

EDI: Electronic Data Interchange

- ▶ What is EDI?
 - ▶ Exchange of electronic data between companies using precisely defined transactions
 - ▶ Set of hardware, software, and standards that accommodate the EDI process

Electronic Data Interchange

Cost Savings	<ul style="list-style-type: none">◆ Reduction of employee hours involved in creation and handling of paper documents◆ Reduction in the cost of funds transfer◆ Reduction in the cost of storage space◆ No mailing cost
Speed	<ul style="list-style-type: none">◆ Forwarding of documents through a computer network is faster than mail.
Accuracy	<ul style="list-style-type: none">◆ EDI minimizes the need for rekeying information.◆ Communication is direct and easily verifiable.◆ No mail is lost.
Security	<ul style="list-style-type: none">◆ Information is less susceptible to interception and falsification.
System Integration	<ul style="list-style-type: none">◆ EDI software can be interfaced with internal systems so that incoming data trigger applications and further automation of data processing.
Just-in-time Support	<ul style="list-style-type: none">◆ Speeding up communication enhances intercompany just-in-time operations, which significantly reduces inventory costs. Only the necessary items are shipped by the vendor and arrive directly at the manufacturing or assembly line.

Figure 11.2 Benefits of EDI

Electronic Data Interchange

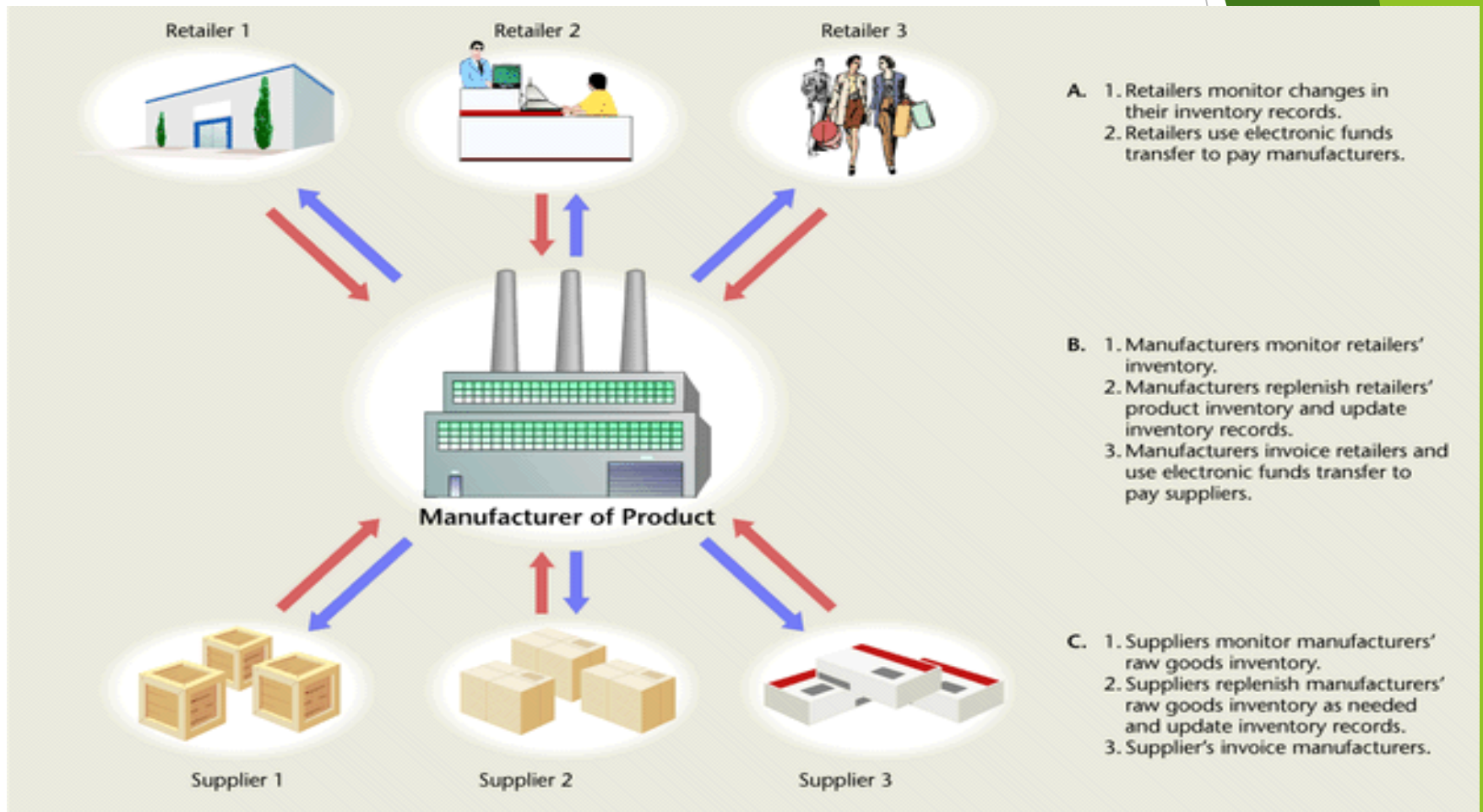


Figure 11.3 Suppliers, manufacturers, and retailers cooperate in some of the most successful applications of EDI.

