VALUE ADDED NETWORK [VAN]

GROUP NO 8

WHAT IS VAN?

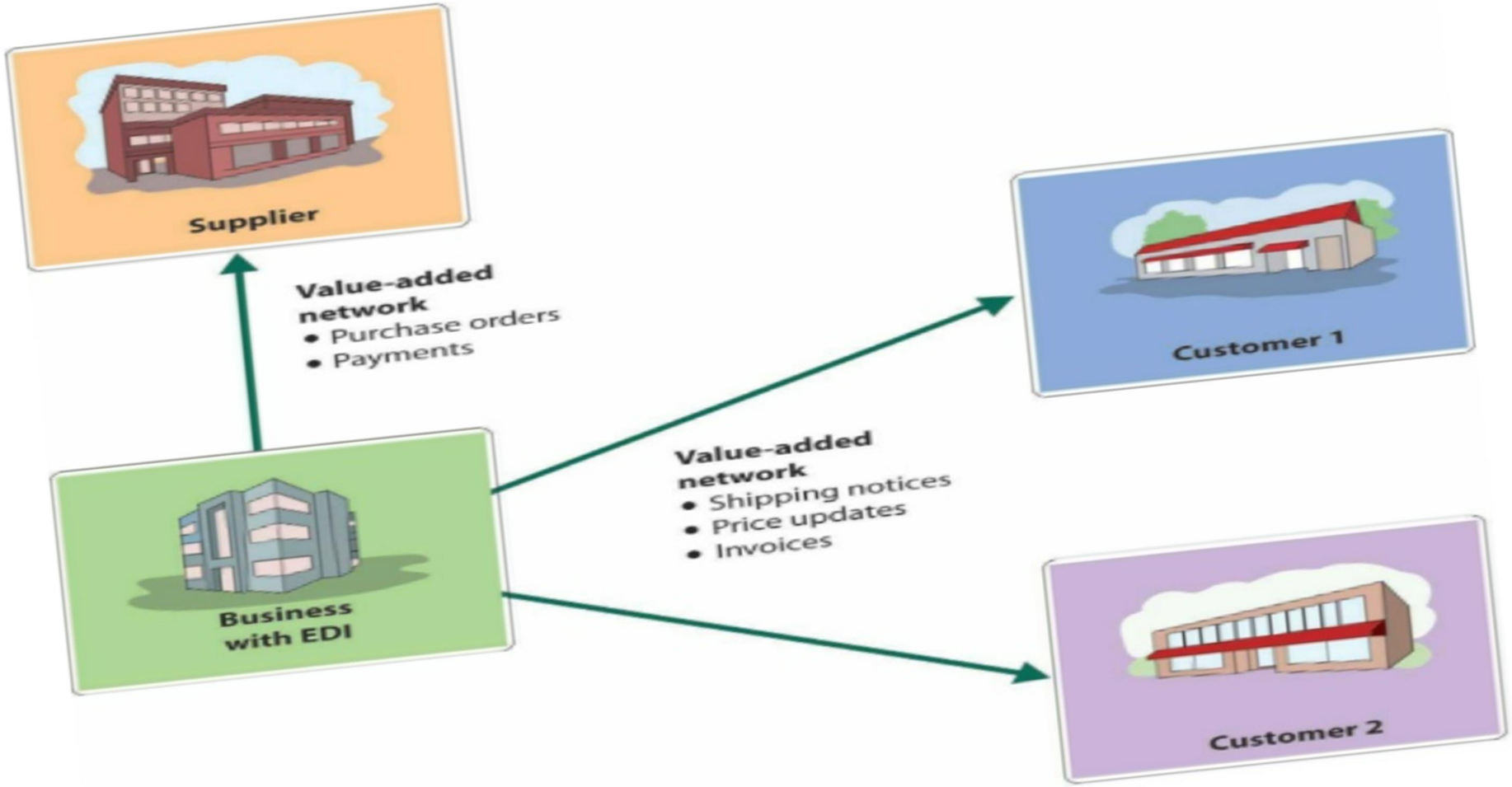
- VAN is private network provider hired by a company to facilitate electronic data interchange (EDI) and/or provide other network services such as message encryption, secure email and management reporting.

- Simplify the communication process by reducing the number of parties

- Typically operates in mailbox scenario(intermediary)

- Intended to save cost and time

- A value-added network (VAN) is a hosted service offering that acts as an intermediary between business partners sharing standards based or proprietary data via shared business processes


Supplier
Value-added network
• Purchase orders
• Payments
Customer 1
Business with EDI
Value-added network
• Shipping notices
• Price updates
• Invoices
Customer 2

WHAT IS VAN?

