

# E-Commerce

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Year Four/Lecture 1

First Semester/ 2020-2021

# Course Objectives

- \* To understand the complexity of E-C and its many faces.
- \* To understand EDI system
- \* Internet affected E-C
- \* To explore how E-B and E-C fit together.
- \* To identify the impact of E-C
- \* To recognize the benefits and limitations of E-C.
- \* To identify the main barriers to the growth and development of E-C in organizations.
- \* To identify E-C Models
- \* To understand the payment systems
- \* To explore the security systems
- \* To explore Online Banking
- \* To understand Online Advertising
- \* To recognize M-C characteristics compared to E-C

# Lecture Outline

## Today

- \* An Introduction to Commerce & to E-Commerce
- \* Why E-Commerce
- \* The Process of E-Commerce
- \* Advantages & Disadvantages of E-Commerce
- \* Unique Features of E-Commerce Technology & Characteristics
- \* Factors affecting E-Commerce
- \* E-Commerce Infrastructure & Limitations
- \* Brief History of E-Commerce.

# What is Commerce ?

- \* Commerce is a part of trade or production which deals with the exchange of **goods** and **services** from producer to final consumer
- \* it comprises the trading of something of economic value such as goods, services, information, or money between **two or more entities**.

# What is Commerce ?

- **Commerce** is a negotiated exchange of valuable objects or services between at least **two parties** and includes all activities that each of the parties undertakes the complete **the transaction.**

# Definition of Commerce

- \* The exchange of goods and services for money
- \* **Consists of:**
  - 1- **Buyers**: These are people with money who wants to *purchase* a good or service.
  - 2- **Sellers**: These are people who offer goods and services to buyers.
  - 3- **Producers**: These are people who create the products and services that sellers offer to buyers.

# Elements of Commerce

1. You need a **Product or Service** to sell
2. You need a **Place** from which to sell the products.
3. You need to figure out a way to get **People** to come to your place.
4. You need a way to accept **Order**
5. You need a way to accept **Money**

# Elements of Commerce

6. You need a way to deliver the products or services, often known as **Fulfilment**.
7. Sometimes customers do not like what they buy, so you need a way to accept **Returns**.
8. You need a **customer service** and technical support department to assist customers with products.

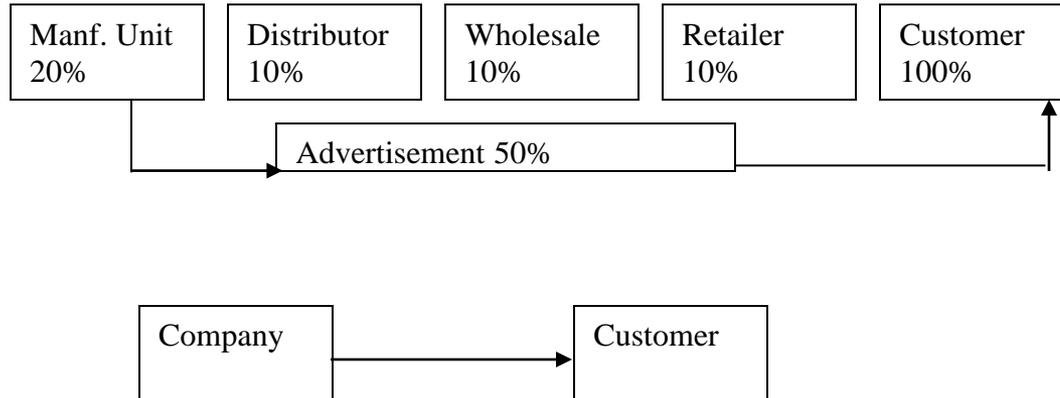
# What is E-Commerce ?

- \* Commonly known as Electronic Marketing.
- \* E-commerce is business that take place electronically, generally over the internet.
- \* 'It is consists of buying and selling goods and services over an electronic systems such as internet and other computer network'

# What is E-Commerce ?

- \* 'E-commerce is the purchasing, selling and exchanging goods over computer networks (internet) through which transaction or terms of sales are performed electronically'
- \*
- \* E-commerce the buying and selling of products and services by businesses and consumers through an electronic medium, ***without using any paper documents***. E-commerce is widely considered the buying and selling of products over the internet, but any transaction that is completed solely through electronic measures can be considered e-commerce (what do u think about the face book now?)

# Traditional business & Direct selling



- \* E-commerce is an emerging concept that describes the process of buying and selling or exchange of products, services; and information via computer networks including internet

# Traditional Commerce vs. E-Commerce

## \* Similarities

- 1- Both aim to deliver a valued product or service
- 2- Both want to serve a large audience
- 3- Both strive to quickly deliver products and services

# Traditional Commerce vs. E-Commerce



## \* Differences

- 1- E-Com customers expect shorter fulfillment time.
- 2- E-Com customers must understand Web-based technologies
- 3- E-Com provides a global audience
- 4- E-Com orders are processed without human interaction or travel to store location
- 5- E-Com relies upon encryption for security

# Why Use E-Commerce ?

- \* Low Entry Cost
- \* Reduced Transaction Costs
- \* Access to the Global Market
- \* Faster Customer Response

# The Process of E-C

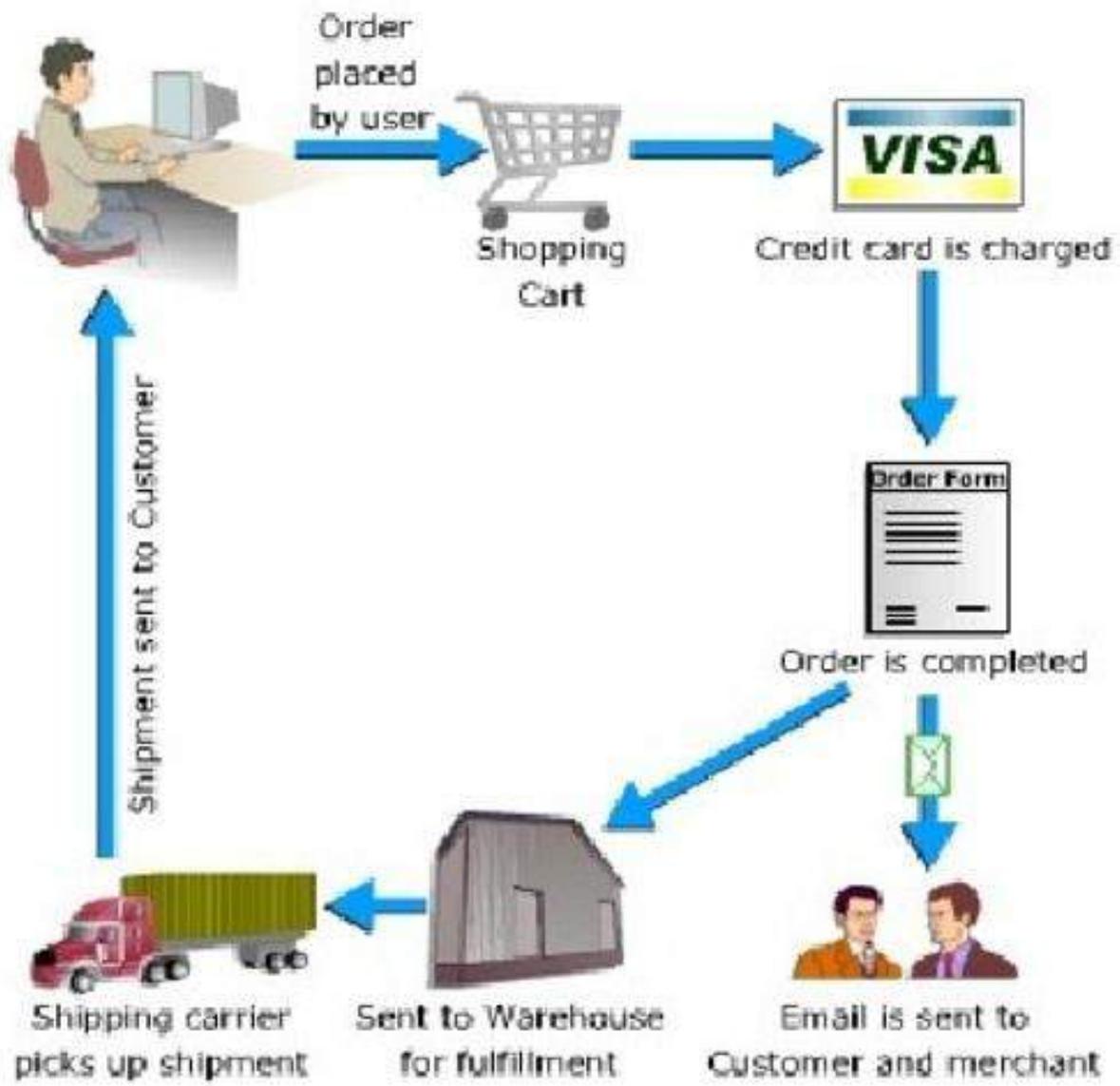
- 1- Attract customers (advertising, marketing)
- 2- Interact with customers (catalog, negotiation)
- 3- Handle and manage orders
  - order capture
  - payment
  - Transaction
  - Fulfilment

# The Process of E-C

4- React to customer inquiries

-customer service

-Order tracking

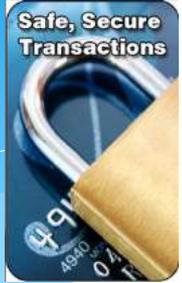


# How do you buy something

# Advantages Of E-Commerce

- \* No checkout queues
- \* Reduce prices
- \* You can shop anywhere in the world
- \* Easy access 24 hours a day
- \* Wide selection to create for all consumers
- \* More flexible ( to add/remove products from catlog)

# Disadvantages Of E-Commerce



- \* Unable to examine products personally
- \* Not everyone connected to the Internet (especially elderly persons will not be reach)
- \* There is the possibility of credit card number theft
- \* People don't socialize much
- \* Not 100% safe

# 8 Unique Features of E-Commerce Technology

1. Ubiquity -Internet/Web technology is available everywhere: at work, at home, and elsewhere via mobile devices, anytime.
2. Global reach- Global reach (Global Customers/Global products): This technology reaches across national boundaries around the earth.
3. Universal standards
4. Information richness – videos, audio and text marketing messages. Possible to deliver rich messages with text, audio and video simultaneously to large number of people

# 8 Unique Features of E-Commerce Technology

5- Interactivity –works with interaction with users

6- Information density-technology reduces information cost and raises quality. In e-commerce markets make prices **costs more transparent**. Price transparency refers to the ease with which consumers can find out the variety of prices in a market.

7- Personalization/customization

8-Social technology-enable user content (involve social media that support transaction)

# Factors affecting E-Commerce

- \* Economic forces
- \* Marketing and interaction forces
- \* Technology
- \* Communication costs
- \* Cheaper customer service cost
- \* Infrastructure

# Characteristics of E-Commerce

- \* E-Com have the following Characteristics:
  - 1- **Non-Cash Payment**: E-Com enables the use of credit cards, debit cards, smart cards, electronic fund transfer via banks websites, and other modes of electronic payment.
  - 2- **24x7 Service availability**: E-com automates the business of enterprises and the way they provide services to their customers. It is available anytime, anywhere that **Improved Sales** .

# Characteristics of E-Commerce

\* E-Com have the following Characteristics:

3- **Support**: E-Com provides various way to provide pre-sale and post-sale assistance to provide better services to customers.

4- **Inventory Management**: E-Com automates inventory management, reports get generated instantly when required. products inventory management becomes very efficient and easy to maintain.

# Characteristics of E-Commerce

\* E-Com have the following Characteristics:

5- **Communication improved**: E-Com provides ways for faster, efficient, reliable communication with customers and partners.

# E-Commerce Infrastructure

## 1- Information superhighway infrastructure

- \* Internet, LAN, WAN, routers, etc.
- \* telecom, cable TV, wireless, etc.

## 2- Messaging and information distribution infrastructure

- \* HTML, XML, e-mail, HTTP, etc.

## 3- Common business infrastructure

- \* Security, authentication, electronic payment, directories, catalogs, etc.

# Infrastructure in E-Commerce Limitations

- \* High Internet access costs, including connection service fees, communication fees, and hosting charges for websites with sufficient bandwidth;
- \* Limited availability of credit cards and a nationwide credit card system;
- \* Underdeveloped transportation infrastructure resulting in slow and uncertain delivery of goods and services;

# Infrastructure in E-Commerce

## Limitations

- \* Network security problems and insufficient security safeguards;
- \* Lack of skilled human resources and key technologies (i.e., inadequate professional IT workforce);

# History of E-commerce

- \* Electronic commerce has existed for over 60 years
- \* The electronic transmission of messages used during the Berlin airlift in 1948.



# History of E-commerce

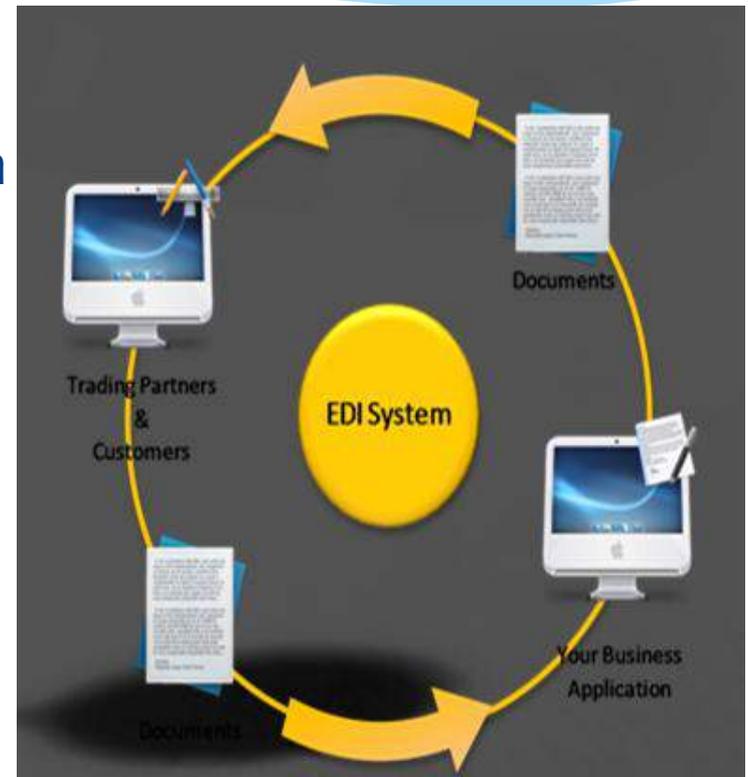
- \* 1970s: Electronic Funds Transfer (EFT)
- \* Used by the banking industry to exchange account information over secured networks
- \* EFT is the electronic exchange or transfer of money from one account to another.

# History of E-commerce

- \* The work began with Electronic Data Interchange (EDI) late of 1970s and early of 1980s for e-commerce within companies
- \* Used by business to transmit data from one business to another.

# History of E-commerce

- \* **EDI** is the structured transmission of data between organizations by electronic means. It is used to transfer electronic documents or business data from one computer system to another computer system.



# History of E-commerce

## \* 1980

- \* The growth and acceptance of credit cards
- \* Automated Teller Machine (ATM)
- \* Telephone banking
- \* Airline reservation system

# History of E-commerce

- \* 1990s: The World Wide Web on the Internet provides easy –to-use technology for information publishing and dissemination
- \* Cheaper to do business
- \* Enable diverse business activities

# History of E-commerce

## \* 2000s

- \* Many European and American business companies offered their services through the World Wide Web.
- \* Since then, people began to associate a word 'E-Commerce'

# E Commerce

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# Lecture Outline

## Today

- \* Other Definitions for E-Commerce
- \* E-Commerce in Figures
- \* Why Internet Commerce
- \* Benefits to Internet Commerce
- \* Internet Commerce Strategies
- \* Types of E-Commerce Sites

# Other Definitions for E-Commerce

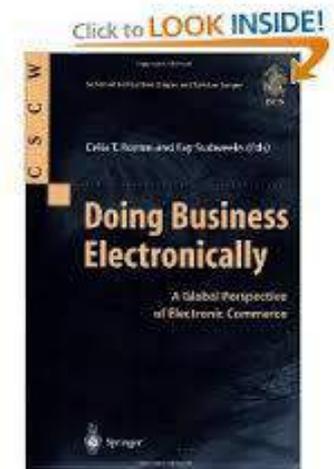
- \* Describes the buying and selling of products, services, and information via computer networks including the Internet.



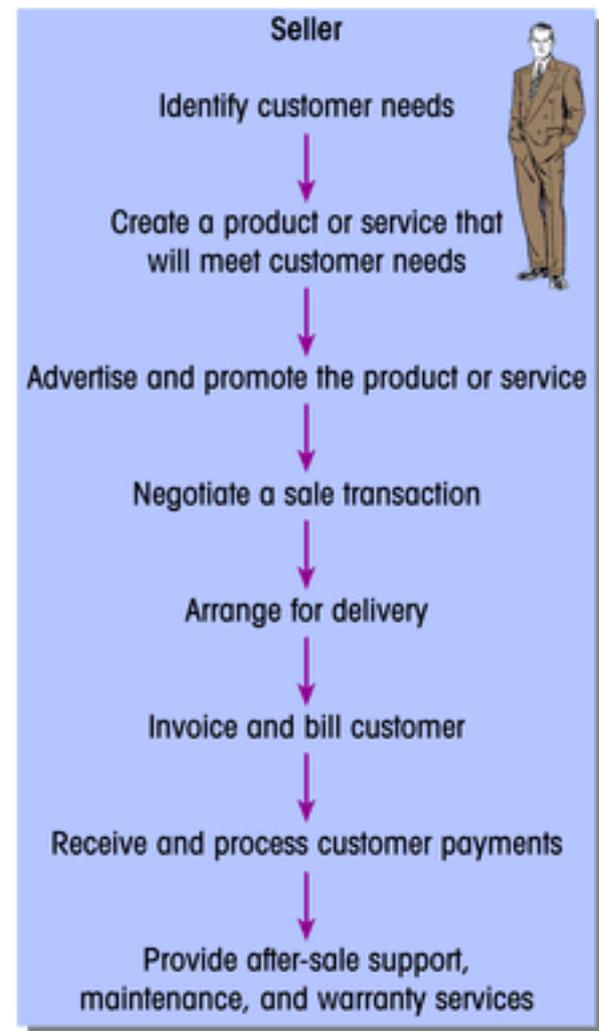
# Other Definitions for E-Commerce



- \* More definitions for E-Commerce are:
- \* Electronic Commerce (EC) is where business transactions take place via telecommunications networks, especially the Internet.
- \* Doing business electronically.