Electronic Data Exchange

- ▶ How does EDI work? (Figure 11.4)
 - ▶ Supplier's proposal sent electronically to purchasing organization.
 - ▶ Electronic contract approved over network.
 - ▶ Supplier manufactures and packages goods, attaching shipping data recorded on a bar code.
 - ▶ Quantities shipped and prices entered in system and flowed to invoicing program; invoices transmitted to purchasing organization

Electronic Data Exchange

- ▶ Manufacturer ships order.
- ▶ Shipment notice EDI transaction sent (not shown)
- ▶ Purchasing organization receives packages, scans bar code, and compares data to invoices actual items received.
- ▶ Payment approval transferred electronically.
- ▶ Bank transfers funds from purchaser to supplier's account using electronic fund transfer (EFT).

Electronic Data Interchange

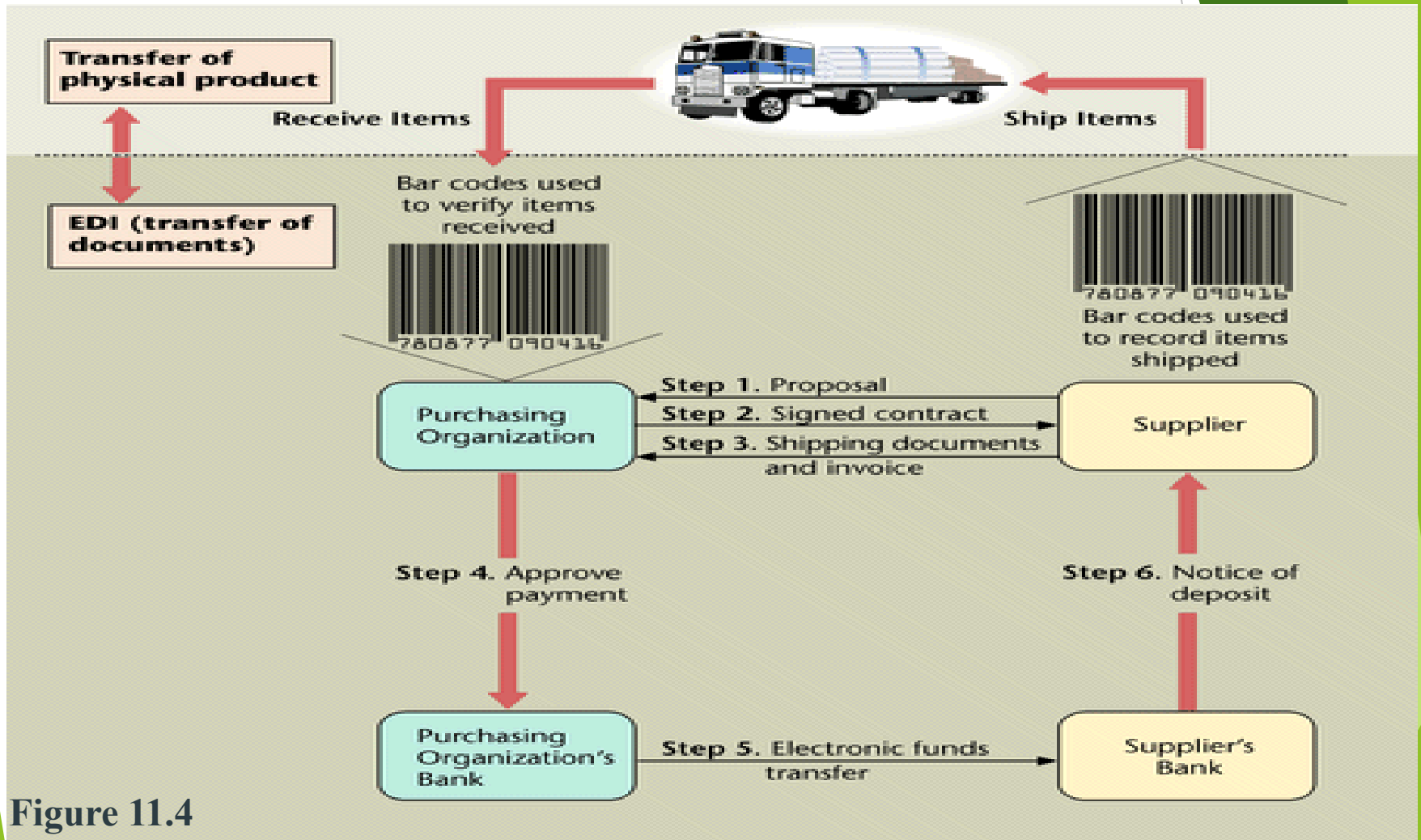


Figure 11.4

Electronic Data Interchange

▶ EDI Standards

▶ EDI requires companies to agree on standards

- ▶ Compatible hardware and software
- ▶ Agreed upon electronic form format

▶ Established EDI standards

- ▶ Automotive Industry Action Group (AIAG)
- ▶ X.12 *de facto* umbrella standard in U.S. and Canada
- ▶ EDI for Administration, Commerce, and Trade (EDIFACT) umbrella of standards in Europe

Electronic Data Interchange

- ▶ How to Subscribe to EDI
 - ▶ Larger companies purchase hardware and software
 - ▶ Medium and small companies seek third-party service
 - ▶ Value-added networking (VAN)
 - ▶ Managed network services available for a fee

Electronic Data Interchange

▶ EDI on the Web

▶ Advantages of Web EDI

- ▶ Lower cost
- ▶ More familiar software
- ▶ Worldwide connectivity

▶ Disadvantages of Web EDI

- ▶ Low speed
- ▶ Poor security

Electronic Data Interchange

▶ The Importance of EDI

- ▶ Need for timely, reliable data exchange in response to rapidly changing markets
- ▶ Emergence of standards and guidelines
- ▶ Spread of information into many organizational units
- ▶ Greater reliability of information technology
- ▶ Globalization of organizations