- Value-added networks are generally used by large companies for efficient supply chain management with their suppliers, or by industry or telecommunications companies.

- VANs usually operate in a mailbox setting, wherein a company sends a transaction to a VAN, and the VAN places it in the receiver's mailbox.

- The receiver contacts the VAN and picks up the transaction, and then sends a transaction of its own.

❑Value Added Network

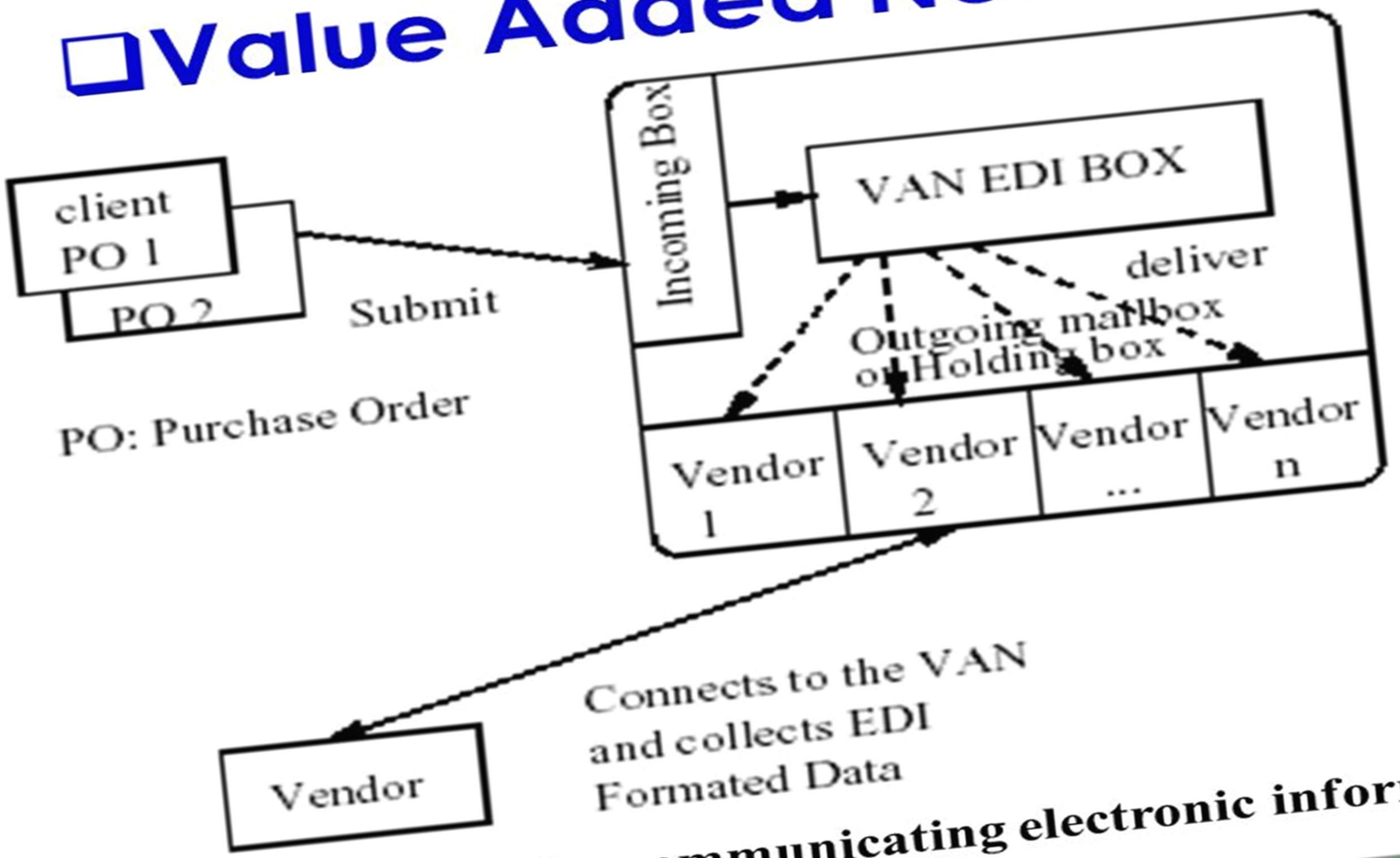
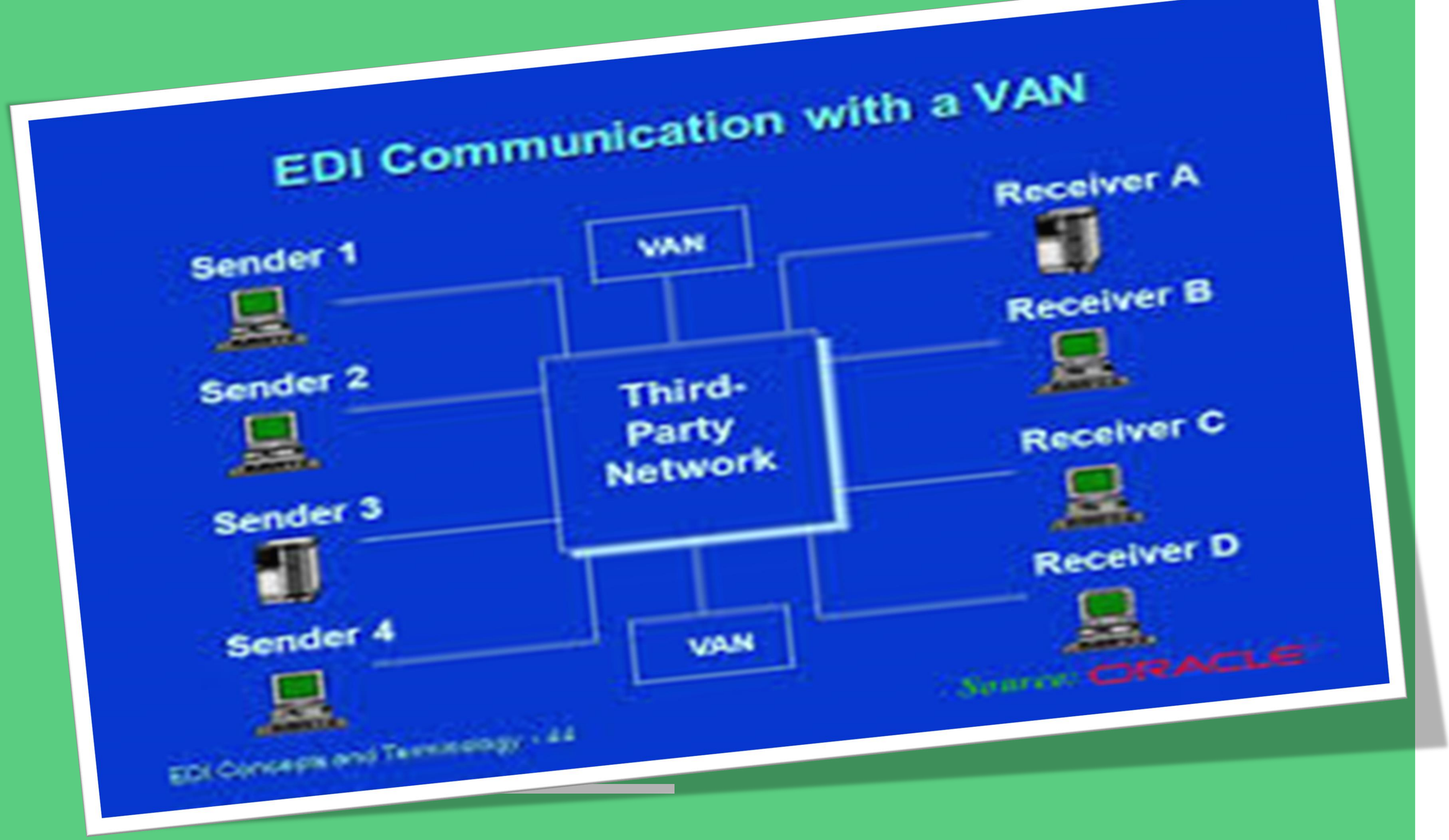