# Buyer and Seller Rules in Commerce



# E-Commerce in Figures

- \* [Ref ] states that E-commerce is the fastest growing retail market in Europe and North America. Online sales in the UK, Germany, France, The Netherlands, Sweden, Italy, Poland and Spain “Online Retailing: Britain, Europe, US and Canada 2016” *Centre for retail research*  
<http://www.retailresearch.org/onlineretailing.php>
- \* Access date 17/10/2016

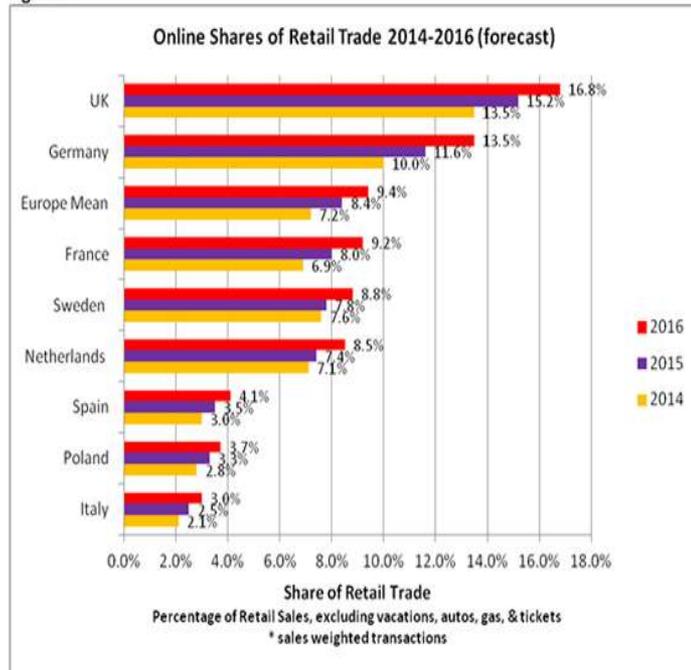
# E-Commerce in Figures

**Table 1**

<b>Online Retail Sales</b>	<b>Online Sales (£ bn) 2015</b>	<b>Growth 2015</b>	<b>Online Sales (£ bn) 2016</b>	<b>Growth 2016</b>	<b>Online Sales in euros (bn) 2016</b>
UK	£52.25	16.2%	£60.04	14.9%	€71.05
Germany	£44.61	23.1%	£52.77	18.3%	€62.45
France	£30.87	17.0%	£36.02	16.7%	€42.63
Spain	£8.15	18.6%	£9.68	18.8%	€11.45
Italy	£6.35	19.0%	£7.42	16.9%	€8.78
Netherlands	£5.94	16.8%	£6.92	16.5%	€8.19
Sweden	£4.17	15.5%	£4.85	16.4%	€5.74
Poland	£4.33	21.0%	£5.10	17.8%	€6.03
Europe	£156.67	18.6%	£182.80	16.7%	€216.32

# E-Commerce in Figures

Figure 1



U.S. E-Retail Sales,  
in billions



Figure 2 USA Commerce sales 2011-2016 REF 1

# E-Commerce in Numbers

eMarketer's Global Ecommerce Forecast 2019 Report forecasts that ecommerce will continue to grow at a steady rate around the globe with the Asia-Pacific region leading the ecommerce growth charts. To put it more precisely, China has 54.7% of the global market share.

**Top 10 Countries, Ranked by Retail Ecommerce Sales, 2018 & 2019**  
*billions and % change*

	2018	2019	% change
1. China*	\$1,520.10	\$1,934.78	27.3%
2. US	\$514.84	\$586.92	14.0%
3. UK	\$127.98	\$141.93	10.9%
4. Japan	\$110.96	\$115.40	4.0%
5. South Korea	\$87.60	\$103.48	18.1%
6. Germany	\$75.93	\$81.85	7.8%
7. France	\$62.27	\$69.43	11.5%
8. Canada	\$41.12	\$49.80	21.1%
9. India	\$34.91	\$46.05	31.9%
10. Russia	\$22.68	\$26.92	18.7%

*Note: includes products or services ordered using the internet via any device, regardless of the method of payment or fulfillment; excludes travel and event tickets, payments such as bill pay, taxes or money transfers, food services and drinking place sales, gambling and other vice good sales;  
\*excludes Hong Kong  
Source: eMarketer, May 2019*

T10308 [www.eMarketer.com](http://www.eMarketer.com)

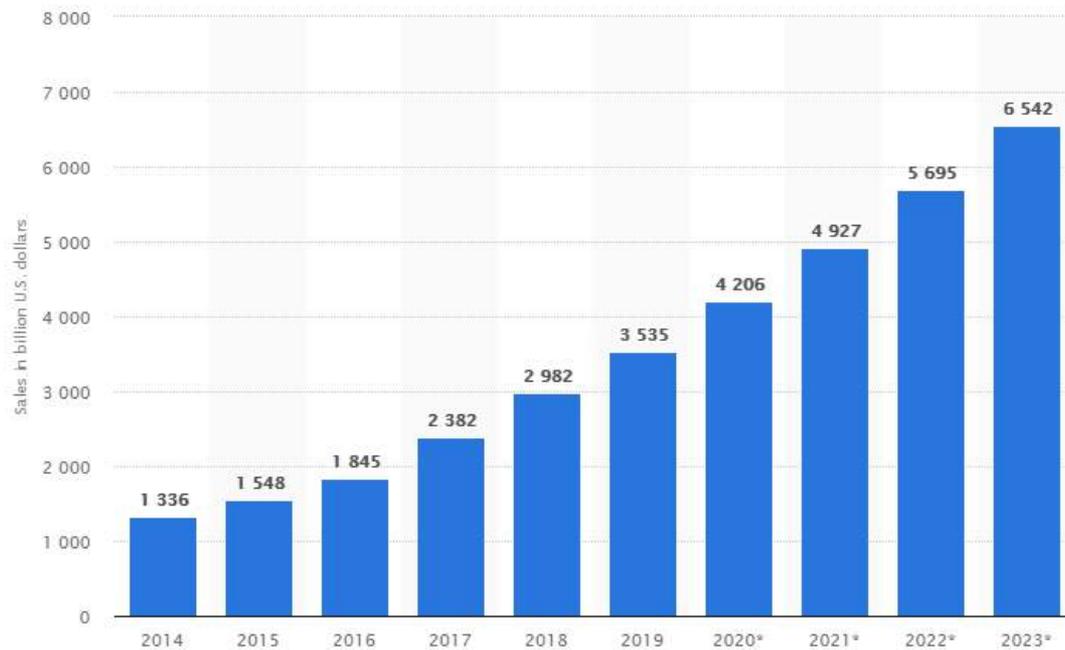
# E-Commerce in Numbers

In 2019, an estimated 1.92 billion people purchased goods or services online. During the same year, e-retail sales surpassed 3.5 trillion U.S. dollars worldwide, and according to the latest calculations, **e-commerce** growth will accelerate even further in the future.

# E-Commerce in Numbers

## Retail e-commerce sales worldwide from 2014 to 2023

(in billion U.S. dollars)



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[Additional Information](#)

[Show source](#)

# Why Internet Commerce

How Internet help improve the adopting of e-commerce?

- \*Internet offers a **web-based** opportunity for you to gain customers.
- \*The **World Wide Web** is one of the most promising applications supported the Internet
- \*Increase your knowledgebase about what your customers are customers are looking for.

# Why Internet Effect

By creating an **online presence** your marketing campaigns can include a population of people that can never reach through **local advertising**.

You know have the opportunity to grow your customer base by simply creating and maintaining an online presence.

# Essential Terms

Ebay

Amazon



Online market

Online payment

PayPal

Credit card

VISA card

Online Stores



# Why Internet Commerce

With the advent (مجيء) of the Internet, the term e-commerce began to include:

1. Electronic trading of physical goods البضائع الملموسة and of intangibles such as information.
2. All the steps involved in trade, such as on-line marketing, ordering payment and support for delivery.
3. The electronic provision of services such as after sales support or on-line legal advice.
4. Electronic support for collaboration between companies such as collaborative on-line design and engineering or virtual business consultancy teams.

# Why Internet Commerce

With the advent of the Internet, the term e-commerce began to include:

1- physical goods



2-intangibles such as information or software



# Why Internet Commerce

With the advent of the Internet, the term e-commerce began to include:

- \* Marketing.



# Why Internet Commerce

- \* ordering payment



The advertisement features a laptop displaying the Tops Market website and a hand holding a mobile phone showing the same site. The text on the right side of the image reads: "It's Easy to Order Your Sandwich **ONLINE** or From Your **MOBILE PHONE.** ...Your Order will be Ready When You Arrive!" At the bottom, the website URL [www.TopsMkt.com](http://www.TopsMkt.com) and a QR code are visible.

# Why Internet Commerce

- \* The electronic provision of services such as after sales support or on-line legal advice.



# Why Internet Commerce

- \* Electronic support for collaboration between companies such as collaborative on-line design and engineering or virtual business consultancy teams.

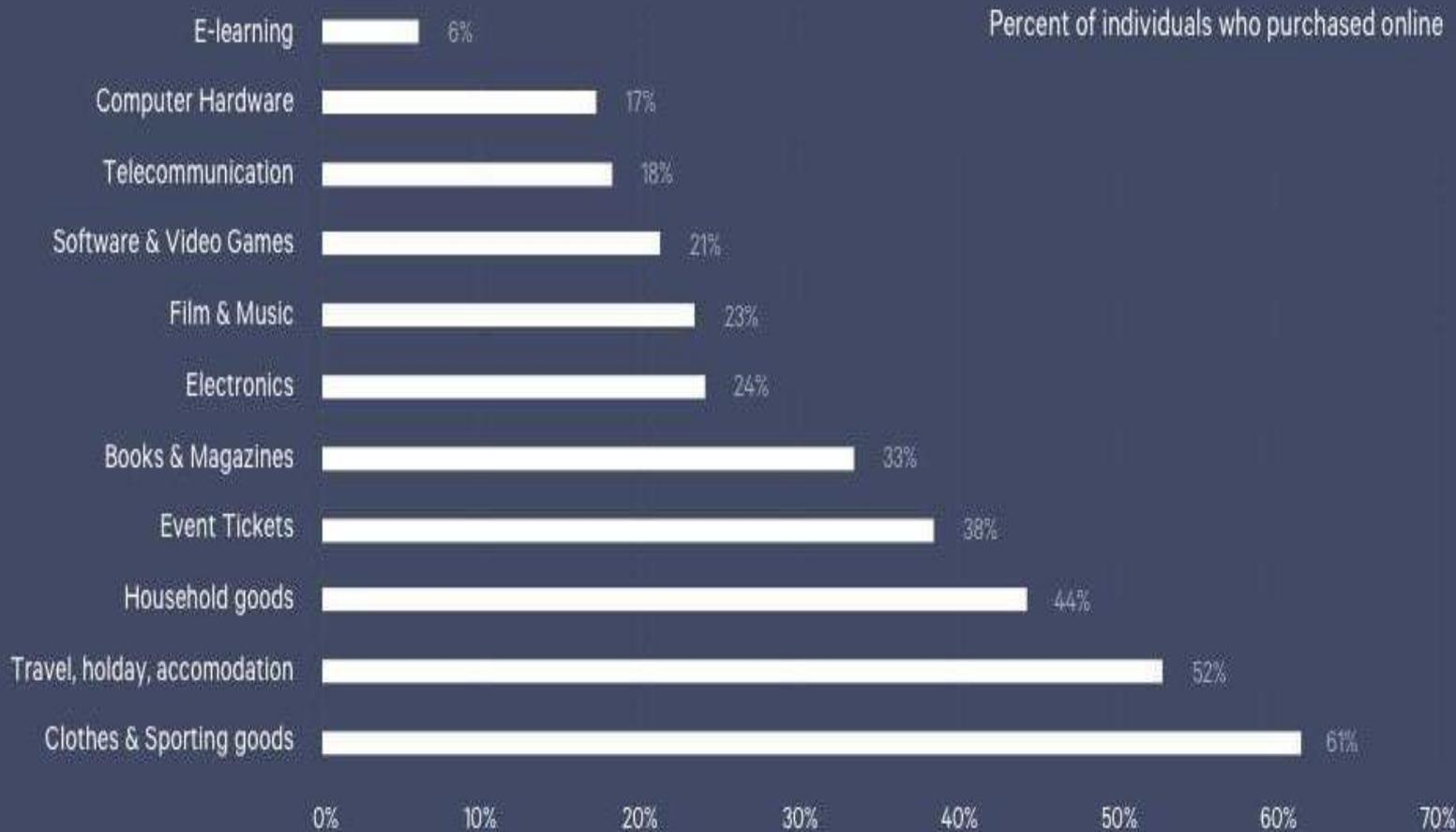


Immediate solutions  
for your business

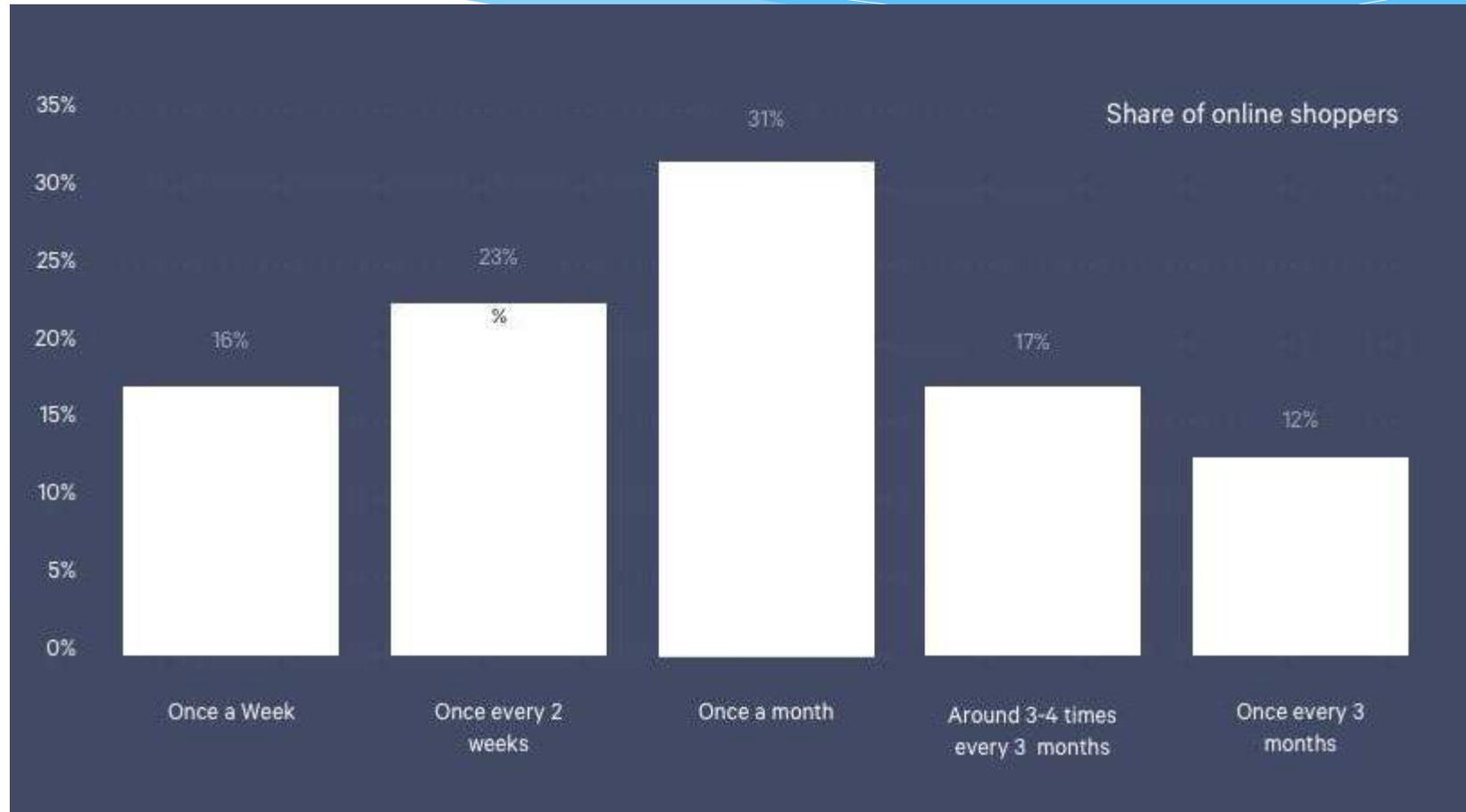
Speak to our professional team today:  
**1300 788 788**

[Inquire Online Now](#)

# What do we buy?



# How Often we Buy



# Why the Internet ?

**\*Visibility:** To let your customers know what your business is doing, may also be interested in what you have offers. The more your visible you can gain more people likes and share business with others

# Why the Internet ?

- \* **Content:** creating connection with customers, by adding fresh content which attract more customers via website.
- \* You can advertise specials that you are offering to your customers, increasing the reach of your special promotions

# Why the Internet ?

**\*Involvement:** it allow customers to comments, So by hearing what your customers want, you may be able to meet their needs, when you find out what your customers truly desire and fulfilling needs, you will be increasing their trust . When you please, then will in turn recommend to their friends, increasing your customer base.

