COMPUTER APPLICATION IN BUSINESS

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COMPUTER APPLICATIONS IN BUSINESS

Syllabus as per
Manonmaniam Sundaranar University, Abishegapatti,
Tirunelveli, Tamilnadu, India
for B.Com II Year

UNIT I: INTRODUCTION TO COMPUTERS
Meaning of Computers-Characteristics of Computer-Components of computer-Hardware and Software **(10 hours)**

UNIT II: OVERVIEW OF E-COMMERCE AND E-BUSINESS
E-commerce vs. E-Business, Benefits of E-commerce- Limitations-Business models-Online Trading- E-Commerce vs. Traditional Commerce **(9 hours)**

UNIT III: CONSUMER ORIENTED E-COMMERCE APPLICATIONS
Mercantile Process model- Consumers Perspective and Merchant's Perspective, Electronic payment systems-Advantages and risk, Types of payment System (Credit cards, e-cash, smart cards, debit card) **(10 hours)**

UNIT IV: ELECTRONIC DATA INTERCHANGE
Non-EDI system, Partial EDI system, Fully Integrated EDI System, Pre-requisites of EDI-EDI vs Email. **(8 hours)**

UNIT V: E-MARKETING TECHNIQUES
Meaning-Applications of 5P's(Product, Price, Place, Promotion, Personalization), E-Advertising Techniques: Banners, Sponsorships, portals and online coupons. **(8 hours)**

(Total :45 hours)

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UNIT I

INTRODUCTION TO COMPUTERS

Meaning of Computers

History, Classification, Types

Application of Computers

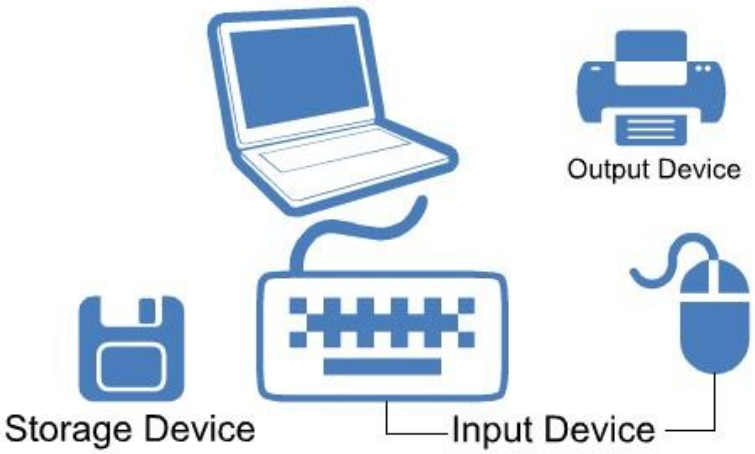
Characteristics of Computers

Components of computer

Hardware and Software

MEANING OF COMPUTER

COMPUTER stands for **Common Operating Machine Purposely Used for Technological and Educational Research**. A computer is a machine that can be programmed to manipulate symbols. Computer responds to a specific set of instructions in a well-defined manner. It can execute a prerecorded list of instructions (a program). It can quickly store and retrieve large amounts of data.A computer is a device for working with information. The information can be numbers, words, pictures, movies, or sounds. Computer information is also called data. Computers can process huge amounts of data very quickly.Computer is used to perform some sequence of instructions in fast and accurate manner. Computer receives input in the form of digitized data, using in devices like keyboard, mouse, joystick, scanner etc.



HISTORY OF COMPUTER

Professor Charles Babbage's analytical engine considered as "**fundamental framework of computer**" is a mechanical general-purpose programmable computing engine. It was a success to the Difference Engine. Computer that we use today is absolutely different from the first generation computer. Evolution in technology from 19th century to present day modified computer totally.

CLASSIFICATION OF COMPUTERS

In digital world, from a small wrist watch to space satellite all are controlled by computer. A small or large machine was handled by humans in past, but in digitalized world these are handled by programmed humans i.e. 'Robots'.

Any digital computer carries out five functions in gross terms:

- Takes data as input
- Stores the data / instructions in its memory and use them when required.
- Processes the data and converts it into useful information.
- Generates the output
- Controls all the above four steps.

There are three major categories based on which computers can be classified. These are:

1. Based on Size
2. Based on Purpose
3. Based on Types

The image given below gives a clear classification of the Types of Computers:

TYPES OF COMPUTERS – BASED ON SIZE

Described below are the four types of Computers based on their sizes along with their functions:

- **Micro Computers –** A relatively inexpensive and small computer comprising a microprocessor and a Central Processing Unit (CPU) is called a Microcomputer. Such computers are made with minimal circuitry mounting over a single circuit board. Examples include Desktop, Laptop, etc.
- **Mini Computer –** Developed in the mid-1960s, Mini computers are comparatively smaller than mainframe computers. They were developed keeping in consideration

human interaction, control instrumentation and were cost-effective. For example Smartphones, iPads, etc.