Figure: VAN concepts for communicating electronic information


EDI Communication with a VAN
Sender 1
Sender 2
Sender 3
Sender 4
VAN
Third-Party Network
VAN
Receiver A
Receiver B
Receiver C
Receiver D
Source: ORACLE
EDI Concepts and Terminology - 44

Components Of VAN (Value Added Network)

- EDI(Electronic Data Interchange)
- Mail Box

Components Of VAN (Value Added Network)

EDI (Electronic data interchange)

The full form of EDI is Electronic Data Interchange.

Electronic data interchange (**EDI**) is the concept of businesses electronically communicating information that was traditionally communicated on paper, such as purchase orders and invoices. Technical standards for EDI exist to facilitate parties transacting such instruments without having to make special arrangements.

Direct EDI: peer-to-peer :-
Trading partners can connect directly to each other. For example, an automotive manufacturer might maintain a modem-pool that all of its hundreds of suppliers are required to dial into to perform EDI. However, if a supplier does business with several manufacturers, it may need to acquire a different modem (or VPN device, etc.) and different software for each one

Components Of VAN (Value Added Network)

What is EDI ?

- **Summarised as: A 'Paperless Trading'**
- **Defined as:**
- *'The transfer of structured data,*
- *by agreed message standards,*
- *from one computer system to another,*
- *by electronic means.'*
- **International Data Exchange Association (IDEA**

Components Of VAN (Value Added Network)

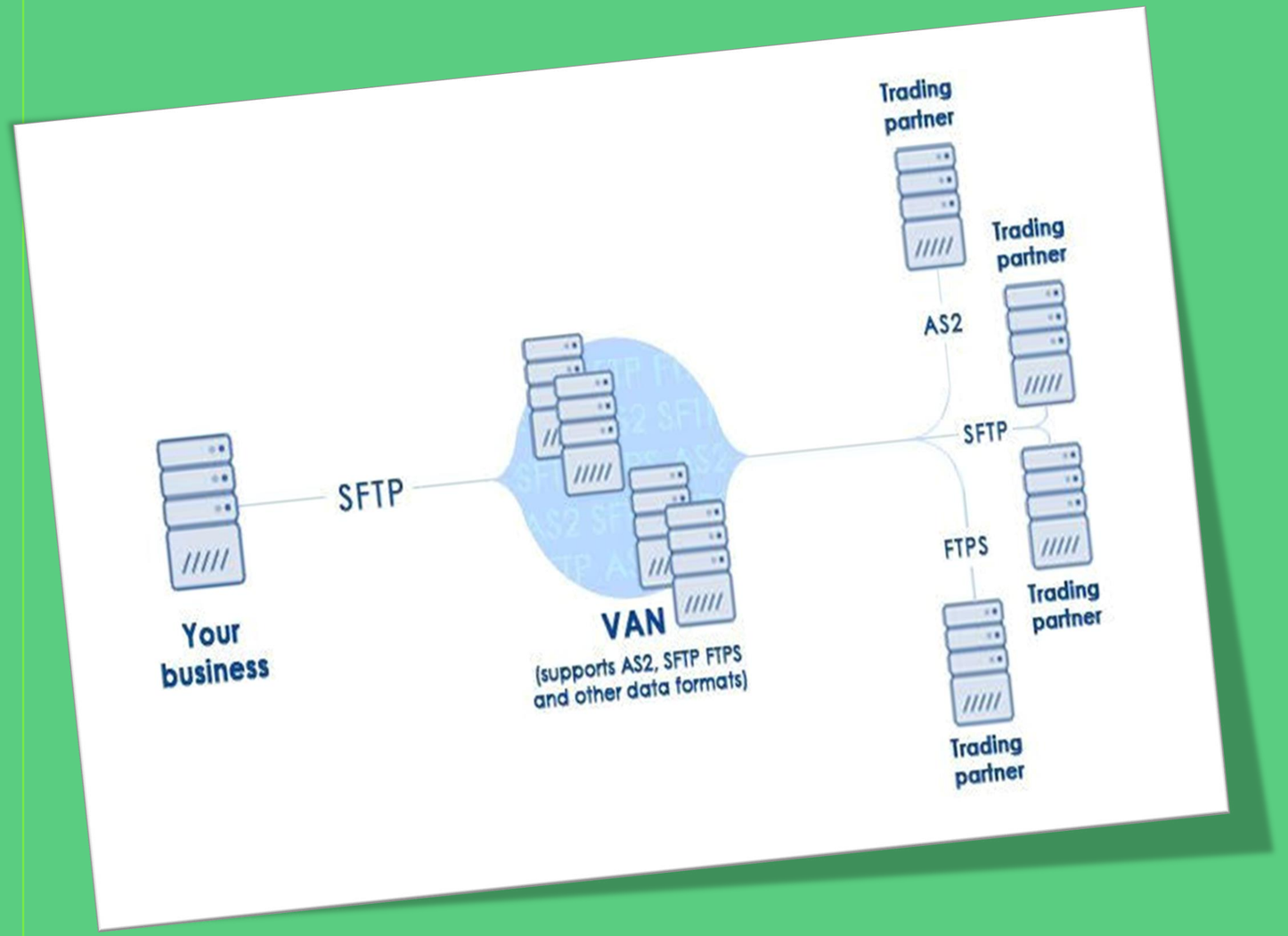
Components Of VAN (Value Added Network)

EDI (Electronic data interchange)

- To address the limitations in peer-to-peer adoption of EDI, VANs (value-added networks) were established decades ago. A VAN acts as a regional post office.
- It receives transactions, examines the 'from' and the 'to' information, and routes the transaction to the final recipient. VANs may provide a number of additional services, e.g. retransmitting documents, providing third party audit information, acting as a gateway for different transmission methods, and handling telecommunications support.
- Because of these and other services VANs provide, businesses frequently use a VAN even when both trading partners are using Internet-based protocols. Healthcare clearinghouses perform many of the same functions as a VAN, but have additional legal restrictions.