# Why the Internet ?

## \* **Target:** it can target specific demographics.

- \* Identify Market Demographics:
  - \* WHO are the people in your community?
  - \* HOW old are they?
  - \* HOW many of them are young, middle aged, elderly?
  - \* WHAT is their level of education?
  - \* WHAT is their income level?



# Why the Internet ?

## \*Target

- \* Identify Market Demographics:
  - \* **Age:** children, teens, young, middle, elderly.
  - \* **Gender:** male, female.
  - \* **Education:** high school, college, university.
  - \* **Income:** low, medium, high.
  - \* **Marital status:** single, married, divorced.
  - \* **Ethnic and/or religious background**
  - \* **Family life cycle:** newly married, married for 10 – 20 years, with or without children.



# Benefits of Internet Commerce

- \* Increased competition
- \* Reduction time to market
- \* Improvement in payment process
- \* To improve productivity and to generate profit

# Internet Commerce Strategies

- \* Offer a great customer experience to increase customer loyalty.
- \* Valuing the customer
- \* Build relationships with customers and treating each one as an individual-loyalty strategies as essential

# Types of E-Commerce Sites

- \* Educational Sites
- \* Financial Sites
- \* Auction Sites
- \* News Sites
- \* Entertainment Sites

# E Commerce

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# Lecture Outline

## Today

- \* Learn E-Business
- \* E-Business Infrastructure
- \* The Distinction between E-Business & E-Commerce
- \* Aims & Benefits of doing Business Electronically
- \* Macro & Micro Environments

# E-Commerce other Names

*\*Since transactions go through the Internet and the Web, the terms **I-commerce (Internet commerce)**, **i-commerce** and even **Web-commerce** have been suggested but are now very rarely used.*

*\* بما ان المعاملات التجارية اصبحت تنجز باستخدام الانترنت وصفحات الويب، تم اقتراح لكن مثل هذه المصطلحات قلما-commerce, Web-commerce ابعض التسميات مثل تستعمل في الوقت الحاضر.*

*\*Other terms that are used for on-line retail selling include **virtual-stores** or **cyber stores**. A collection of these virtual stores is sometimes gathered into a '**virtual mall**' or '**cybermall**'.*

# E-Commerce

\*E-C is conducting business communications and transactions via computers and over networks. It is **Buying** and **Selling** of goods and services through digital communications on the **World Wide Web** and **Internet**.  
Introduced around 1994(Amazon.com)

# E-Commerce

- \*Digitally enabled commercial transactions between and among **organizations** and **individuals**.
- \*Simply use **INTERNET** and **WEB** to transact business.

# E-Business

E-business is the **conduct of business** on the Internet, not only **buying** and **selling** but also **servicing customers** *and collaborating with business partners*

يمثل عملية ادارة الاعمال من خلال استخدام الانترنت، حيث لا يقتصر على عملية البيع والشراء وانما يتضمن عملية تقديم الخدمات للزبائن والتعاون مع الشركاء الاخرين

# Emergence of E-Business

The first to use the term was IBM, in October 1997, when it launched a campaign built around e-business. Today, major corporations are **rethinking** their businesses in terms of the **Internet** and its new culture and capabilities and this is what some see as e-business.

# E-Business

- \*E-business can broadly defined as the areas involved in the **running** and **operation** of an **organization** that are *electronic or digital in nature*.
- \*Making the business **digital**
- \*It's redefining **old** business models
- \*Not only limited to **monetary** transactions

# Other Definitions of E-Business

- \* E-Business is the **Electronic connection or link of business operations to customers, suppliers, employees and other partners.**
- \* EB or internet business (IB) may be termed as the **application of information and communication technologies (ICT)**

# Other Definitions of E-Business

- \* Involve the use of electronic platforms to conduct company business
- Web sites** for selling and **customer** relations
- Intranet** for within **company communication**
- Extranet** connecting with major **suppliers and distributors** (can be viewed as part of company's intranet that extended to users outside the company)

# Other Definitions of E-Business

- **E-commerce**

- The exchange or buying and selling of goods and services by electronic means

- **E-business**

- The use of information and communication technologies to perform business functions

\* E-Business encompasses an organization's external interactions with its:

-Suppliers

-Government

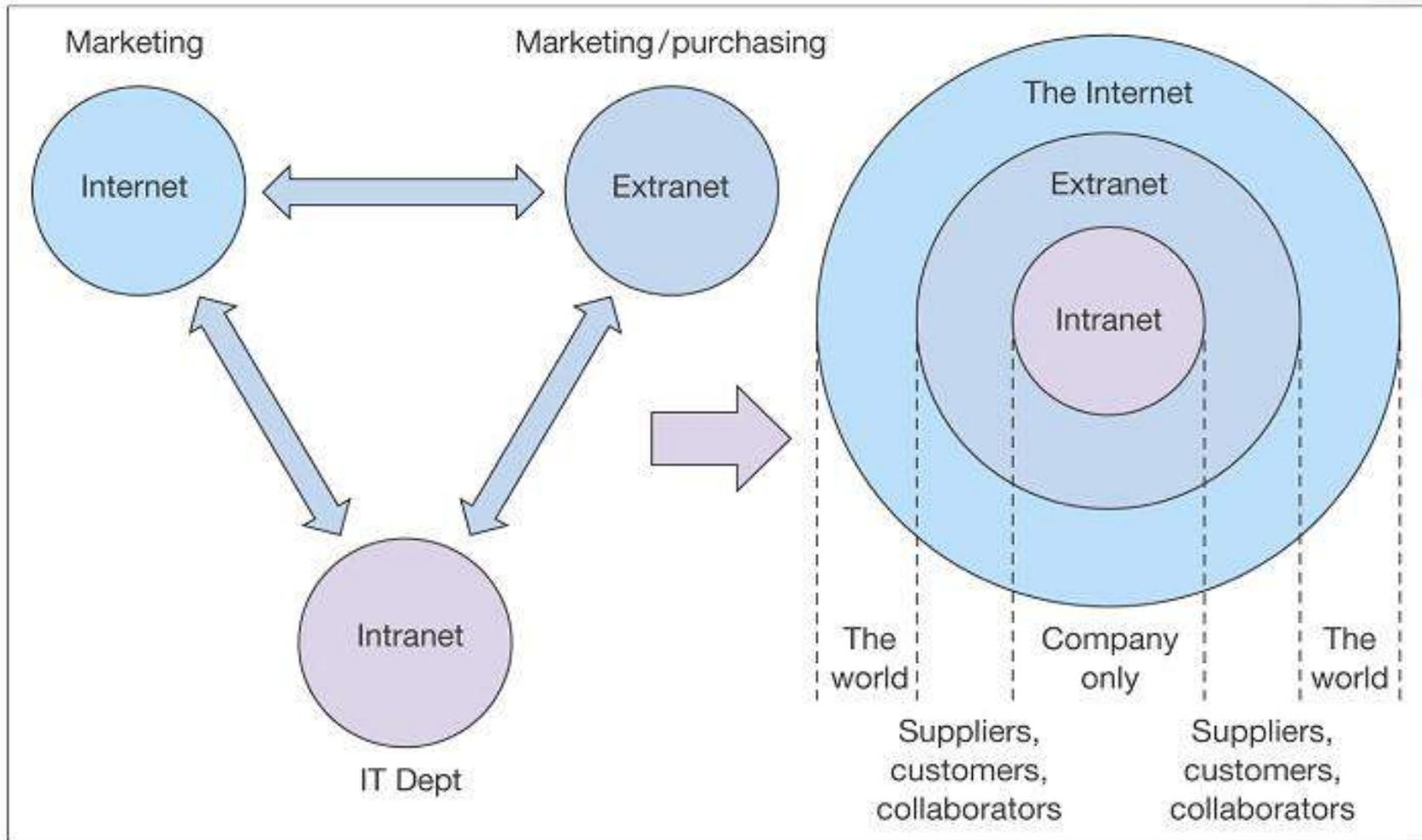
-Customers

-Creditor

-Investors

-Media

# E-Business Infrastructure



# EC Vs EB

## **E-Business:**

**Improving business performance through low cost and open connectivity:**

**New technologies in the value chain connecting value chain across businesses**

**In order to:  
Improve service/reduce cost  
Open new channel  
Transform competitive landscape**

## **E-Commerce**

**-Selling  
-Buying of products and services on the internet  
-Marketing**

- **The Two concepts do not the same**
- **They are often confused**
- **E-C is a part of E-B**

# DISTINCTION between Ecommerce and E-Business

- 1- E-business is broader in scope and e-commerce is just an aspect or a subset of it.
- 2- E-commerce only covers business transactions such as buying and selling of goods and services over the internet.
- 3- E-commerce essentially involves monetary trade while in e-business, money transactions are not necessary.

# Aims of E-Business

*1- Cost savings*

*2- Improvements in efficiency*

*3- Productivity*

# Benefits of doing Business Electronically

- 1- Reducing the cost of executing transactions*
- 2-Increase the speed of business*
- 3-Doing business any time any where*
- 4-improving workflow*
- 5-Reducing errors and improving quality*

# Macro & Micro Environments

- \* Thus Electronic Commerce can be broadly defined as the exchange of merchandise (whether tangible or intangible) using an electronic medium – namely the Internet. The implications of this are that e-commerce incorporates a whole **telecommunications technology and commercial infrastructure** at the **Macro-environmental level**. All these elements interact together to provide the **fundamentals of e-commerce**

# Macro & Micro Environments

- \* مصطلح التجارة الالكترونية يمكن ان يتضمن الوسط الذي تجري فيه عملية تبادل السلع (سواء كانت السلع من النوع الملموس او غير الملموس)، وان هذا الوسط يسمى "الانترنت". بالاضافة الى دمج وتوظيف كل النواحي المستخدمة في التجارة الالكترونية مثل تكنولوجيا الاتصالات والبنى التحتية التجارية على مستوى **البيئات الكبيرة** وتوظيف جميع هذه العناصر لتوفير وتجهيز مستلزمات التجارة الالكترونية

# Macro & Micro Environments

- \* EB is conducting business in the internet
- \* EB is the transformation of business processes through the internet.

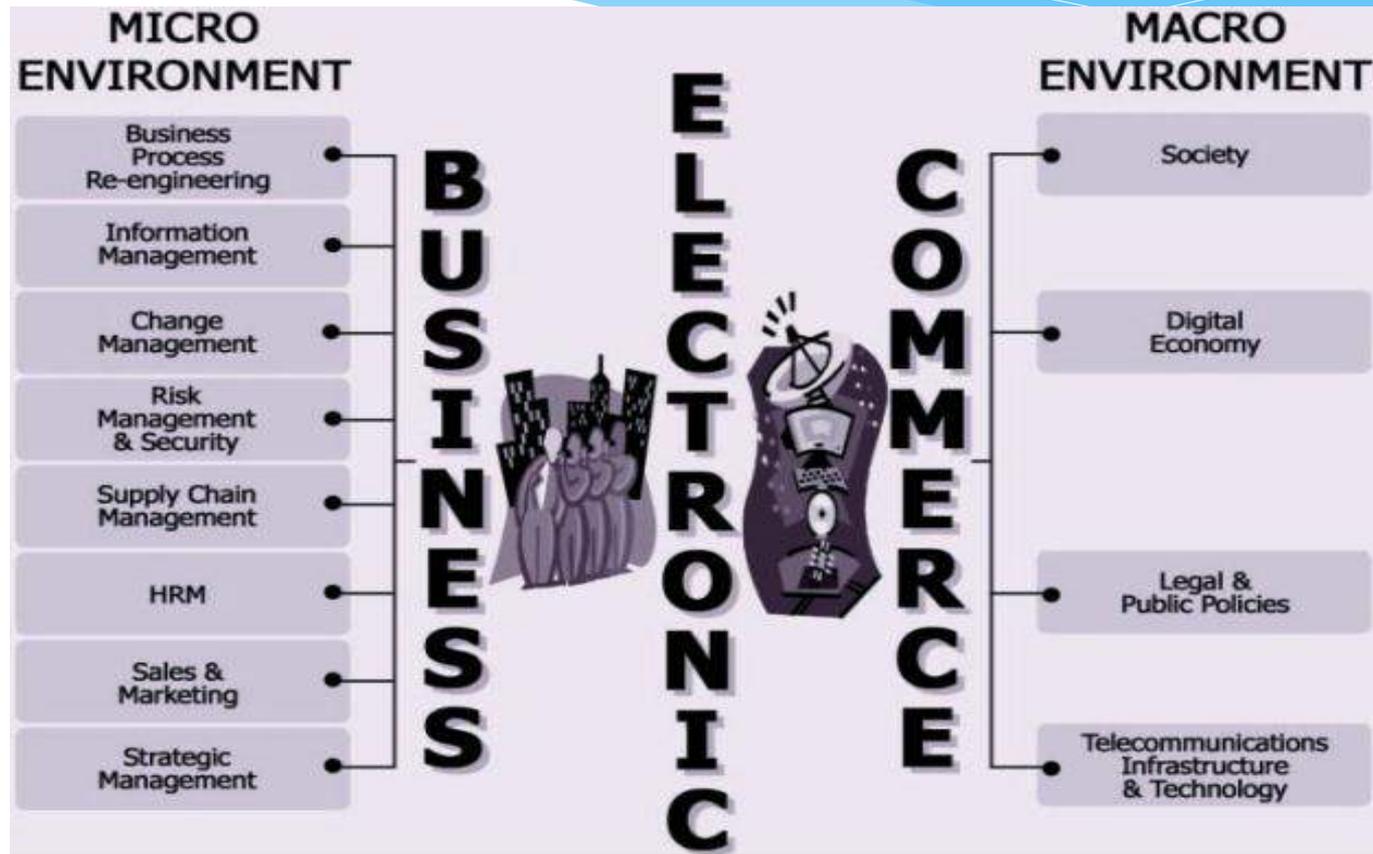
# Macro & Micro Environments

- \* E-business can broadly be defined as the processes or areas involved in the running and operation of an organization that are electronic or digital in nature. These include **direct business activities** such as marketing, sales and human resource management but also **indirect activities** such as business process re-engineering and change management, which impact on the improvement in efficiency and integration of business processes and activities.

# Macro & Micro Environments

- \* يمكن تعريفه على نطاق واسع على انه المعالجات المتضمنة في عمليات التشغيل الخاصة بالمؤسسات والتي تكون طبيعتها الكترونية او رقمية، العمليات المباشرة مثل التسويق؛ المبيعات وادارة الموارد وتتضمن هذه العمليات الغير مباشرة مثل عملية اعادة هندسة البشرية بالاضافة الى العمل التجاري وتغيير عملية الادارة.

# Macro & Micro Environments



# What is Macro Environment?

- \*Considered to be beyond the control of organization.

It is the major external and uncontrollable factors that influence an organization's decision making, and affect its performance and strategies. These factors include the economic factors; demographics; legal, political, and social conditions and technological changes.

# What is Macro Environment?

Specific examples of macro environment influences include

**Real growth in income**

**Changes in interest rates**

**Changes in cultural tastes**

**Government regulations**

# What is Micro environment?

- \* Actors close to company that affect its ability to serve its customers
- \* Factors or elements in an organization's immediate area of operations that affect its **performance and decision-making.**

# What is Micro environment?

These factors include

**Market channel**

**Customers**

**Distribution channels**

**Suppliers**

The End



# E Commerce

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Baghdad University/Collage of science/Computer Science Dep.

Year Four/Lecture 4

First Semester/ 2020-2021

# Lecture Outline

## Today

- \* Learning the E-C Classification Models:  
Identifying Transaction Partners Model.

# Classifying E-C

- \* Academics have already drawn up a number of frameworks for classifying E-C but each one tends to explain it from a particular perspective. Some of these frameworks are discussed in more detail below.*

# Identifying Transaction Partners Model

- \* A general method for classifying E-C is by identifying **تشخيص** the partners directly involved **الداخلين او المشتركين بصورة مباشرة** in the transaction.
- \* **اي تحديد طرفي التعامل التجاري**
- \* The framework that is summarized in Figure shown.

# Identifying Transaction Partners Model

## *Identifying transacting partners*

TRANSACTION ORIGINATING FROM AND BEING FULFILLED BY					
TRANSACTION INITIATED & ACCEPTED BY		Business	Consumer	Government	Transaction Partners
	Business	<b>B-to-B</b>	<b>B-to-C</b>	<b>B-to-G</b>	
	Consumer	<b>C-to-B</b>	<b>C-to-C</b>	<b>C-to-G</b>	
	Government	<b>G-to-B</b>	<b>G-to-C</b>	<b>G-to-G</b>	

# Business-to-Business (B-to-B)

***B2B refers to one business selling to another business via the internet.***

- \* The exchange of products, services or information between business entities.*
- \* Biggest market/ Largest form of E-C*
- \* Note: The Gartner Group estimates B-to-B revenue worldwide will be \$7.29 trillion by 2004, a compound annual growth of about 41 percent.*

# Business-to-Business (B-to-B)

## \* **Why B to B is important?**

- 1- The market is large and expanding
- 2-B to B is 80-90% of e-com
- 3-B2B changes business process (-it has changed the way we do business)
- 4-Great benefits for both buyer and supplier sides, as well as the overall economy.

# Business-to-Business (B-to-B)

## **THE BASIC TYPES OF B2B TRANSACTIONS AND ACTIVITIES**

**1-Sell-side**

**2- Buy-side**

**3-Exchanges**

**4-Supply chain improvements and  
collaborative commerce**

# Business-to-Business (B-to-B)

- **BASIC TYPES OF B2B TRANSACTIONS AND ACTIVITIES**

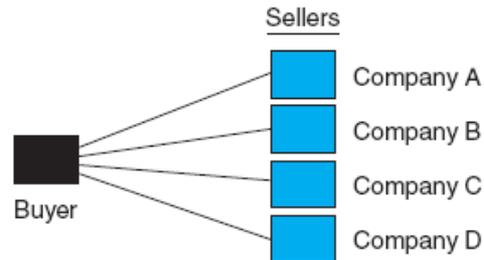
- Sell-side: one seller to many buyers.
- Buy-side: one buyer from many sellers.
- Exchanges: Many sellers to many buyers.
- Supply chain improvements and collaborative commerce: including additional activities such as ,communicating, sharing information for joint design.

