an ERP. In the case of an inbound document (being sent to you) your customer's ERP will export a Flat File which is in-turn picked up by a translator (the EDI Translator software shown in the diagram to the right).

The EDI Translator is often provided by a VAN and is the software that allows the mapping of your ERP data into a format acceptable by your trading partner.

The EDI document is transferred through a VAN or sometimes directly sent via FTP to a trading partner.

When the document arrives, it needs to be "decrypted" into a format that your ERP system can handle. Therefore the receiver must have the EDI Translator software.

Very high end ERP systems will have a native EDI Translator module, but very few mid-market systems have these built in. There is a large community of products available, including specific products from each VAN.

Once the file is decrypted into a standard flat file, that can be imported into your ERP with whatever import technique is normally used.

Some Translator products will combine the Import and Translation/Decryption process, while some will rely on the ERP to handle importing the flat file. Many ERP systems have a base EDI Flat File importing built right in.

EDI Cost

As a rule of thumb, EDI will cost in the \$15,000-\$20,000 to implement for your first trading partner, and \$3000-\$5000 for each additional. Cloud solutions can lower this cost somewhat, although usually at the expense of higher per-transaction fees.

EDI Flow and Modules