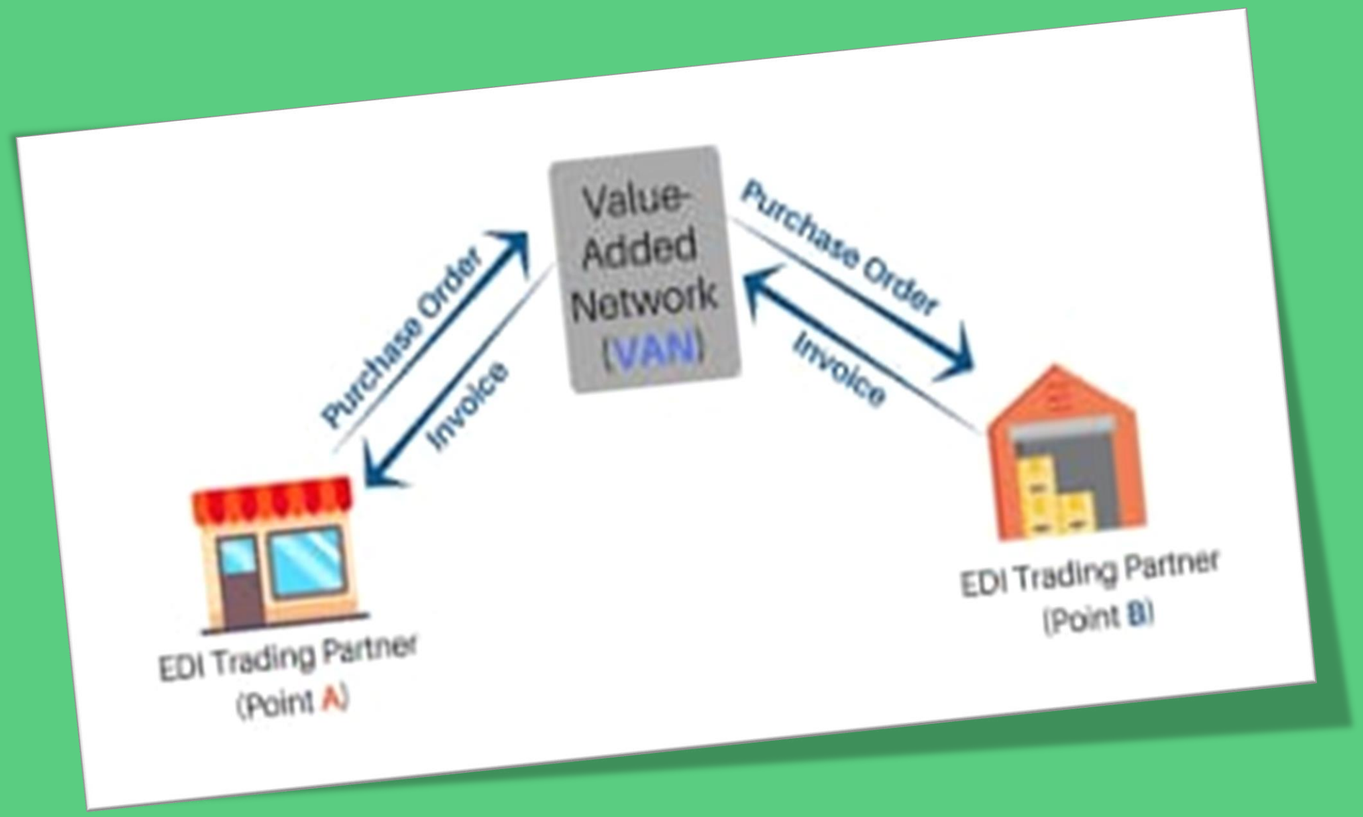
EDI

Components Of VAN (Value Added Network)



Components Of VAN (Value Added Network)

VAN (value added network)



Components Of VAN (Value Added Network)

Mail box

Users of a VAN (Value Added Network) can send messages to and retrieve messages from a mailbox. This is a specialized subscriber service that will hold messages until the subscriber requests them.