# Business-to-Business (B-to-B)

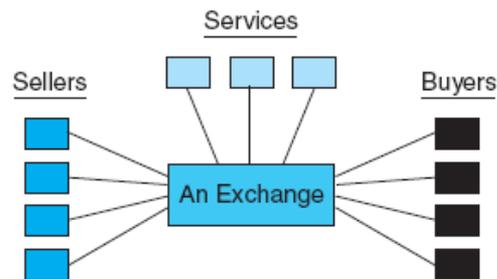
## EXHIBIT 4.1 Types of B2B E-Commerce



(a) Sell-Side B2B



(b) Buy-Side B2B



(c) Electronic Exchange



(d) Supply Chain Improvements and Collaborative Commerce

# Business-to-Business (B-to-B)

**Many-to-Many: Public Exchanges exchanges (trading communities or trading exchanges)**

**Many-to-many e-marketplaces, usually owned and run by a third party or a consortium, in which many buyers and many sellers meet electronically to trade with each other**

A **B2B exchange** is a central market space where buyers and sellers meet online and negotiate to buy and sell derivatives products at a mutually acceptable price in accordance with the rules of the **exchange**.

# Business-to-Business (B-to-B)

Supply chain management (SCM) refers to the handling of all operations that relate to building a product and getting it to the right customers / companies. The purpose of a supply chain is to get goods produced and distributed as quickly and efficiently as possible. The supply chain can include, for example, designing, planning, manufacturing, storing, fulfillment and distributing. Some companies are able to own every stage of their supply chain, but most supply chains are made up of a collection of companies, suppliers, manufacturers and distributors to name a few—that are each responsible for completing certain steps within the process chain.

# Business-to-Business (B-to-B)

- \* Key Technologies:

Following are the key technologies used in B2B E-Com:

1-EDI

2- Internet: represents the WWW or network of networks connecting computers across the world

3-Intranet: represents a dedicated network of computers within a single organization

# Business-to-Business (B-to-B)

- \* Key Technologies:

Following are the key technologies used in B2B E-Com:

4- Extranet: represents a network where the outside business partners, supplier or customers can have limited access to a portion of enterprise intranet/network

5-Back-End Information System Integration: are the database management systems used to manage business data.

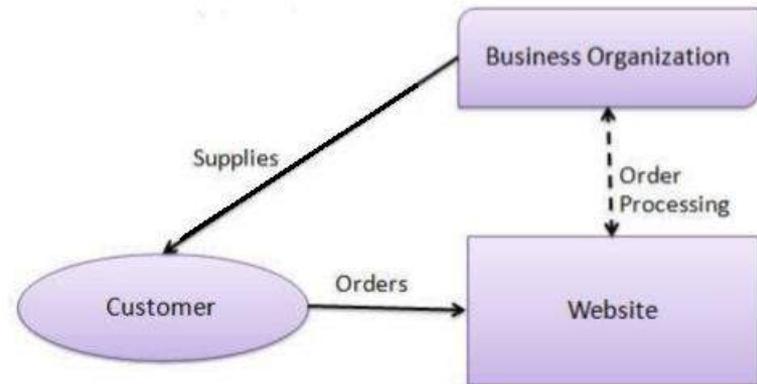
# Business-to-consumer (B-to-C)

- \* The exchange of products, information or services between business and consumers in a retailing relationship, (the basic concept is to sell the product online to the consumers)*
- \* amazon.com and dell.com in the USA*
- \* lastminute.com in the UK.*

# Business-to-consumer (B-to-C)

## \* *Advantages of B2C*

- 1- Availability of choice*
- 2-Reduction in cost to customers*
- 3-Availbilty of rare goods*
- 4-save time, energy,.....*



## \* *Disadvantages of B2C*

- 1-Relaibilty of products is questionable*
- 2-Susception to phishing, online scamming and cyber crimes*

# Business-to-Government (B-to-G)

- \* The exchange of information, services and products between business organizations and government agencies on-line.*

# Business-to-Government (B-to-G)

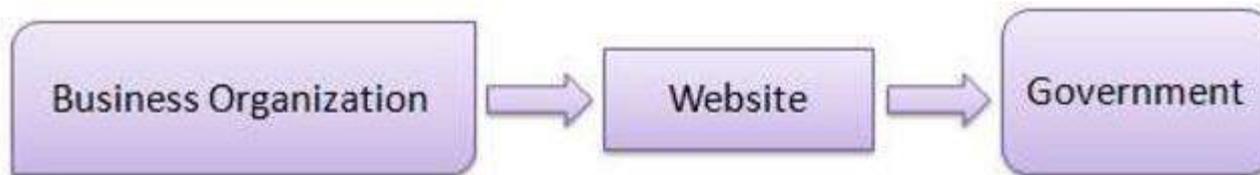
- \* ***Business can also use the Internet to communicate with government departments, apply for government contracts and pay taxes.***

# Business-to-Government (B-to-G)

\* This may include:

- 1- E-procurement **الوصول او توفير** services, in which businesses learn about the purchasing needs of agencies and provide services.
- 2- A virtual workplace in which a business and a government agency could coordinate the work on a contracted project by collaborating on-line to coordinate on-line meetings, review plans and manage progress.
- 3- Rental of on-line applications and databases designed especially for use by government agencies.

# Business-to-Government (B-to-G)



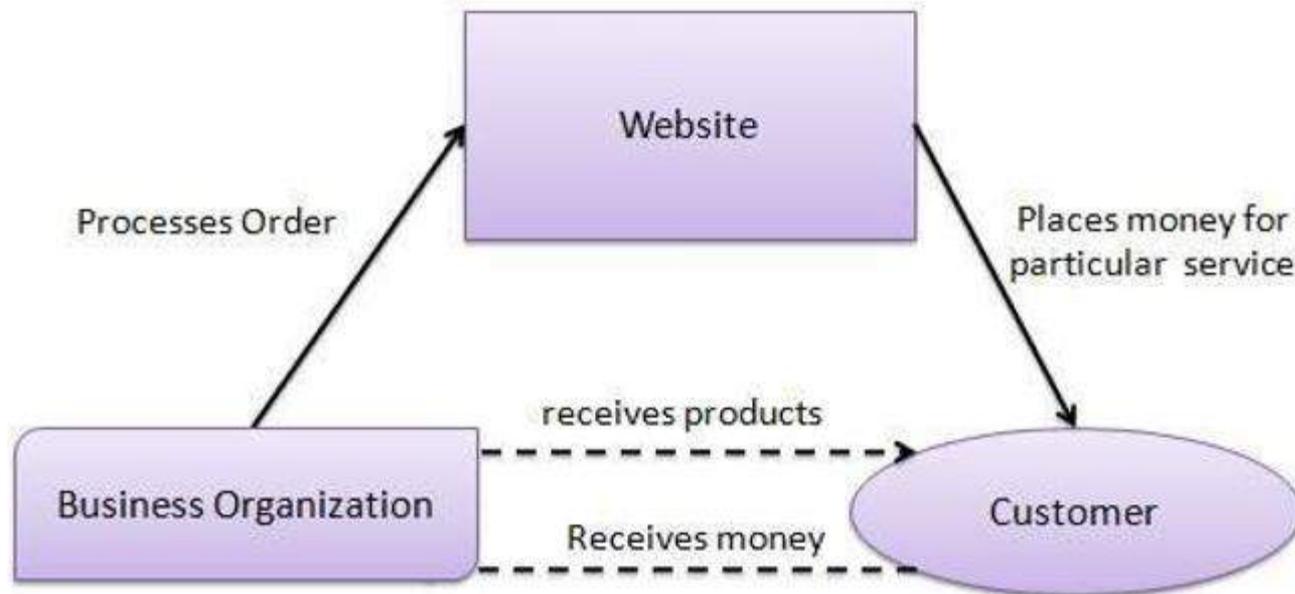
# Consumer-to-Business (C-to-B)

- \* This is the exchange of products, information or services from individuals to business. A classic example of this would be individuals selling their services to businesses.

# Consumer-to-Business (C-to-B)

- \* A consumer puts his project with a set budget online and within hours companies review the consumer's requirements and bid on the project.
- \* The consumer reviews the bids and select the company that will complete the project

# Consumer-to-Business (C-to-B)



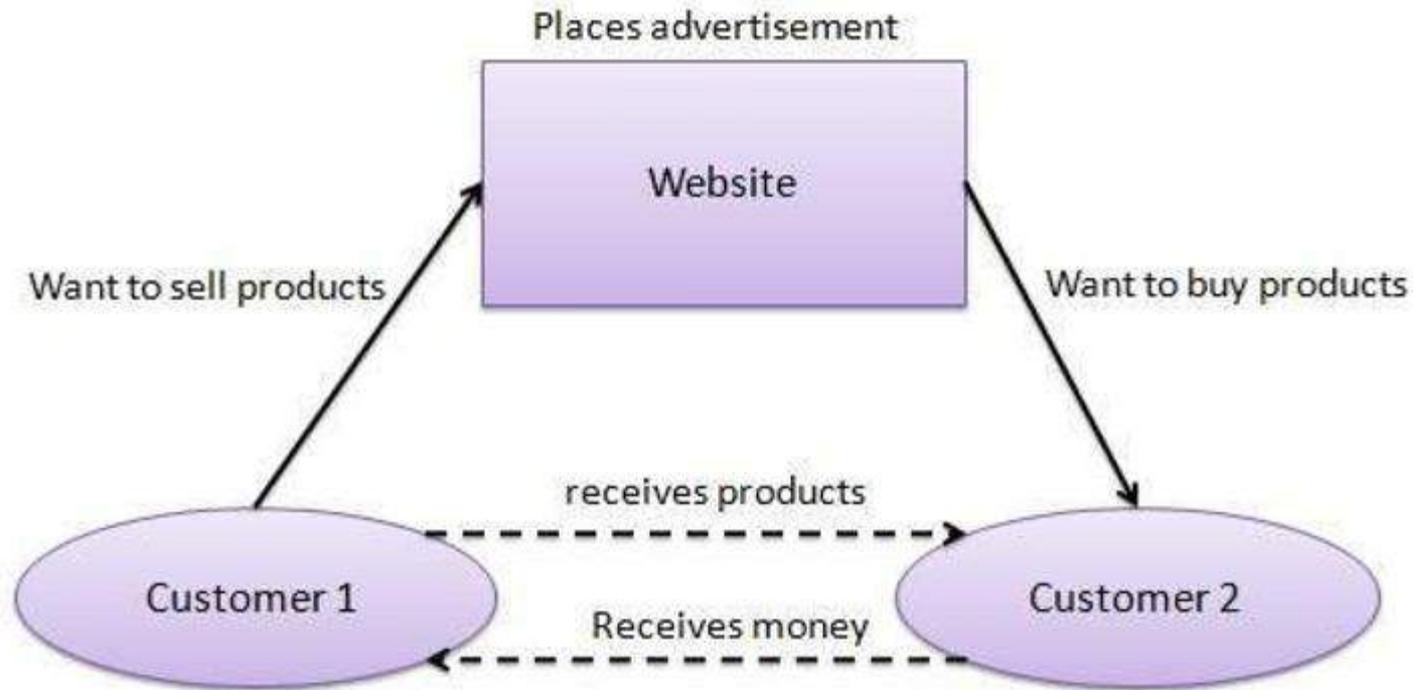
# Consumer-to-Consumer (C-to-C)

- \* It facilitates the online transaction of goods and services between two peoples.

# Consumer-to-Consumer (C-to-C)

- \* In this category consumers interact directly with other consumers. They exchange information such as:
- \* *Expert knowledge (Expert knowledge where one person asks a question about anything and gets an e-mail reply from the community of other individuals.)*
- \* *Opinions about companies and products, for example epinions.com.*  
<http://www.epinions.com/?sb=1>
- \* exchange of goods e-bay ; swapitshop.com

# Consumer-to-Consumer (C-to-C)



# Consumer-to-Government (C-to-G)

- \* **An individual consumer interacts with the government. For example, a consumer can pay his income tax or house tax online.**

# Government-to-Business (G-to-B)

- \* Also known as E-Government. The exchange of information, services and products between government agencies and business organizations.



# Government-to-Business (G-to-B)

Government sites now enable the exchange between government and business of:

- \* • Information, guidance and advice for business on international trading, sources of funding and support (ukishelp), facilities (e.g. [www.dti.org.uk](http://www.dti.org.uk)).

# Government-to-Business (G-to-B)

- \* Government sites now enable the exchange between government and business of:
  - A database of laws, regulations and government policy for industry sectors.

# Government-to-Business (G-to-B)

- \* Government sites now enable the exchange between government and business of:
  - On-line application and submission of official forms (such as company and value added tax).

# Government-to-Business (G-to-B)

- \* Government sites now enable the exchange between government and business of
  - On-line payment facilities. This improves accuracy, increases speed and reduces costs, so businesses are given financial incentives to use electronic-form submission and payment facilities.

# Government-to-Consumer (G-to-C)

- \* (Also known as E-Government).
- \* Government sites offering information, forms and facilities to conduct transactions for individuals, including paying bills and submitting official forms on-line such as tax returns



# Government-to-Government (G-to-G)

- \* (Also known as E-Government).  
Government- to-Government transactions within countries linking local governments together and also international governments, especially within the European Union, which is in the early stages of developing coordinated strategies to link up different national systems.

# E Commerce

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# Lecture Outline

## Today

- \*Degree of Digitization
- \*Impact of E-C
- \*Social Impact

		From: Supplier of content/service		
		Consumer or citizen	Business (organization)	Government
To: Consumer of content/service	Consumer or citizen	<b>Consumer-to-Consumer (C2C)</b> <ul style="list-style-type: none"> <li>• eBay</li> <li>• Peer-to-Peer (Skype)</li> <li>• Blogs and communities</li> <li>• Product recommendations</li> <li>• Social networks: MySpace, Bebo</li> </ul>	<b>Business-to-Consumer (B2C)</b> <ul style="list-style-type: none"> <li>• Transactional: Amazon</li> <li>• Relationship-building: BP</li> <li>• Brand-building: Unilever</li> <li>• Media owner – News Corp</li> <li>• Comparison intermediary: Kelkoo, Pricerunner</li> </ul>	<b>Government-to-Consumer (G2C)</b> <ul style="list-style-type: none"> <li>• National government transactional: Tax – inland revenue</li> <li>• National government information</li> <li>• Local government services</li> </ul>
	Business (organization)	<b>Consumer-to-Business (C2B)</b> <ul style="list-style-type: none"> <li>• Priceline</li> <li>• Consumer-feedback, communities or campaigns</li> </ul>	<b>Business-to-Business (B2B)</b> <ul style="list-style-type: none"> <li>• Transactional: Eurooffice</li> <li>• Relationship-building: BP</li> <li>• Media Owned: Emap business publications</li> <li>• B2B marketplaces: EC21</li> </ul>	<b>Government-to-Business (G2B)</b> <ul style="list-style-type: none"> <li>• Government services and transactions: tax</li> <li>• Legal regulations</li> </ul>
	Government	<b>Consumer-to-Government (C2G)</b> <ul style="list-style-type: none"> <li>• Feedback to government through pressure group or individual sites</li> </ul>	<b>Business-to-Government (B2G)</b> <ul style="list-style-type: none"> <li>• Feedback to government businesses and non-governmental organizations</li> </ul>	<b>Government-to-Government (G2G)</b> <ul style="list-style-type: none"> <li>• Inter-government services</li> <li>• Exchange of information</li> </ul>

Summary and examples of transaction alternatives between businesses, consumers and governmental organizations

# Degree of Digitization

- \* There is another framework created for the categorization of e-commerce into different configurations **based on the degree of digitization of the:**
  - \* **product or service sold,**
  - \* **process of the transaction**
  - \* **delivery agent.**

The three main dimensions can be isolated as:

# Degree of Digitization

**1- Traditional commerce, where products or services are physical, the process of the transaction is physical and the delivery agent is physical**

For Example a corner shop stocks newspapers that are bought with cash over the counter and are taken away by the customer out of the shop.

However, in reality in today's world, it is very rare that a business is truly traditional.

# Degree of Digitization

**2-Pure e-commerce, where products or services are digital, the process of the transaction is digital and the delivery agent is digital.**

For example, software update services of companies like Microsoft, Cisco, Symantec; downloading of electronic books.