- **Mainframe Computer –** Computers used by large Organisations to manage bulk data are called Mainframe computers. Main functions of such type include managing customer statistics, census and other heavy data in a single device. For example, the system used at Trading companies.
- Super Computer – Computers used at Organisations dealing with Weather forecasting, Quantum Mechanics, Climate research, etc., where high level of performance has to be justified are called Super Computers.

TYPES OF COMPUTER – BASED ON PURPOSE

On the basis of purpose, there are just two variety of computers. Those two varieties have been discussed in detail below:

- **General Purpose –** Based on General Purpose, there are these following functions which a device is expected to perform:
    1. Basic Input/Output functions
    2. Calculations
    3. Data Saving on a smaller scale
    4. General performing activities

These may include basic calculators, laptops, desktop computers, mobile phones, etc., which can help people with their basic necessary functions are included in the General Purpose computer type.

- **Special Purpose –** When a computer is designed specifically to perform a certain function, such type of computers is known as Special Purpose computer. These types may include:
    1. Thermometers to test temperature
    2. Generators to manage electricity
    3. Devices used for analysing Climate Change
    4. Large computers for IT Companies
    5. Machines used at Manufacturing Units and the list goes on and on

The special-purpose computers are important for various Organisations and their applications are made in a way that makes the work easy and efficient.

Aspirants are also advised to also check the Preparation Strategy for Competitive Exams at the linked article and get the best tips and strategies to ace the upcoming Government exams.

TYPES OF COMPUTER-BASED ON TYPES

The three types of computers along with their functions are given below:

- **Analog Computer –** An analog computer one that uses the continuously changeable aspects of physical phenomena to model the problem being solved. These phenomena may be such as electrical, mechanical, or hydraulic quantities and they are extremely complex to be used. Such computers are mostly used for scientific and industrial applications. Examples of Analog computers include Thermometer, Operational Amplifiers, Electric Integrators, etc.
- **Digital Computer –** Such computers are capable of solving problems in discrete format. It only operates on data entered in binary language and can perform the dynamic function of managing large amounts of data and regulating the operations of the machine, Examples of Digital computers are Desktop, Laptop, Mobile Phones, etc.
- **Hybrid Computer –** Computers that exhibit features of both Analog and Digital computers are called Hybrid Computers. The logical operations are solved by the digital aspects and the differential equations are solved using the analog features. Few important examples of Hybrid Computers include Space Flights, Food processing Plants, etc.

APPLICATION OF COMPUTERS

Computers play a role in every field of life. They are used in homes, business, educational institutions, research organizations, medical field, government offices, entertainment, etc.

- **Home :** Computers are used at homes for several purposes like online bill payment, watching movies or shows at home, home tutoring, social media access, playing games, internet access, etc. They provide communication through electronic mail. They help to avail work from home facility for corporate employees. Computers help the student community to avail online educational support.
- **Medical Field :** Computers are used in hospitals to maintain a database of patients' history, diagnosis, X-rays, live monitoring of patients, etc. Surgeons nowadays use robotic surgical devices to perform delicate operations, and conduct surgeries

remotely. Virtual reality technologies are also used for training purposes. It also helps to monitor the fetus inside the mother's womb.

- **Entertainment** Computers help to watch movies online, play games online; act as a virtual entertainer in playing games, listening to music, etc. MIDI instruments greatly help people in the entertainment industry in recording music with artificial instruments. Videos can be fed from computers to full screen televisions. Photo editors are available with fabulous features.
- **Industry :** Computers are used to perform several tasks in industries like managing inventory, designing purpose, creating virtual sample products, interior designing, video conferencing, etc. Online marketing has seen a great revolution in its ability to sell various products to inaccessible corners like interior or rural areas. Stock markets have seen phenomenal participation from different levels of people through the use of computers.
- **Education :** Computers are used in education sector through online classes, online examinations, referring e-books, online tutoring, etc. They help in increased use of audio-visual aids in the education field.
- **Government :** In government sectors, computers are used in data processing, maintaining a database of citizens and supporting a paperless environment. The country's defense organizations have greatly benefitted from computers in their use for missile development, satellites, rocket launches, etc.
- **Banking :** In the banking sector, computers are used to store details of customers and conduct transactions, such as withdrawal and deposit of money through ATMs. Banks have reduced manual errors and expenses to a great extent through extensive use of computers.
- **Business :** Nowadays, computers are totally integrated into business. The main objective of business is transaction processing, which involves transactions with suppliers, employees or customers. Computers can make these transactions easy and accurate. People can analyze investments, sales, expenses, markets and other aspects of business using computers.
- **Training :** Many organizations use computer-based training to train their employees, to save money and improve performance. Video conferencing through computers allows saving of time and travelling costs by being able to connect people in various locations.