When a company contracts out to a VAN service provider, the company is assigned a mailbox. First, data is translated by the EDI software package. Then the communications adaptor initiates a connection to that VAN mailbox and uploads the EDI files to the VAN mailbox.

Components Of VAN (Value Added Network)

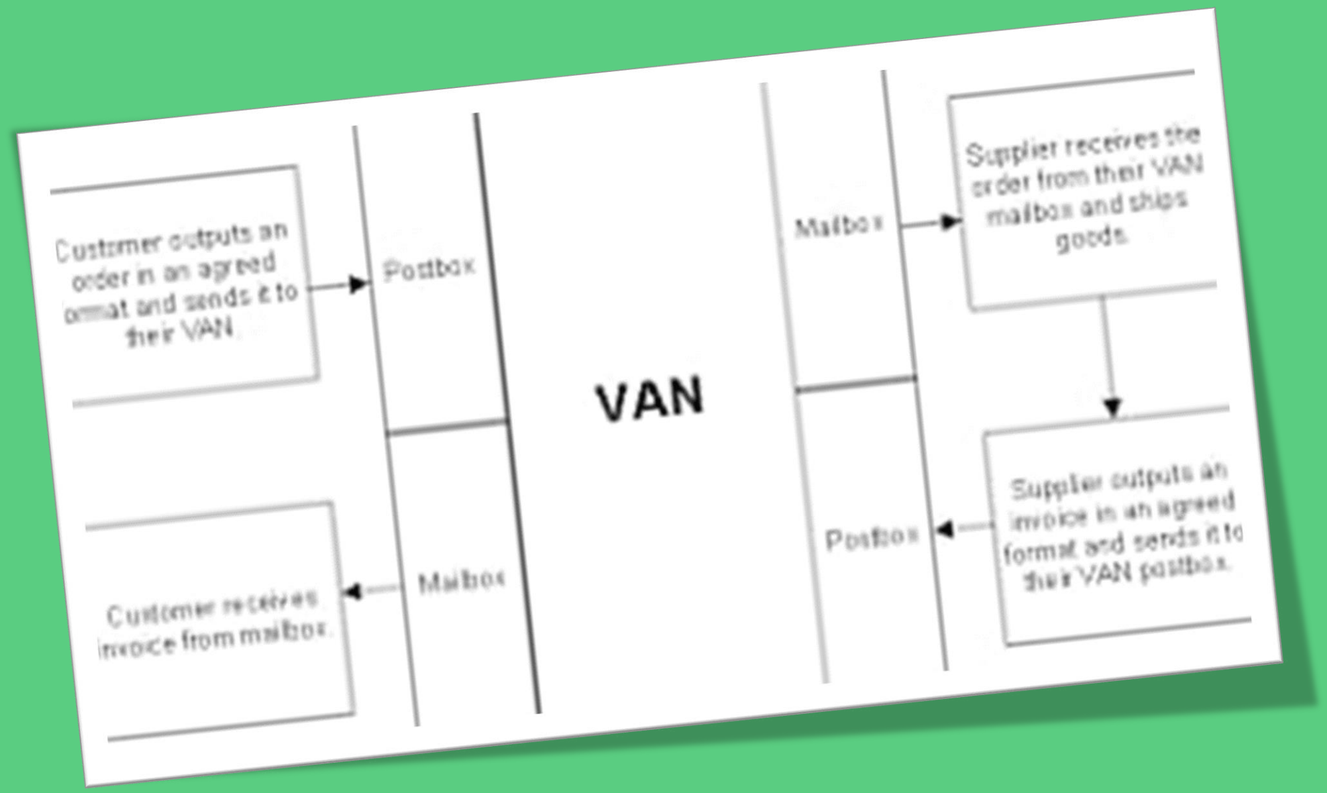
Mail box

The VAN receives the files in the mailbox and forwards the files to the appropriate trading partners. For example, in the retail industry, a supplier company needs to send several invoices to several different retailers, such as Target, Sears and Home Depot. Instead of transmitting the invoices to three different places, the invoice is transmitted to one VAN mailbox.