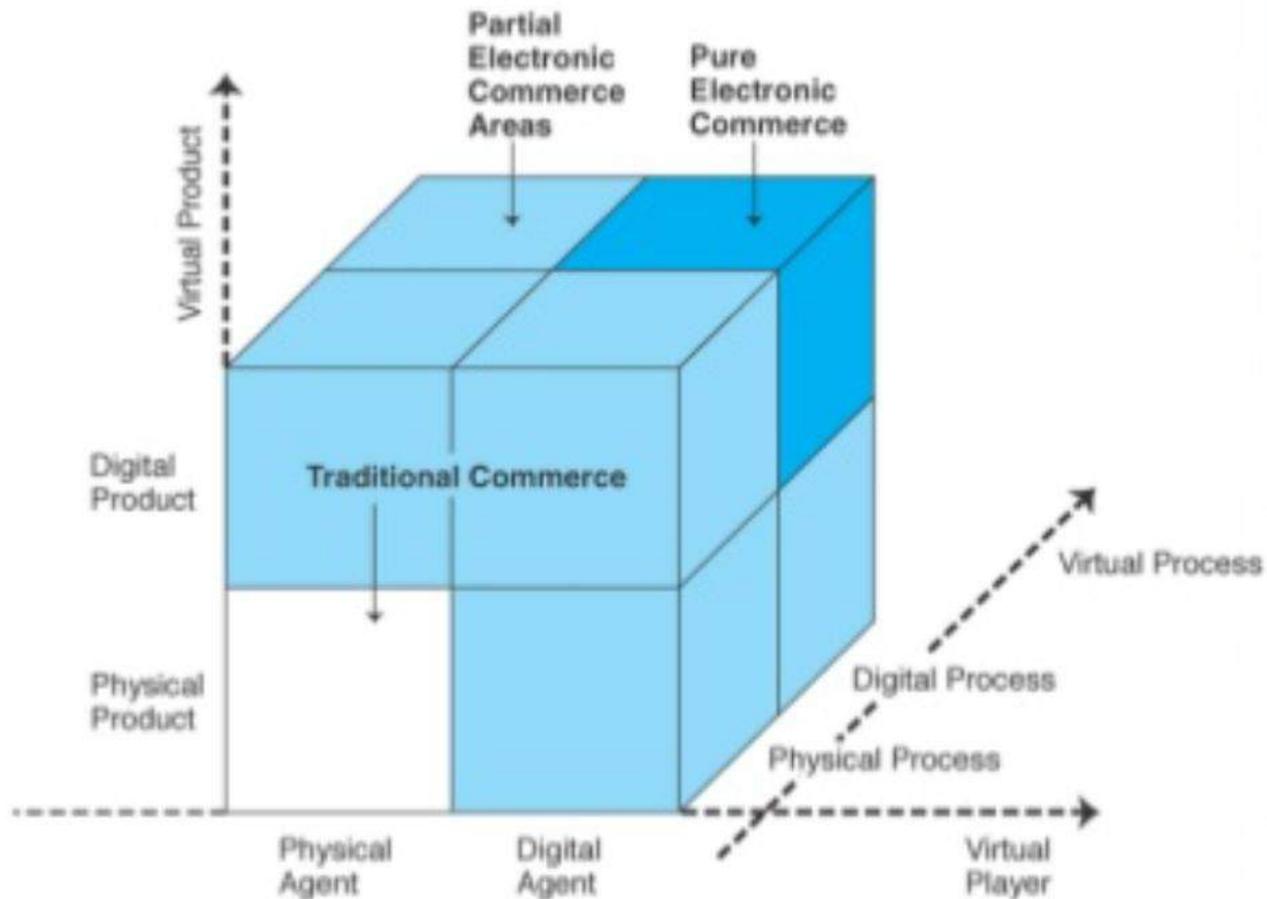
# Degree of Digitization

**3-Partial e-commerce, where either one or two of the dimensions are physical.** For example in the case of booksellers Amazon, the products (books) are physical, the process is digital and the delivery agent is physical.

# Degree of Digitization

- Pure vs. Partial EC: based on the degree of digitization of
  - **Product**
  - **Process**
  - **Delivery agent**
- Traditional commerce: all dimensions are physical
- Pure EC: all dimensions are digital
- Partial EC: all other possibilities include a mix of digital and physical dimensions

# Degree of Digitization



Source: *Economics of Electronic Commerce*, 1/E by Choi/Stahl/Whinston, ©1997. Reprinted by permission of Pearson Education, Inc., Upper Saddle River, NJ.

# Degree of Digitization

- \* **Classifying e-commerce by degree of digitization is a useful way for managers to**
- \* **Analyse the range of products/services they sell, the processes of carrying out and finalizing the transaction and the way the product/service is delivered. By identifying the areas that could potentially be digitized, organizations can re-engineer their business processes to improve efficiency, reduce costs, access global markets and benefit from the advantages presented by e-commerce and e-business.**

# What is the Impact of E-Commerce?

- \* E-commerce and e-business are not solely the Internet, websites or **dot com companies**. It is about a new business concept that incorporates all previous business management and economic concepts

# What is the Impact of E-Commerce?

**1- *Marketing*** – issues of on-line advertising, marketing strategies and consumer behavior and cultures. One of the areas in which it impacts particularly is direct marketing.

# What is the Impact of E-Commerce?

- 2- Computer sciences** – development of different network and computing technologies and languages to support e-commerce and e-business
- 3- Finance and accounting** – on-line banking; issues of transaction costs; accounting and auditing

# What is the Impact of E-Commerce?

**4-*Economics*** –the impact of e-commerce on local and global economies.

## **5- *Production and operations management***

– *the impact of on-line processing has led to reduced cycle times. It takes seconds to deliver digitized products and services electronically; similarly the time for processing orders can be reduced by more than 90 per cent from days to minutes.*

# What is the Impact of E-Commerce?

## ***6-Production and operations***

***management (manufacturing)*** –  
*moving from mass production to demand-driven,  
mass customization customer pull rather than the  
manufacturer push of the past.*

# What is the Impact of E-Commerce?

**7-Human resource management** – issues of on-line recruiting *توظيف*, home working and ‘entrepreneurs’ working on a project by project basis replacing permanent employees.

# What is the Impact of E-Commerce?

**8-Business law and ethics** – the different legal and ethical issues that have arisen as a result of a global ‘virtual’ market. Issues such as **copyright laws, privacy of customer information, legality of electronic contracts, etc.**

# Positive Effects of E-C on Society

- Convenience
- Disabled & Elderly
- Time Saving
- Information Availability & Price Comparison
- New Businesses
- Jobs
- 24/7
- Greater Choice
- Global Marketplace
- Pre-orders

## Convenience

Shopping online can be a lot more convenient than heading out to a shopping centre to find what you want. Instead, you can simply sit at home with access to the internet and order away.

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## Disabled & Elderly

Those who suffer from disabilities, whether they are physical or mental, or old age can often struggle to go shopping in your regular shopping mall. This can become more of a problem when living greater distances from town centres. Online shopping allows these individuals to stay in the comfort of their own home when ordering the products and services they desire.

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## Time Saving

Ordering an item online through an e-commerce site takes a lot less time when compared to travelling to your nearest store.

## Information Availability & Price Comparison

The internet is filled with information and with the use of search engines like Google almost anything can be found out rather quickly. When you involve online shopping with these abilities you can easily find the best price for the product you are searching for without having to travel from retailer to retailer. Google Shopping is an example of a product search engine that finds the best price at the selling stores.

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## New Businesses

When starting off a new business it can be mega-expensive to get it all up and running if you are planning on being a brick organisation. The start-up and running costs for having your business start with an online presence is much cheaper than getting a shop and a place for product storage.

## Jobs

In order to have an online presence and trade online you will need a website that is capable of selling your products or services with acceptable methods of payment. Smaller businesses are likely to hire an external company that specialises in setting up this kind of thing but larger companies on the other hand are likely to employ their own web developers, marketing analysts and search engine optimisation specialists.

# Positive Effects of E-C on Society

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## Greater Choice

When going out shopping you usually only have the availability of the products that are there. This differs when compared to shopping online. Firstly, it is highly likely that you can find the product you want to from multiple different sites. Also, when purchasing from a bricks and clicks organisation it is possible that the product you are after isn't available at your nearest store but instead it can be delivered from a store based elsewhere.

## 24/7

Website's that run online are constantly available at all hours providing there are no technical difficulties. This is a great advantage for those who finish work late and don't have the time to run down to their nearest outlet to find the product they desire as they can now simply order online

# Positive Effects of E-C on Society

- Convenience
- Disabled & Elderly
- Time Saving
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## Global Marketplace

The internet spreads across the world and anyone with access to it can see what is up there. Therefore if you have a website up and running anyone around the world can get access to your website. This gives you a global marketplace but it also brings a much greater competition as you are competing with everyone else who has the same purpose as you with an online presence.

## Pre-orders

Most high demanded products online today tend to have the option to be pre-ordered. This is a process that involves you paying for the product before it is released but in return having it delivered to your door on the release day. This is a very popular process with most entertainment products such as computer games.

# Negative Effects of E-C on Society

## Negative Effects of E-Commerce on Society

- Unemployment
- Uncertainty
- Security Issues & Customer Trust
- Returns & Complaints
- Direct Communication & Product Experience
- Delivery

## Unemployment

Some organisations or businesses move from being a brick organisation, where they are based in a store, and move to become an online, more globally available company and therefore have no need for the staff they have employed in their stores.

# Negative Effects of E-C on Society

## Negative Effects of E-Commerce on Society

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## Uncertainty

As there are some websites out there with the purpose to scam some people are afraid of entering their credentials online and they can't be blamed. There are trusted sites out there and there are multiple ways to detect whether they are official sites or not. PayPal is an online payment method that people can use that keeps your credential information private from the trader. The online trade will then work with PayPal meaning that none of your payment details are shared with the company you a buying from.

# Negative Effects of E-C on Society

## Negative Effects of E-Commerce on Society

- Unemployment
- Uncertainty
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- Delivery

## Security Issues & Customer Trust

It is important to provide a safe and secure online shop for a customer when they are trying to buy products from you. This helps create a greater customer trust and ensure them that they can place an order without any worries to help encourage additional business with that customer in the future. The business will need to make sure that a safe gateway is available and that the information is secured when the customer makes the payment

# Negative Effects of E-C on Society

## Negative Effects of E-Commerce on Society

- Unemployment
- Uncertainty
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## Returns & Complaints

If there is a product malfunction then the customer is going to want a replacement or refund giving that it was not their fault, if it arrived damaged for example. With a business that is solely based online it can be a lot of hassle for the customer to sort out a return or a refund as they can't simply walk into their nearest corresponding store. This can also create a bad experience for the customer and it is likely they will not be coming back to your shop again.

# Negative Effects of E-C on Society

## Negative Effects of E-Commerce on Society

- Unemployment
- Uncertainty
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## Direct Communication & Product Experience

When you order a product online the customer will have no face-to-face contact with the salesperson and no hands-on experience with the product. Instead, the product will usually have a few images to get an idea of the product along with a product description. Sometimes these images and descriptions can be misleading and the customer could end up ordering an item that is not exactly what they want

# Negative Effects of E-C on Society

## Negative Effects of E-Commerce on Society

- Unemployment
- Uncertainty
- Security Issues & Customer Trust
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- Delivery

## Delivery

When you order a product or service online you have to wait for the product to arrive. Usually these e-commerce sites offer different options for delivery which will range from faster delivery times at a higher price to slower delivery times at a lower price or in some cases free. But sometimes the product can take a good duration to come due to many issues and this can cause problems if the product or service you ordered is for an event that is coming up, like a birthday or Christmas present.

# E Commerce

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# Lecture Outline

## Today

- \* The Criteria that Determine the Level of Advancement in E-C
- \* The Criteria that Determine the Level of Advancement in E-B

# The Criteria that can Determine the Level of Advancement of E-Commerce

\*It is important to identify the key drivers of E-C to allow a comparison between different countries. It is often claimed يدعي that E-C is more advanced in the USA than in Europe. These key drivers can be measured by a number of criteria that can highlight the stages of advancement of E-C in each of the respective countries. The criteria that can determine the level of advancement of E-C are summarized in Table 1.1 and can be categorized as:

في يمكن ايجاز المعايير التي تحدد مستوى التقدم في استخدام وتبني التجارة الالكترونية\*  
:بلد ما كما يلي

# The Criteria that can Determine the Level of Advancement of E-Commerce

**1- Technological Factors** – The degree of advancement of the telecommunications infrastructure which provides access to the new technology for business and consumers.

*درجة تطور البنية التحتية في مجال الاتصالات والتي تؤمن النفاذ والوصول \* للمستهلك ومجهزي البضائع.*

# The Criteria that can Determine the Level of Advancement of E-Commerce

**2- Political Factors** – including the role of government in creating government legislation, initiatives and funding to support the use and development of e-commerce and information technology.

*\* العوامل السياسية وتتضمن دور الحكومة في اصدار التشريعات اللازمة للبدء بمثل هذه المشاريع وتوفير الاموال اللازمة لدعم تطوير التجارة الالكترونية وقطاع تكنولوجيا المعلومات.*

# The Criteria that can Determine the Level of Advancement of E-Commerce

**3- Social Factors** – incorporating the level and advancement in IT education and training which will enable both potential buyers and the workforce to understand and use the new technology.

- \* دمج وتوظيف مختلف المستويات في مجال التعليم والتدريب في تقنية المعلومات والذي سيتمكن كل من المشتريين المحتملين والقوى العاملة لفهم واستعمال التقنيات الحديثة في التجارة.

# The Criteria that can Determine the Level of Advancement of E-Commerce

**4- Economic Factors** – including the general wealth and commercial health of the nation and the elements that contribute to it.

- \* العوامل الاقتصادية وتضمن الثروات العامة والوضع التجاري المتعافي للدولة وجميع العوامل التي تساهم في استمرارية وزيادة الثروات وتعافي الاقتصاد.

**TABLE 1.1** Key drivers of E-commerce

<i>Key drivers</i>	<i>Measurement criteria</i>
Technological factors	<ul style="list-style-type: none"> <li>● Telecommunications infrastructure               <ul style="list-style-type: none"> <li>Backbone infrastructure and architecture</li> <li>Industry players and competition</li> <li>Pricing</li> <li>Internet service providers</li> <li>Range of services available (e.g. ADSL, ISDN)</li> <li>Ownership (private or public sector)</li> </ul> </li> <li>● Access to new technology developments</li> <li>● Bandwidth</li> <li>● Speed of development and implementation of new technology by industry sector</li> </ul>
Political factors	<ul style="list-style-type: none"> <li>● Number and type of government incentives and programmes to support the use and development of new technology</li> <li>● Legislation – number and type of supportive or restrictive laws and policies that govern electronic data, contacts and financial transactions. For example, laws that recognise and enforce the validity of electronic documentation, contracts and transactions in a court of law; the validation of digital signatures; the legal usage of electronic security measures such as encryption</li> <li>● Public policies – whether government supports the growth of electronic transactions and processes. For example, filing tax returns to the Inland Revenue electronically, the national education curriculum and training</li> </ul>
Social factors	<ul style="list-style-type: none"> <li>● Skills of workforce</li> <li>● Number of users on-line</li> <li>● Penetration rate of PCs</li> <li>● Level of education; computer literacy and IT skills</li> <li>● Culture of technophilia – a willingness and ability to adopt new technology and the speed at which technology achieves critical mass as in Japan</li> </ul>
Economic factors	<ul style="list-style-type: none"> <li>● Economic growth – GDP</li> <li>● Average income</li> <li>● Cost of technology (hardware and software)</li> <li>● Cost of access to telecommunications infrastructure – pricing structures and rates               <ul style="list-style-type: none"> <li>● Commercial infrastructure – advancement of banking sector; payment systems</li> <li>● Innovative business models</li> </ul> </li> </ul>

# E-Business

## Evolution of e-business

- ▶ 1997: Introduction of a brand new phrase - e-business. IBM was one of the first companies to use the term when, in October 1997, it launched a thematic campaign built around e-business.
- ▶ 1999: The emphasis of e-business shifted from B2C to B2B.
- ▶ 2001: The emphasis of e-business shifted from B2C to B2B, c-commerce, e-government, e-learning, and m-commerce.
- ▶ 2004: Total online shopping and transactions in the United States between \$3 to \$7 trillion.
- ▶ E-business will undoubtedly continue to shift and change.

# E-Business

## Impact of E-Business on Business

- ❖ Direct sales to customer.
- ❖ Anytime access from anywhere.
- ❖ Customization of products.
- ❖ Quicker time to market.
- ❖ Lower stock outs.
- ❖ Price discrimination.
- ❖ Automated and convenient process.

# The Criteria that can Determine the Level of Advancement of E-Business

Since a distinction has been made between E-C and E-B for consistency (لغرض التناغم), the key drivers of E-B are also identified.

These are mainly at the level of the firm (مؤسسة organization) and are influenced by the macro-environment and E-C, which include:

# The Criteria that can Determine the Level of Advancement of E-Business

**1- Organizational Culture** – attitudes وضع to research and development (R&D); its willingness رغبة to innovate ابتداع and use technology to achieve objectives.

- \* ثقافة المؤسسة: اهتمام المؤسسات بالبحث والتطوير والرغبة في استحداث واستخدام التكنولوجيا الحديثة لانجاز اهداف المؤسسة

# The Criteria that can Determine the Level of Advancement of E-Business

**2- Commercial Benefits** – in terms of cost savings and improved efficiency that impact on the financial performance of the firm.

- \* **الفائدة التجارية:** وتكون متمثلة في تقليل الكلفة وتحسين الكفاءة والتي تؤثر على الاداء المالي للشركات

# The Criteria that can Determine the Level of Advancement of E-Business

**3- Skilled and Committed workforce** – that understands, is willing and able to implement new technologies and processes. توفر القوى العاملة الماهرة

**4- Requirements of Customers and Suppliers** – in terms of product and service demand and supply.

احتياجات الزبائن والمجهزين

**5- Competition** – ensuring the organization stays ahead of or at least keeps up with competitors and industry leaders.