The VAN’s role at this point is to forward the invoices to the VAN mailboxes belonging to those retailers. A similar process occurs for incoming EDI files. For example, when Target, Sears and Home Depot issue purchase orders, they send the EDI purchase orders to their own VAN mailboxes. The VAN distributes the EDI purchase orders to the supplier-company’s mailbox. The supplier company then connects to their mailbox and downloads the purchase orders created by the three retailers

Components Of VAN (Value Added Network)

Mail box



Types of Value-Added Networks

THERE ARE THREE TYPES OF VANS, BASED ON HOW THE COMPUTERS IN THE NETWORK ARE CONNECTED

- ❑ *One-to-One*
- ❑ *One-to-Many*
- ❑ *Many-to-Many*

Types of Value-Added Networks

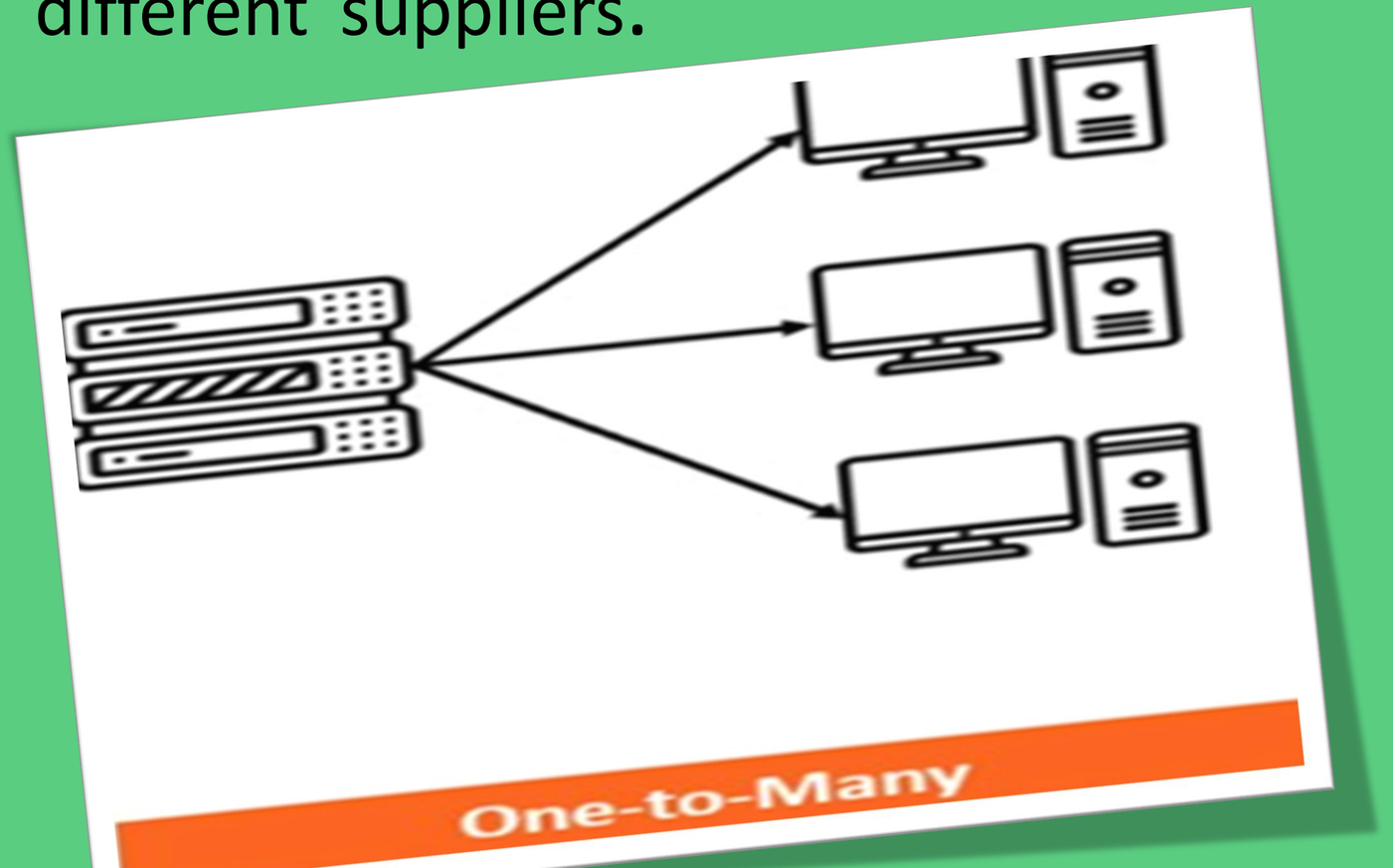
❑ *One-to-One*

The one-to-one network is a connection between two businesses exchanging data.