# E Commerce

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Year Four/Lecture 7

First Semester/ 2020-2021

# Lecture Outline

## Today

- \* This lecture aim to help students to understand:  
The Benefits and Limitation of E-C

# Scope

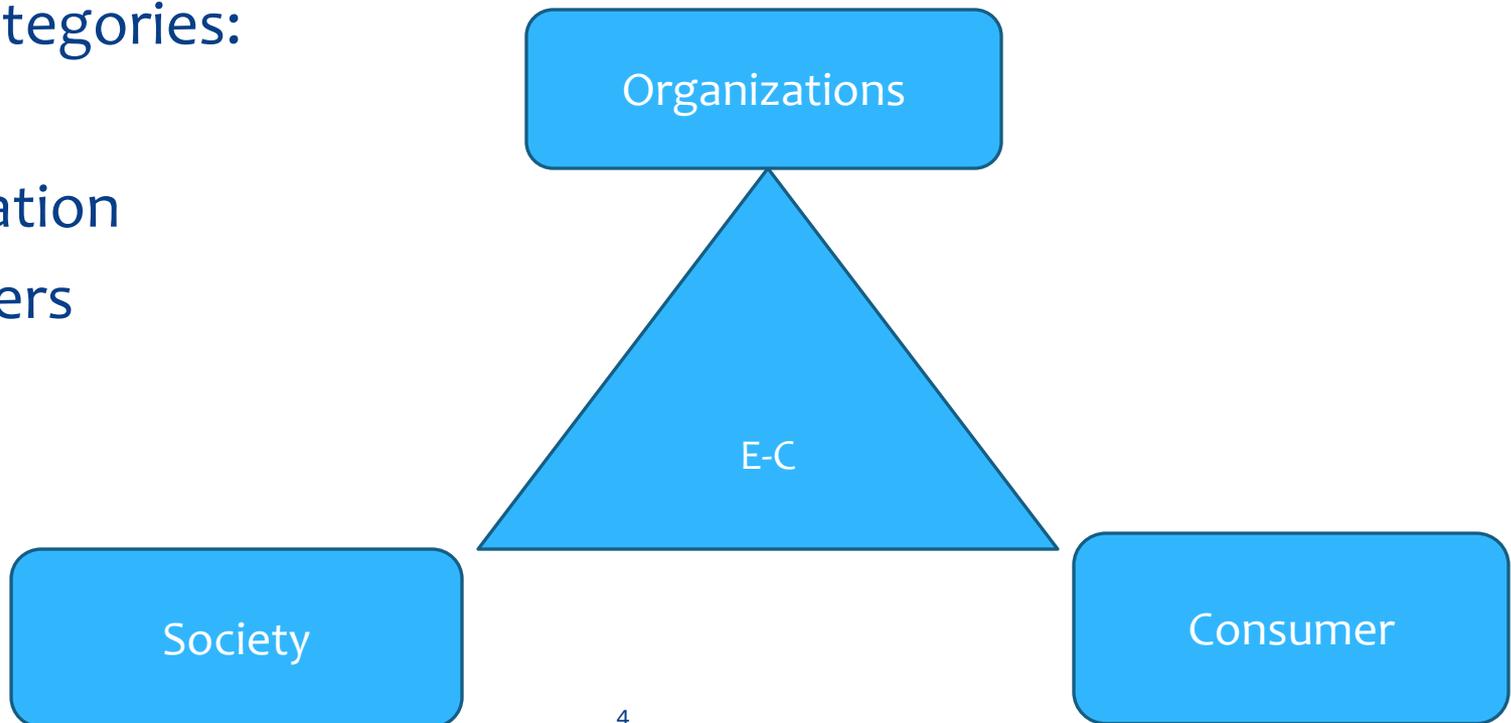
## Scope of E-Commerce

- Marketing, sales and sales promotion
- Pre-sales, subcontracts, supply
- Financing and insurance
- Commercial transactions: ordering, delivery, payment
- Product service and maintenance
- Co-operative product development
- Distributed co-operative working
- Use of public and private services
- · Business-to-administrations (e.g. customs, etc)
- · Transport and logistics
- · Public procurement
- · Automatic trading of digital goods
- · Accounting

# Benefits and Limitation

\*The Benefits and Limitation of E-Com can be broadly classified into 3 major categories:

- 1- organization
- 2-Consumers
- 3-Society



# Benefits of E-C to Organizations

- 1. International marketplace***
- 2. Operational cost savings***
- 3. Mass customization (Ford black car)***
- 4. Lower telecommunications cost.***
- 5. Digitization of products and processes***
- 6. No more 24-hour-time constraints***

# Benefits of E-C to Consumers

- 1. *24/7 access enables customers to shop or conduct other transactions 24 hours a day***
- 2. *More choices***
- 3. *Price comparisons.***
- 4. *An environment of competition***

# Benefits of E-C to Society

- 1. Enables more flexible working practices.** *Means enables more individuals to work at home, and to do less traveling for shopping, resulting in less traffic on the roads & lower air pollution.*
- 2. Connects people** *(in some rural areas & 3rd world countries to enjoy products & services)*
- 3. Facilitates delivery of public services such as healthcare, education, social services at a reduced cost in an improved manner.**

# Limitation of E-C to Organization

*1-Lack of sufficient system security, reliability, standards and communication protocols.*

# Limitation of E-C to Organization

There are numerous reports of websites and databases being hacked into, and security holes in software. For example, Microsoft has over the years issued many security notices and 'patches' for their software. Several banking and other business websites, including Barclays Bank, Powergen and even the Consumers' Association in the UK, have experienced breaches in security where 'a technical oversight' or 'a fault in its systems' led to confidential client information becoming available to all.

# Limitation of E-C to Organization

*2-Rapidly evolving and changing technology, so there is always a feeling of trying to 'catch up' and not be left behind.*

# Limitation of E-C to Organization

3-Under pressure to  
innovate *ابتداع* and develop  
*وتطوير* business models to  
exploit *للاستفادة* the new  
opportunities *الفرص*

# Limitation of E-C to Organization

4-Facing increased competition *مواجهة*  
from both national and international competitors often leads to price wars *حرب الاسعار* and subsequent unsustainable losses *خسائر دائمية* for the organization

# Limitation of E-C to Organization

*5-Problems with compatibility of older and 'newer' technology. There are problems where older business systems cannot communicate with web based and Internet infrastructures, leading to some organizations running almost two independent systems where data cannot be shared.*

# Limitation of E-C to Organization

This often leads to having to invest **استثمار** in new systems or an infrastructure, which bridges **تعمل كجسر** the different systems. In both cases **كلا** this is both financially costly as well as disruptive **فوضى** to the efficient running of organizations.

# Limitation of E-C to Consumers

## 1-Computing equipment

Computing equipment *الاجهزة الكومبيوترية* is needed for individuals *للشخص* to participate in the new 'digital' economy, which means an initial capital cost *تكلفة* *اساسيه* to customers.

# Limitation of E-C to Consumers

## *2-A basic technical knowledge*

- \* A basic technical knowledge *اساسيات الخبرة تقنية* is required *مطلوبه* of both computing equipment and navigation of the Internet *التجوال في الانترنت* and the World Wide Web.

# Limitation of E-C to Consumers

## *3-Cost of access to the Internet*

Cost of access to the Internet, whether  
or عن طريق استعمال خط الهاتف الارضي dial-up  
بيانات الانترنت broadband tariffs  
فيمل لو كان

# Limitation of E-C to Consumers

## 4- Lack of security and privacy of personal data

- \* Lack of security and privacy of personal data. There is no real control of data that is collected over the Web or Internet. Data protection laws are not universal and so websites hosted in different countries may or may not have laws which protect privacy of personal data

# Limitation of E-C to Consumers

*5 - A lack of trust because they are interacting with faceless computers*

*A lack of trust **الثقة** because they are interacting with faceless computers*

# Limitation of E-C to Society

## 1- Breakdown in human interaction

- \* Breakdown in human interaction *كسر اواصر الترابط الاجتماعي*. As people become more used to interacting electronically there could be an erosion *تاكل* of personal and social skills *العلاقات الاجتماعية* which might eventually *وبالتالي* be detrimental *مضر* to the world we live in where people are more comfortable *راحة* interacting with a screen than face to face.

# Limitation of E-C to Society

## 2- Social division for people depend on the skills they have.

- \* Social division *الانقسام الاجتماعي*. Which mean that people who do not have technical skills become unable to get better-paid jobs and could form an underclass with potentially dangerous implications for social stability *الاستقرار الاجتماعي*.

# Limitation of E-C to Society

## 3- *Difficulty in policing the Internet*

Difficulty in policing the Internet, which means that numerous crimes can be perpetrated **بترتكب** and often go undetected. There is also an unpleasant rise in the availability and access of obscene material and ease with which pedophiles **الاشخاص** (الشاذون جنسيا) (تحديدا المنجذبون نحو الاطفال) and others can entrap children by masquerading **طريقة تنكرية** in chat rooms.

# E Commerce

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Year Four/Lecture 9  
First Semester/ 2020-2021

# Lecture Outline

## Today

- \*Issues Surrounding E-C
- \*E-C Challenges

# Fundamentals of E-C

- \* E-C is evolving quickly.
- \* Failures of many start-ups shows its not without risks.
- \* E-C presents significant opportunities and threats.

# 1. Trust Issues



*"On the Internet, nobody knows you're a dog."*

The New Yorker Collection 1993 Peter Steiner from cartoonbank.com. All rig

# 1. Trust Issues

- \* How do I know who say you are?
- \* How can I guarantee you will supply me with the products you offer within the timeframe you gave?

# 1. Trust Issues

- \* Established companies, especially those with offline presence, have easy time creating trust on the Web.
- \* New companies face difficulties due to anonymity that exists (visitors won't just buy from anyone, especially if they have never heard of the company before ).

## 2. Language Issues

- \* ‘Think globally, act locally’
- \* Providing local language conversations of a site (customers more likely to buy products or services from a sites in their own language).
- \* About 60% of content on Web is in English; more than 50% of Current Internet users do not read English.

# 3. Culture Issues

- \* Common language and common customs provide an easier time for consumers to determine how to find actual needs.
- \* Laws and business practices vary between countries

# 3. Culture Issues

- \* ham.com (not suitable for Muslim culture)
- \* Hejab.com (suitable for Muslim culture)
- \* Use of icon and terms to depict common actions

-Shopping carts used in USA, baskets in Europe, trolleys in Australia, OK in come countries

## 4. Culture and Government Issues

- \* Government controls that limit form of open online discussion
- \* French law regulates that the advertisement for a product must be in French; companies willing to sell to Frenchmen online and ship to France must have content in French.

# 5. Infrastructure Issues

- \* Internet connection cost & services (poor telecommunication infrastructure).
- \* online Bank
- \* Delivery of products

# Challenges

- 1-Technical
- 2- Perceptual
- 3- Societal
- 4- Legal and ethical
- 5- Intellectual property

# Challenges

## \* Technical

**1-Interoperability:** The ability of system running in different operating environments to communicate and work together.

Ex: clients running Windows XP can access Web pages from server running Linux.

For the interoperability to work, the same set of rules (protocols) must be followed.

# Challenges

## \* Technical

2-Security: Threats to systems

Three types of security threats:

1-Denial of services (DOS): Two primary types of DOS attacks: spamming & Viruses

**Spamming: sending unsolicited commercial emails to individuals**

**Viruses: self-replicating computer program designed to perform unwanted events**

# Challenges

## \* **Technical**

2-Security: Threats to systems

Three types of security threats:

2-Unautherized access: illegal access to systems,  
application and data.

# Challenges

## \* Technical

### 3-Privacy: Threats to data

**Spyware:** a type of program that watches what users do with their computer and then sends that information over Internet to the spywares' author.

# Challenges

## \* **Perceptual**

Trust lies somewhere between total trust or complete lack of trust.

The level of trust may change over time as one becomes familiar with other party through experience or other knowledge

# Challenges

## \* Perceptual

### Components of Trust:

- 1-Predictability: establish clear expectation- consistently sending email, notification of order confirmation and of order shipment.
- 2- Reliability: providing follow through (do according to what merchants promise)
- 3-Technical competence: ability to carry out responsibilities ( and show this clearly to users)

# Challenges

## \* Societal

- Differences in cost/income
- Access inequalities
- Information technology skills shortage (global movement of IT workers (brain drain) from developing countries to developed ones for higher salaries)

# Challenges

## \* Legal & Ethical

## \* Intellectual Property

- protection (copyrights, trademarks (name, brands))
- Global uniformity of laws

# E Commerce

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First Semester/ 2020-2021

# Lecture Outline

## Today

- \* This lecture aim to help students to understand:
  1. Architectural Framework for E-Commerce
  2. The Technical/Non Technical Problems of E-C

# Architectural Framework for E-Commerce

Architectural framework of e-commerce means the synthesizing of various existing resources like DBMS, data repository, computer languages, software agent-based transactions, monitors or communication protocols to facilitate the integration of data and software for better applications.

The architectural framework for e-commerce consists of **six layers** of functionality or services as follows:

- 1. Application services.**
- 2. Brokerage services, data or transaction management.**
- 3. Interface and support layers.**
- 4. Secure messaging, security and electronic document interchange.**
- 5. Middleware and structured document interchange, and**
- 6. Network infrastructure and the basic communication services.**

# Architectural Framework for E-Commerce

1. **Applications:** In the application layer services of e-commerce, it is **decided that what type of e-commerce application is going to be implemented.** (B2B,B2C,C2C,B2G)

There are three types of distinguished e-commerce applications i.e., consumer to business application, business-to-business application and government-to-business.

# Architectural Framework for E-Commerce

**2. Information Brokerage and Management Layer:** This layer is rapidly becoming necessary in dealing with the voluminous amounts of information on the networks. **This layer works as an intermediary who provides service integration between customers and information providers,** given some constraint such as low price, fast services or profit maximization for a client.

# Architectural Framework for E-Commerce

For example, a person wants to go to USA from India. The person checks the sites of various airlines for the low-price ticket with the best available service. For this he must know the URLs of all the sites. Secondly, to search the services and the best prices, he also has to feed the details of the journey again and again on different sites. If there is a site that can work as information **broker and can arrange the ticket as per the need of the person, it will save the lot of time and efforts of the person.** This is just one example of how information brokerages can add value.

# Architectural Framework for E-Commerce

**3. Interface and Support Services:** The third layer of the architectural framework is interface layer. **This layer provides interface for e-commerce applications. Interactive catalogs and directory support services** are the examples of this layer.

# Architectural Framework for E-Commerce

- \* Interactive catalogs are the **customized interface to customer applications** such as home shopping. Interactive catalogs are very similar to the paper-based catalog. The only difference between the interactive catalog and paper-based catalog is that the first one has the additional features such as use of graphics and video to make the advertising more attractive.
- \* Directory services have the **functions necessary for information search and access**. The directories attempt to organize the enormous amount of information and transactions generated to facilitate e-commerce.
- \* The main difference between the interactive catalogs and directory services is that the interactive catalogs deal with people while directory support services interact directly with software applications.

# Architectural Framework for E-Commerce

**4. Secure Messaging Layer: In any business, electronic messaging is an important issue.** The commonly used messaging systems like phone, fax and courier services have certain problems like in the case of phone if the phone line is dead or somehow the number is wrong, you are not able to deliver the urgent messages. In the case of courier service, if you want to deliver the messages instantly, it is not possible as it will take some time depending on the distance between the source and destination places. The solution for such type of problems is electronic messaging services like e-mail, and EDI.

# Architectural Framework for E-Commerce

- \* The electronic messaging has changed the way the business operates. The major advantage of the electronic messaging is the ability to access the right information at the right time across diverse work groups.
- \* The main constraints of the electronic messaging **are security, privacy, and confidentiality through data encryption and authentication techniques.**

# Architectural Framework for E-Commerce

**5. Middleware services:** The enormous growth of networks, client server technology and all other forms of communicating between/among unlike platforms is the reason for the invention of middleware services. **The middleware services are used to integrate the diversified software programs and make them talk to one another.**

# Architectural Framework for E-Commerce

**6. Network Infrastructure:** We know that the **effective and efficient linkage** between the customer and the supplier is a precondition for e-commerce

# Problems

**The Problems of E-Com can be broadly classified into two major categories:**

- 1. Technical**
- 2. Non-Technical**

# Technical Problems

- 1. There can be lack of system security, reliability or standards owing to poor implantation of e commerce.**
- 2. The software development industry is still evolving and keeps changing rapidly.**
- 3. In many countries, network bandwidth causes an issues.**
- 4. Sometimes, it becomes difficult to integrate an e commerce software or website with existing applications and data bases.**
- 5. There could be software/hardware compatibility issues, as some ecommerce software may be incompatible with some operating system or other component.**

# Non Technical Problems

- 1. Initial cost:** The cost of creating/building an ecommerce application in house may be very high. There could be delays in launching an e commerce application due to mistakes, and lack of experience.
- 2. Lack of touch or feel of products during online shopping is a drawback.**
- 3. Security/privacy:** it is difficult to ensure the security or privacy on online transactions.

# Non Technical Problems

- 4. E commerce applications are still evolving and changing rapidly.**
- 5. Internet access is still not cheaper and is inconvenient to use for many potential customers, for example those living in remote villages.**

# E commerce

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Year Four/Lecture 10

First Semester/ 2020-2021

# Lecture Outline

## \* **Today**

- \* Electronic Data Interchange (EDI)
- \* Use of Electronic Data Interchange
- \* EDI Components
- \* Steps in EDI Systems & Process
- \* EDI Documents & EDI Frame
- \* Who Use EDI
- \* Advantages & Disadvantages of EDI
- \* EDI Implement Cost
- \* EDI standards

# Introduction

- \* The business connections used historically to perform these operations have been the postal service and the telephone.
- \* Both are slow. Both terminate with that wall of people who feed the computer and who may make errors.

# What's Wrong with Paper?

- \* Labor intensive
- \* Slow
- \* Error Prone
- \* Uncertain
- \* Expensive

# EC Strategy

## EC Strategy



Paper Intensive  
Non - Integrated

Move From



Automated  
Integrated

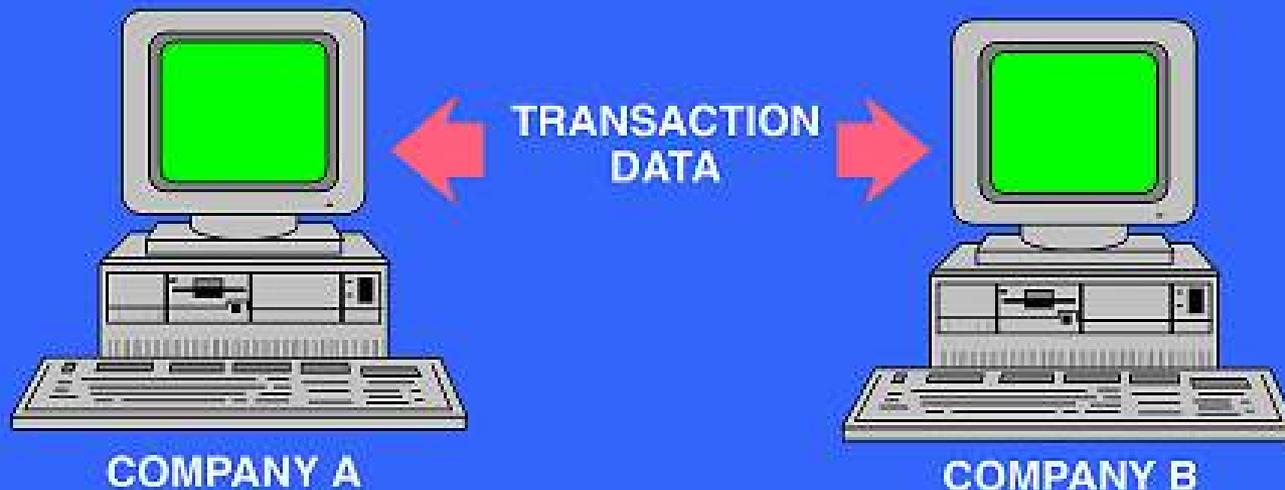
***Create Data Once - Use It Many Times!***

# What Can We Do????

- \* Get rid of the paper altogether.
- \* What your company needs is a better link to **business connections** and that is what **Electronic Data Interchange** is all about.

# Electronic Data Interchange

## ELECTRONIC DATA INTERCHANGE



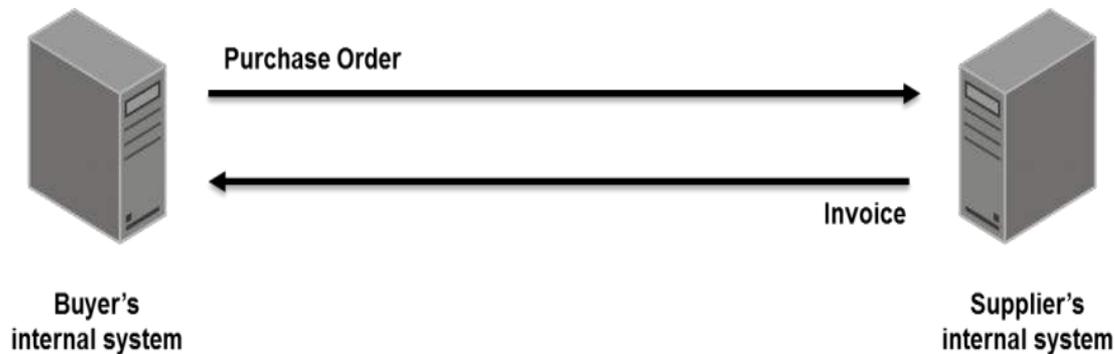
EDI is the computer-to-computer exchange of routine business documents (data) in a standard format between companies.

# Electronic Data Interchange

- \* EDI is the electronic transfer of a standardized business transaction between a sender and receiver computer, over some kind of private network. Both sides would have to have the same application software and the data would be exchanged in an extremely rigorous format.
- \* يمثل عملية التبادل او التبادل الالكتروني للمعاملات المالية او البيانات (المتعارف عليها بين اطراف EDI العمل) بين جهاز الكمبيوتر المرسل وجهاز الكمبيوتر المستلم عبر شبكة اتصالات خاصة بهما، كلا الطرفين يجب ان يمتلكا نفس البرنامج او التطبيق وان البيانات يتم تبادلها بتنسيق عالي جدا.

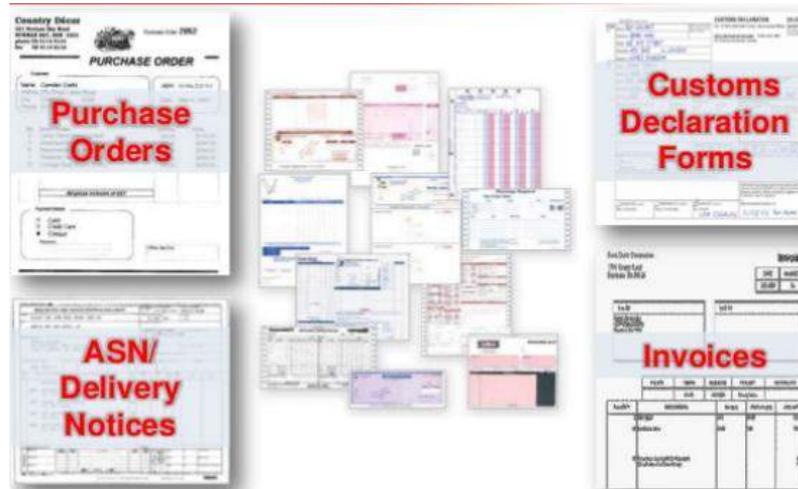
# Electronic Data Interchange

- \* The EDI process looks like this — no paper, no people involved:



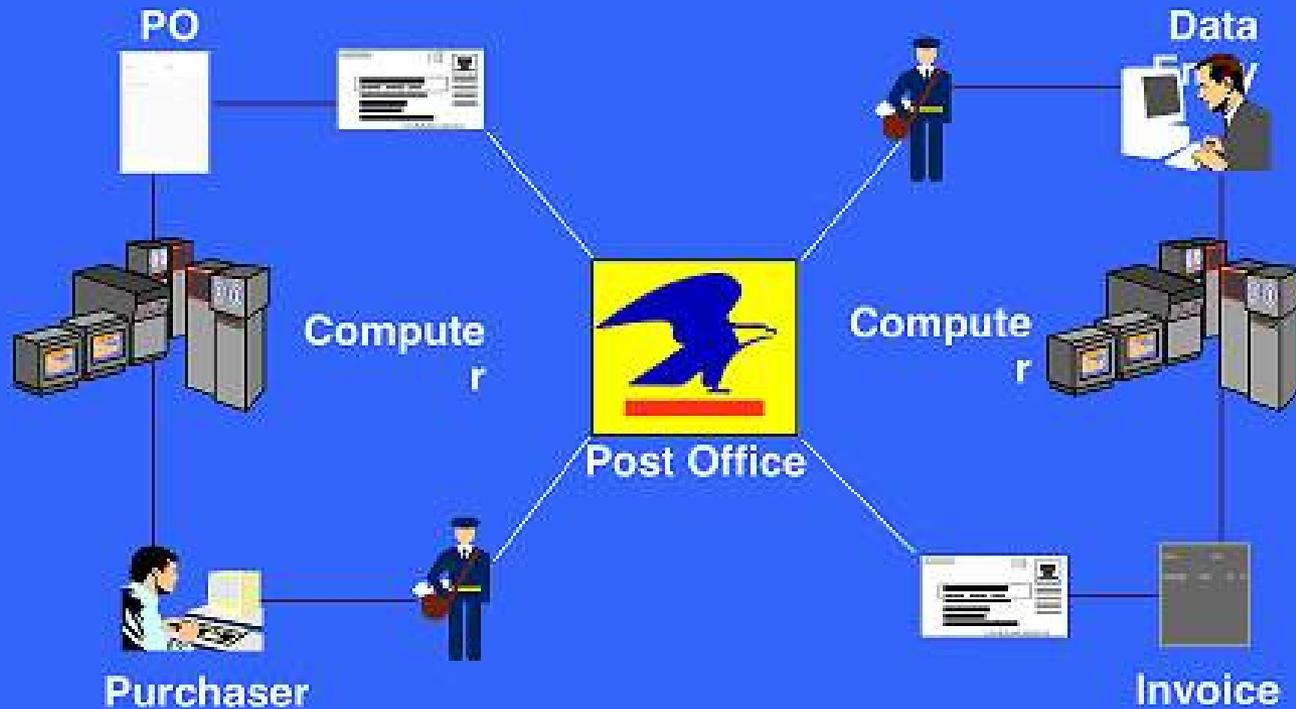
# EDI Replaces Paper-Based Business Documents

- \* EDI is the electronic exchange of structured business information, in standard formats, between computers, EDI eliminates the need for a paper-based system by providing an **electronic link** between companies. This **reduces data entry tasks and improves business cycle times.**



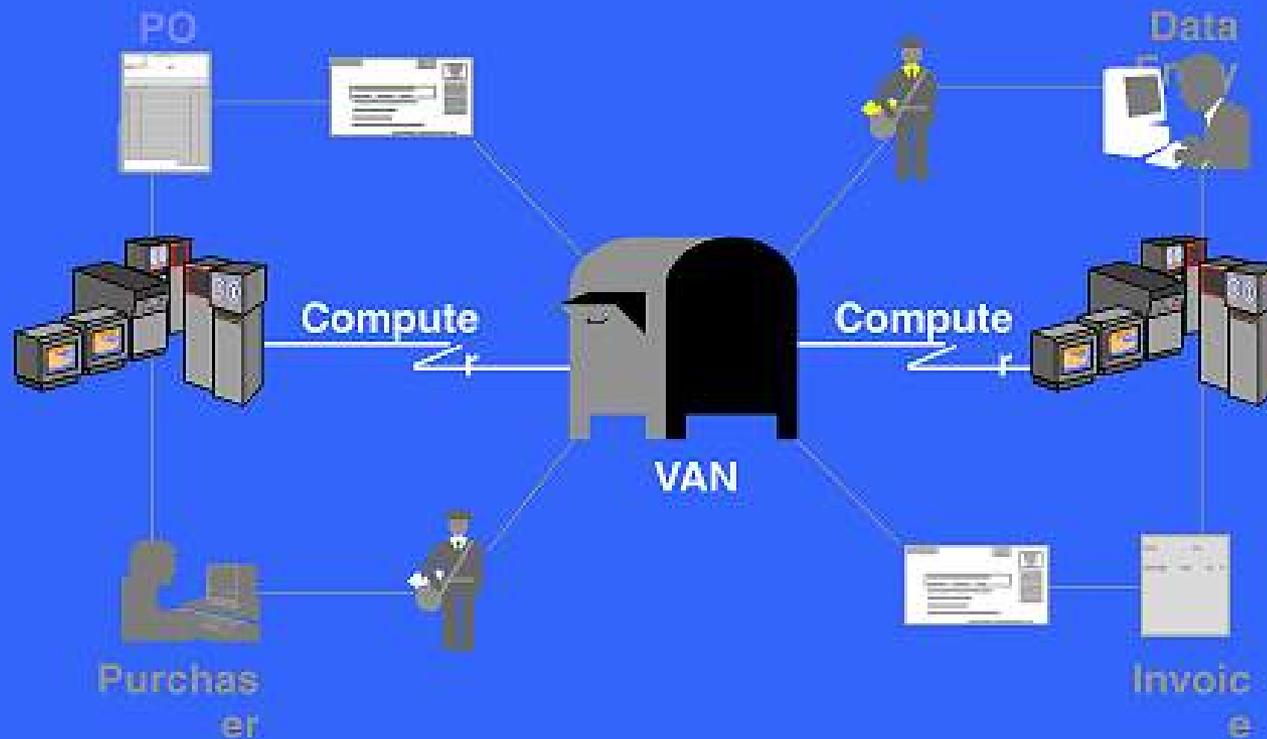
# Paper Document Interchange

## PAPER DOCUMENT INTERCHANGE



# Electronic Data Interchange

## ELECTRONIC DATA INTERCHANGE



# EDI



- \* EDI is the computer-to-computer exchange of standard business documents in electronic format between two companies.
- \* EDI operates under two principles, **firstly** electronic documents replaces paper ones and **secondly** the exchange of documents takes place in a standard format.

# EDI

- \* In EDI information is passed electronically from one computer to another over a network without having to be read, retyped or printed. The information transferred must have **a defined structure agreed between your company**, and the company or group you send and receive data from. **Any company or group which uses EDI is called a TRADING PARTNER**

# EDI

- \* **TRADING PARTNER:** A trading partner is any company, government department or commercial or non-commercial entity with whom an organization regularly exchange documents of formatted data (not letters)

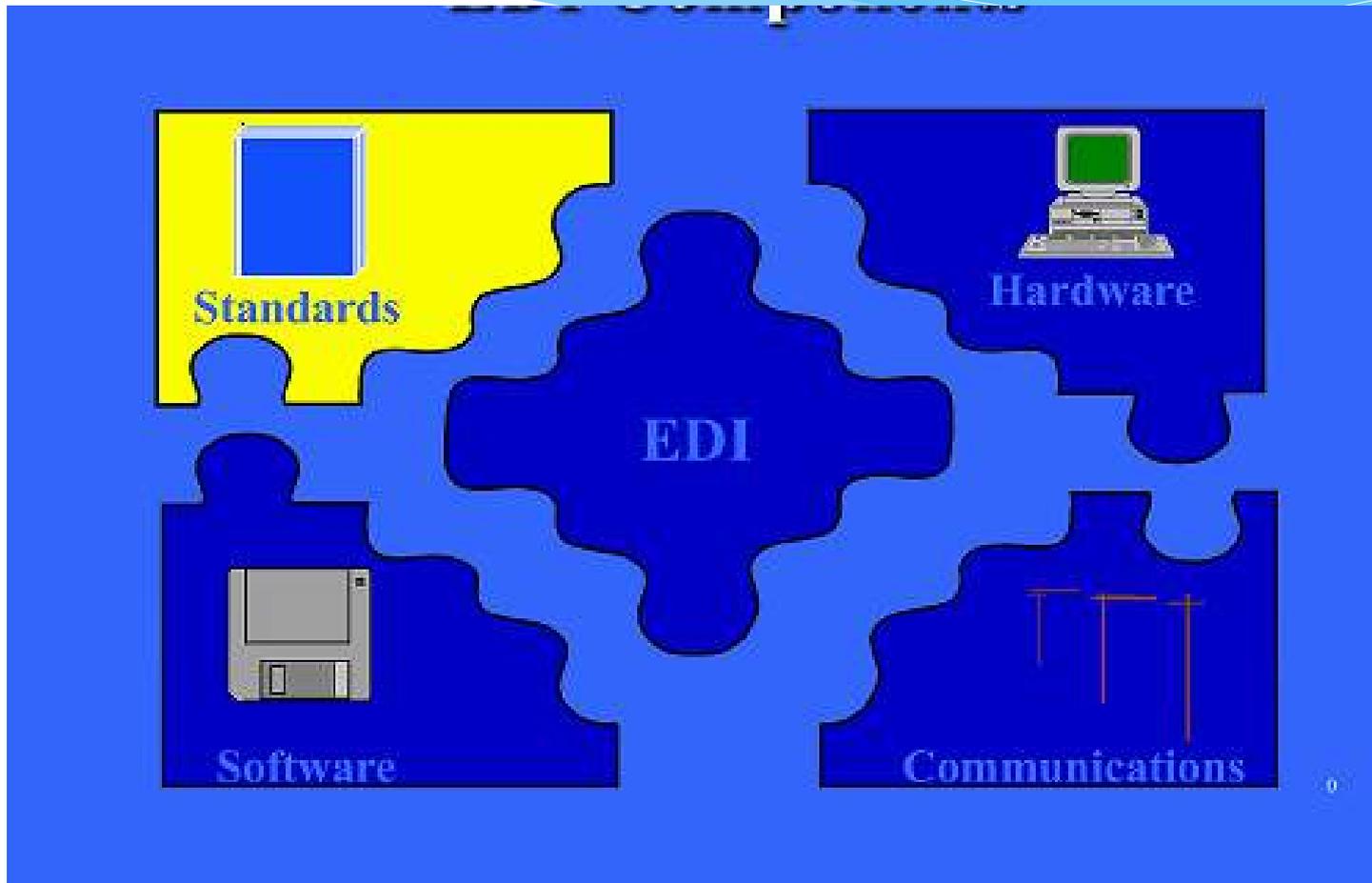
# EDI

- \* **Business partners** – The exchange of EDI documents is typically between two different companies, referred to as business partners or trading partners. For example, Company A may buy goods from Company B. Company A sends orders to Company B. Company A and Company B are business partners.

# Example of EDI

- \* Examples of using EDI is automatic teller machines (ATMs) in banks where EDI is used for transferring and withdrawing notes between different bank accounts, airline reservation systems, stock exchange transactions and car reservation systems

# EDI Components

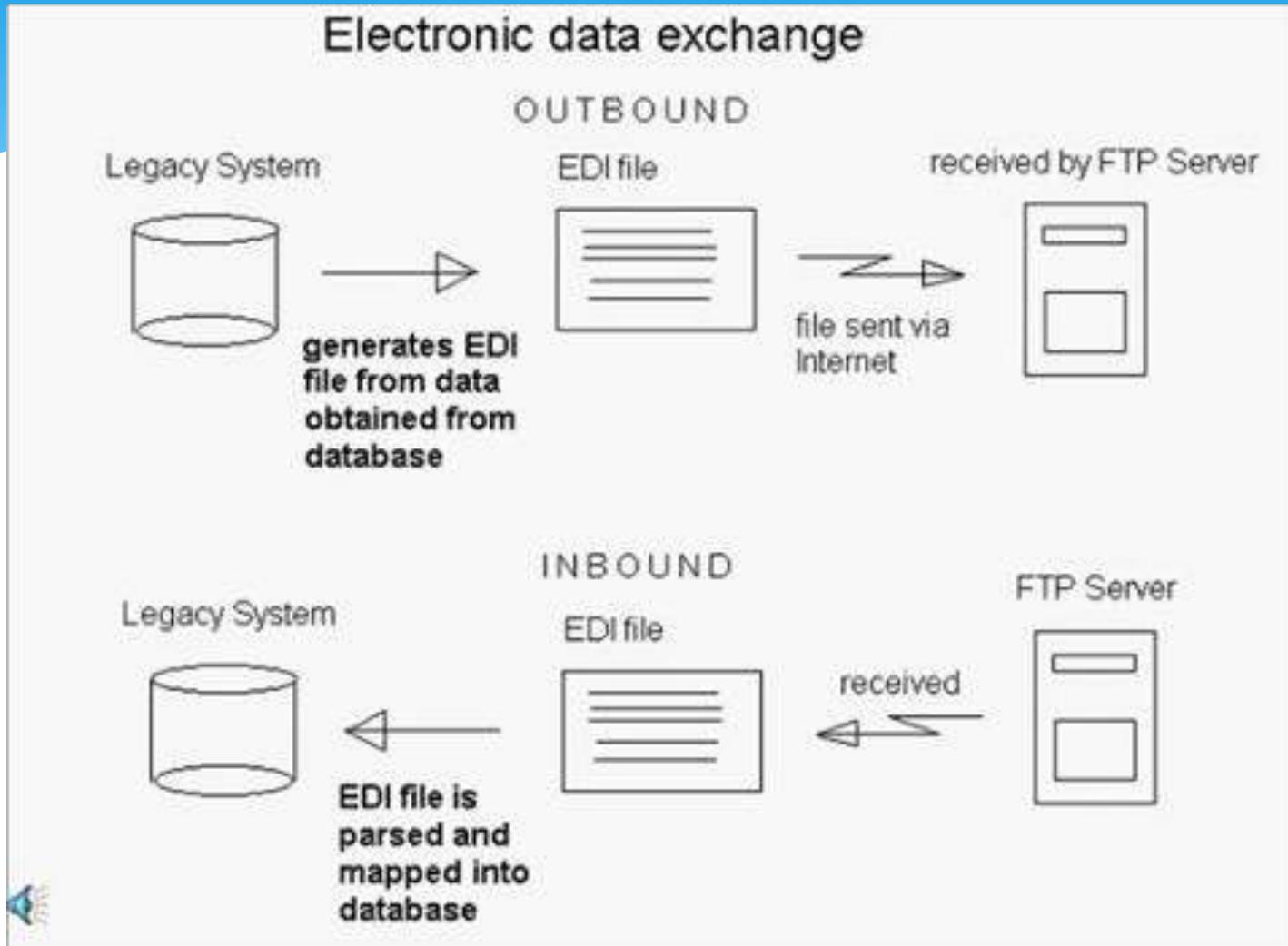


# Steps in EDI System

Following are the steps in an EDI System.