Types of Value-Added Networks

❑ *One-to-Many*

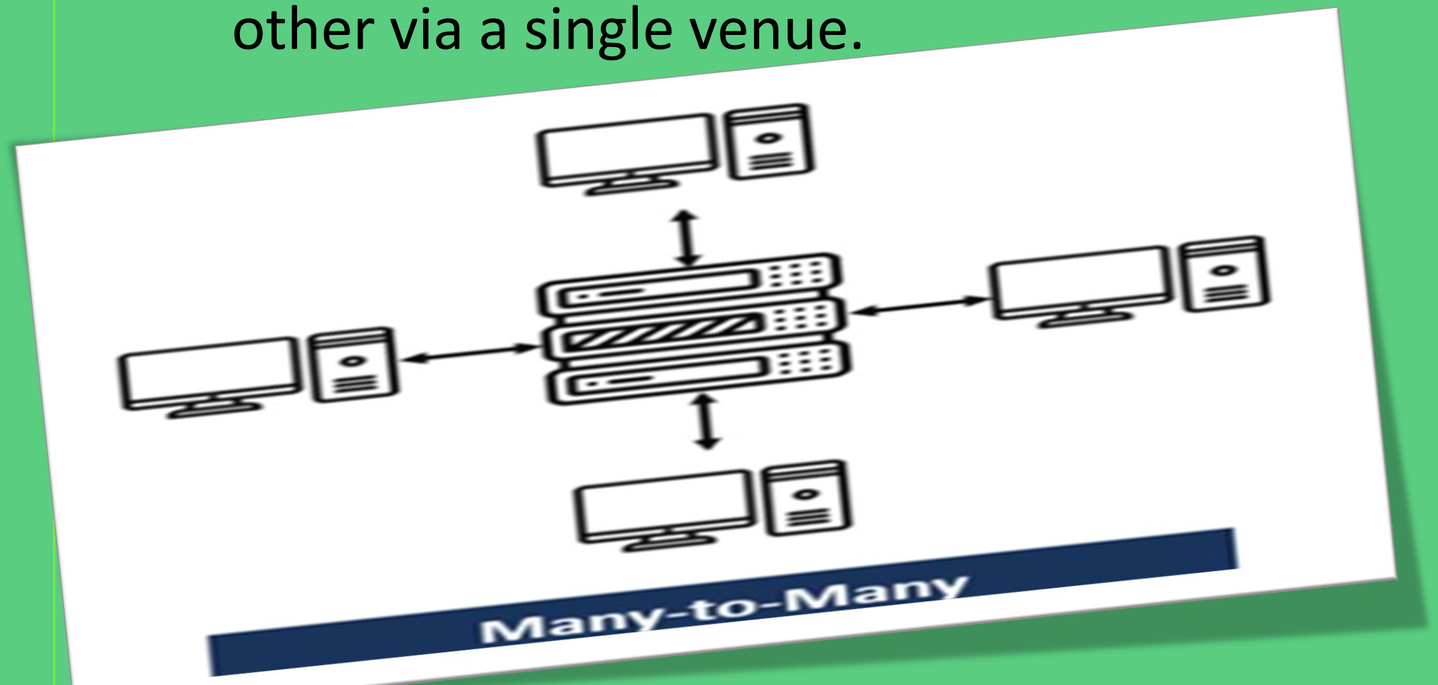
A single business connected to multiple other businesses, e.g., a major retailer connected to its different suppliers.



Types of Value-Added Networks

❑ ***Many-to-Many***

Multiple businesses connected to one another. This is the most common type of network used in the financial markets since there are many market participants connected to each other via a single venue.



BENEFITS OF VALUE ADDED NETWORK

- ❑ Error correction
- ❑ Improved exchange
- ❑ Secure
- ❑ Standardized

BENEFITS OF VALUE ADDED NETWORK

❑ ERROR CORRECTION

VANs help in error correction, as they reduce human involvement, and improve recordkeeping. They can perform checks at the transaction level and ensure minimal error

BENEFITS OF VALUE ADDED NETWORK

❑ IMPROVED EXCHANGE

The exchange of data becomes real-time with VANs. This improves decision-making and record-keeping and provides essential business intelligence to generate insights about operations.

BENEFITS OF VALUE ADDED NETWORK

❑SECURE

Electronic data transfers can be made securely using encryption. All communication between businesses can be encrypted to protect business secrets.

BENEFITS OF VALUE ADDED NETWORK

❑ STANDARDIZED

VANs transfer data using standard formats, such as XML and CSV. They allow the data to be read by the various Enterprise Resource Planning (ERP) software used by companies. They also enable the use of newer technologies without making changes to existing technology