1. A program generates the file which contains the processed document.
2. The document is converted into an agreed standard format.
3. The file containing the document is send electronically on network.
4. The trading partner receives the file.
5. An acknowledgement document is generated and sent to the originating organization.

# EDI Process



**Mapping:** The Process of taking data from a company- specific format and fitting into the EDI standard electronic format.

# EDI Documents

Following are few important documents used in EDI –

- \* Invoices
- \* Purchase orders
- \* Shipping Requests
- \* Financial information letters
- \* Acknowledgment

# The Use of EDI become an Alternative



- \* The buyer raises a Purchase Order (PO) with EDI software , which can be automatically transmitted to seller in near real-time.
- \* The sellers order entry receives the PO and acknowledgment is transmitted to the buyer with delivery conformation .
- \* What can take five days with papers takes minutes with EDI

# EDI Message

- \* An EDI message contains a string of **data elements**, each of which represents a singular fact, such as
  - 1- price
  - 2- product model numberseparated by **delimiter**.
- \* The entire string is called a **data segment**
- \* One or more data segments framed by a header and trailer form a transaction set (equivalent to a message).

# EDI Message Example

A sample EDI file

```
ISA*00*                *00*                *ZZ*SENDERISA        *14*007
GS*PO*SENDERGS*007326879*19960807*1548*000001*X*004010~
ST*850*000000001~
BEG*00*SA*A99999-01**19971207~
REF*0B*12345**11>ABCDEF~
ITD*01*3*1**15**16~
DTM*002*19971219~
N1*BT*ABC Inc.*9*1234567~
N3*P.O. BOX 0000~
N4*TEMPLE*TX*76503~
N1*ST*BUYSNACKS PORT*9*1223334445~
N3*1000 N. SAMPLE HIGHWAY~
N4*ATHENS*GA*30603~
PO1**16*CA*12.34**CB*000111111*UA*002840022222~
PID*F****CRUNCHY CHIPS LSS~
PO4*48*7.89*LB~
CTT*7~
SE*16*000000001~
```



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# EDI Message Example

A sample EDI file

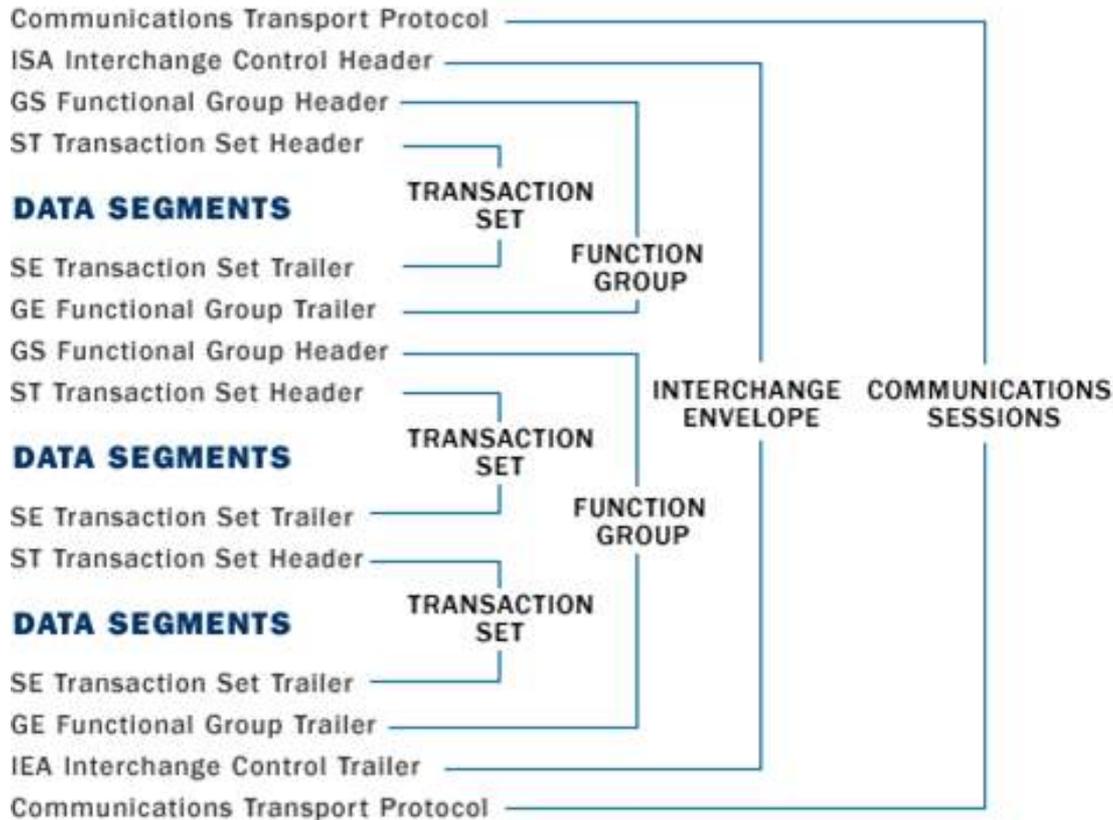
```
ISA*00*                *00*                *ZZ*SENDERISA        *14*007
GS*PO*SENDERGS*007326879*19960807*1548*000001*X*004010~
ST*850*000000001~
BEG*00*SA*A99999-01**19971207~
REF*0B*12345**11>ABCDEF~
ITD*01*3*1**15**16~
DTM*002*19971219~
N1*BT*ABC Inc.*9*1234567~
N3*P.O. BOX 0000~
N4*TEMPLE*TX*76503~
N1*ST*BUYSNACKS PORT*9*1223334445~
N3*1000 N. SAMPLE HIGHWAY~
N4*ATHENS*GA*30603~
PO1**16*CA*12.34**CB*000111111*UA*002840022222~
PID*F****CRUNCHY CHIPS LSS~
PO4*48*7.89*LB~
CTT*7~
SE*16*000000001~
```

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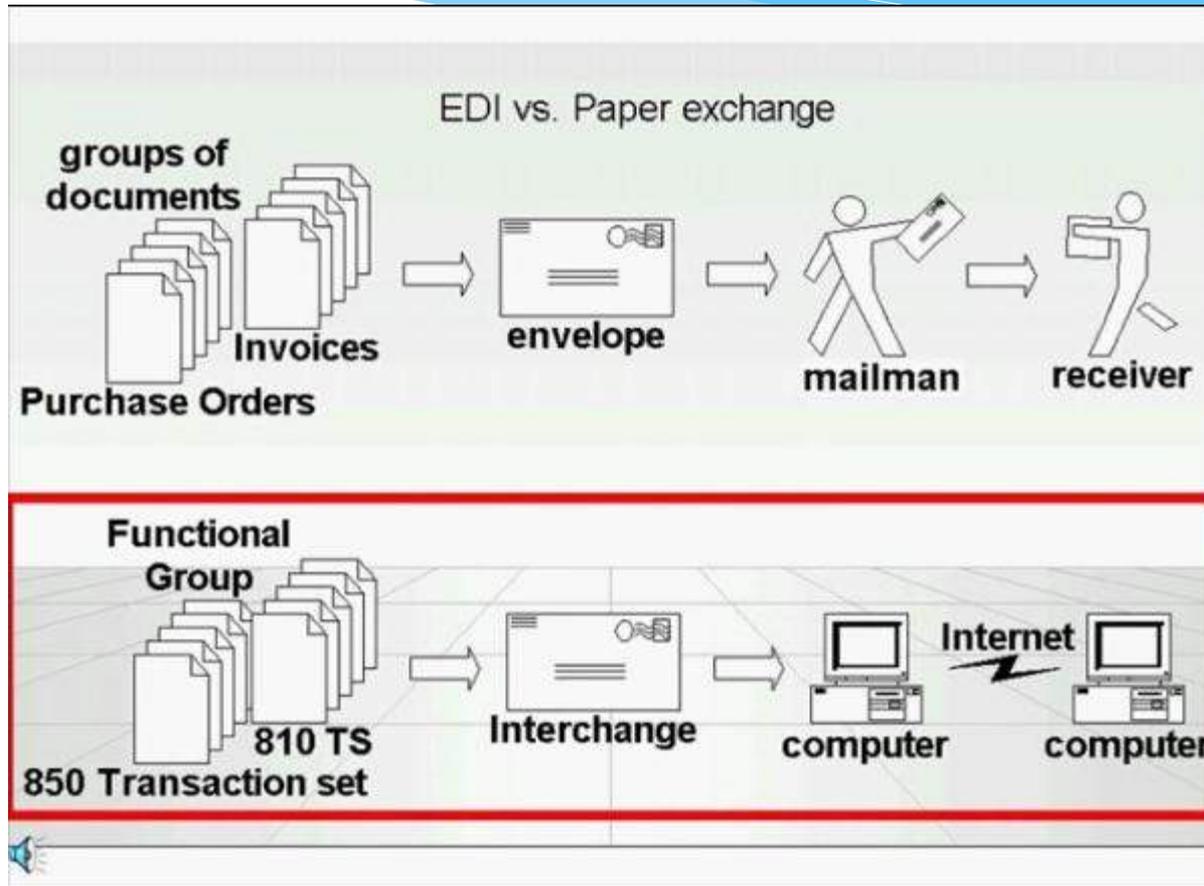
# EDI

- \* In computer programming, a delimiter is a character that identifies the beginning or the end of a character string (a contiguous sequence of characters). The delimiting character is not part of the character string. In command syntax, a space or a backslash (\) or a forward slash (/) is often a delimiter, depending on the rules of the command language. The program interpreting the character string knows what the delimiters are.

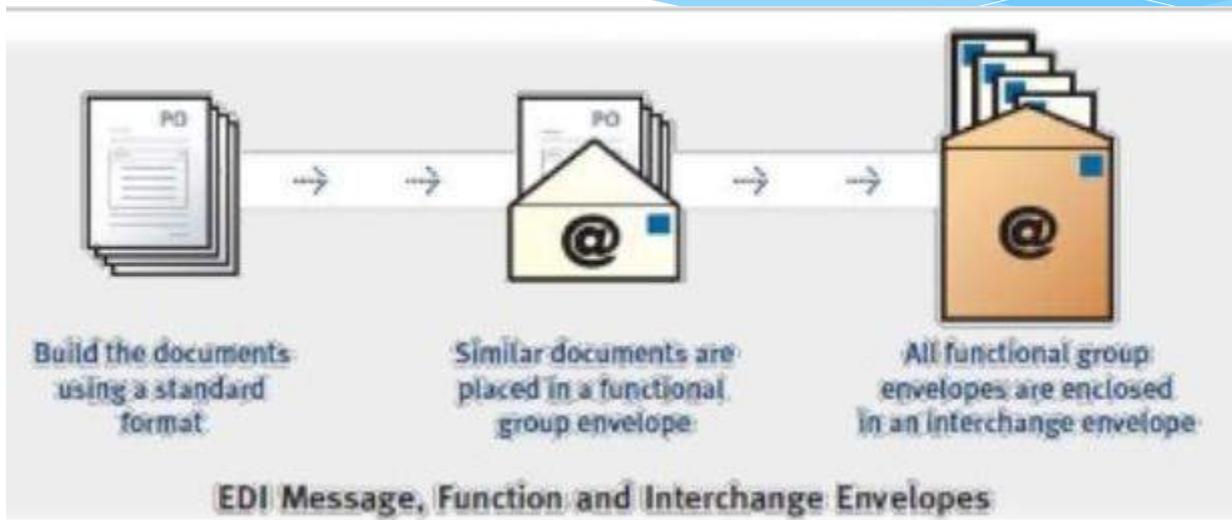
# EDI Frame



# EDI vs. Paper exchange



# What does an EDI Message Consists of?



- \* Paper-based documents are posted in envelopes and it is possible to mail many documents in one envelop, EDI is just the same
- \* A 'message envelope' defines the start and end of a document
- \* 'Function Group envelopes' contain all message envelopes of a specific types, Pos, invoices, etc
- \* 'Interchange envelopes' enclose all functional group envelopes.

# EDI

## Paper envelope vs. Interchange segment (ISA)

**From:** \_\_\_\_\_

**To:** \_\_\_\_\_

ISA \* ... \* SENDERID \* RECEIVERID \* ...

## Paper Vs. EDI Document

Envelope =  
Interchange

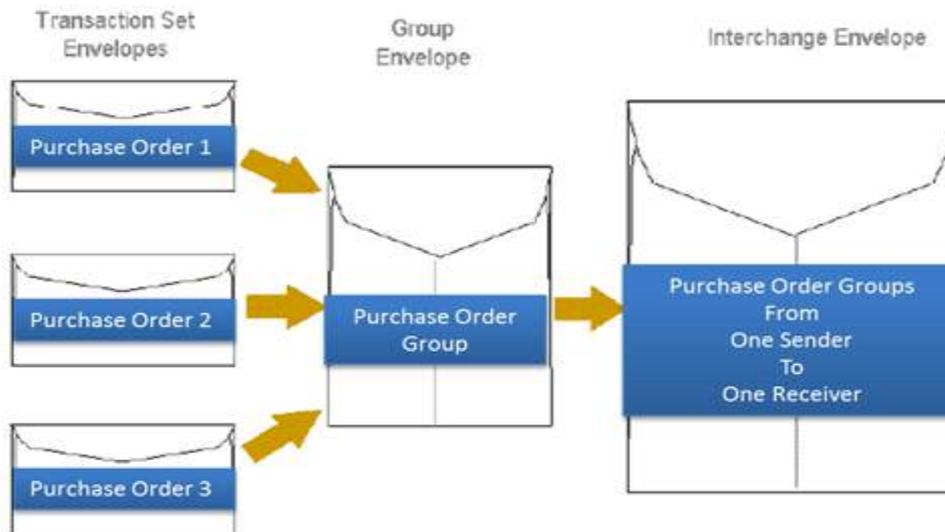


=

```
ISA*05*0000000000*01*PASSWORD01*01*  
SENDERID  
ENTFIC*01*Receiverid*950919*1503*U  
*00304*  
123456789*1*T|^  
GS..  
ST..  
SE..  
GE..  
IEA*1*123456789^
```

# EDI

EDI document transmission uses a system of three “envelopes”



# EDI Example

## Paper group vs. EDI functional group (GS)

GS \* **PO** \* ... 00001 ...  
ST \* 850 \* 01  
SE \* ... 01  
ST \* 850 \* 02  
SE \* ... 02  
ST \* 850 \* 03  
SE \* ... 03  
GE \* 3 \* 00001



GS \* **IN** \* ... 00002 ...  
ST \* 810 \* 01  
SE \* ... 01  
GE \* 1 \* 00002



# Who use EDI?

- \* Any company that (buy, sell goods, services) can potentially use EDI.
- \* Because it supports the entire business cycle.
- \* EDI can streamline the relationship that any company has with its (distributers, suppliers)

# Advantages of EDI

- 1- Lower Operating Costs (saves time and money)**
- 2- Less Error and More Accuracy (No data entry, so less human error)**
- 3- Increase Productivity (More efficient personal and faster throughput)**
- 4- Faster Trading Cycle (The process improved trading relationship)**

# Disadvantages of EDI

- 1- High Dependence on the participation of trading partners**
- 2- Costly for smaller companies**
- 3- Difficult to agree on standard to be used.**

# How Much does EDI Cost to Implement?

- \* EDI can be provided via different pricing models, namely:
- \* Priced by the number of kilo-characters (KC's) contained within an EDI document
- \* Subscription models allow pay-as-you go, monthly or annual contracts
- \* EDI software can be purchased with ongoing maintenance contracts

# What EDI standards are in use?

- \* EDI standards help to ensure that electronic business documents can be exchanged between companies with ease.

The data from one computer is normally not in a form suitable to be entered directly into another computer. The data may have to be arranged differently before it can be entered into another computer or some items of data may not be needed at all. With EDI, all the data is converted into an agreed standard format before it is sent over the network. The computer that receives the data can then extract the information it requires

- \* There are many different EDI standards in use locally and around the world

# EDI Industry Standards



- \* Different industry sectors have their own set of standards for processing electronic documents
- \* Industry groups such as EDIFICE (high-tech) and Odette (automotive) represent their industry group but also work together to share standards across the automotive and high-tech sectors