- **Arts :** Computers are extensively used in dance, photography, arts and culture. The fluid movement of dance can be shown live via animation. Photos can be digitized using computers.
- **Science and Engineering:** Computers with high performance are used to stimulate dynamic process in Science and Engineering. Supercomputers have numerous applications in area of Research and Development (R&D). Topographic images can be created through computers. Scientists use computers to plot and analyze data to have a better understanding of earthquakes.

MODERN - LAPTOP AND SMARTPHONE COMPUTERS

Laptop: A laptop is a battery or AC-powered personal computer that can be easily carried and used in a variety of locations. Many laptops are designed to have all of the functionality of a desktop computer, which means they can generally run the same software and open the same types of files. However, some laptops, such as notebooks, sacrifice some functionality in order to be even more portable.

Notebook: A notebook is a type of laptop that is designed to be even more portable. Notebooks are often cheaper than laptops or desktops. They are generally less powerful than other types of computers, but they provide enough power for email and internet access, which is where the name "notebook" comes from.

Mobile Device: A mobile device is basically any handheld computer. It is designed to be extremely portable, often fitting in the palm of your hand or in your pocket. Some mobile devices are more powerful.

Tablet Computers*:* Like laptops, tablet computers are designed to be portable. However, they provide a very different computing experience. The most obvious difference is that tablet computers don't have keyboards or touch pads. Instead, the entire screen is touch-sensitive, allowing you to type on a virtual keyboard and use your finger as a mouse pointer. Tablet computers are mostly designed for consuming media, and they are optimized for tasks like web browsing, watching videos, reading e-books, and playing games. For many people, a "regular" computer like a desktop or laptop is still needed in order to use some programs. However, the convenience of a tablet computer means that it may be ideal as a second computer.

Smart phones: A smart phone is a powerful mobile phone that is designed to run a variety of applications in addition to phone service. They are basically small tablet computers, and they

can be used for web browsing, watching videos, reading e-books, playing games and more.

CHARACTERISTIC OF COMPUTER

Computer has become a part of our life. We are surrounded by computers as we use computers in our school, at home, in the office and even in our daily lives.

The main characteristics of computer are

1. Speed

- Computers are much faster to perform mathematical calculations than human. The computer is capable of performing millions of tasks per second.
- It takes an hour or a day for a person to do a mathematical calculation or any work, to do the same calculation or work to a computer do in microseconds or nanoseconds.

2. Accuracy

- A computer is very accurate. It does not make any kind of mistake in calculating. Sometimes we get some error but these are because of the mistake performed by us.
- The Accuracy Of the computer is constantly high and it can perform hundred of operation with the carry-out calculation and analysis accurately and speedily.

3. Diligence

- A person gets tired of doing some work in a few hours and a computer has the ability to do any work continuously for many hours, days, months.
- Even after the computer has worked for such a long time, there is no decrease in its ability to work and the accuracy of the result.
- The computer does work without any discrimination. A computer is free from monetary and tiredness.

4. Reliability

- Reliability is a very big **characteristics of computer**. Today almost all the big

industries or big e-Commerce companies like Amazon and Flipkart, and big search engine companies like - Google and Bing, all these companies are dependent on computers.

- Today every major industry and companies in the world have full confidence in their computers, and their entire business is running from computers.
- Today the work of all companies is being done through computers. These companies store all their data in the computer, the data of these companies are many types of data such as the amount to be paid, the date of payment and many other types of data, which will be used in future when the time comes for that data use.
- Data place to another place is transported through a computer in a very short time.
- The computer does all its work very honestly. Night or day, the computer continues its work without being tired. Today this is the reason why big e-commerce companies and industries blindly trust computers.

5. Versatility

- Versatility is the Characteristics of a computer. Its means is that the computer is capable of working in almost every field.
- Today computers are being used almost everywhere like schools, colleges, hospitals, offices, railway stations, hotels etc.
- A computer system is multitasking so that you can do two tasks very easily at the same time.

6. Storage Capacity

- Computer systems have a very large capacity to store any type of data. A computer can store and resell any information due to its storage capacity.
- Computers have the ability to store all types of data such as data, pictures, files, programs, games, and sound for many years and later we can get any data in a few seconds at any time for taking that information and for future retrieval.

7. Automatic

- A computer is an automatic machine because once started on a job they carry on until the job is finished without any human assistance.

8. Quick Decision

- The computer takes the decision very quickly, given by the user which is the instruction arithmetic data or logic data.
- All Mathematical data is called arithmetic data.
- Copy Document, Delete file, open camera etc this type of data is called Logical data.

9. Multitasking

- Multitasking is also a very special feature of computers. A user can do different types of tasks on the computer at the same time.
- Like we are using MS Word in computer as well as listening to songs and also getting printouts.
- We can do a lot of work at the same time.

10. No Feeling

- In computers, like humans, there is no feeling and emotion, nor does the computer have any knowledge and experience, because a computer is a machine which works continuously on the instruction of humans without any selfishness and without tiredness.

11. Power of Remembering

- Power of remembering is also very special **Characteristics of the computer.**

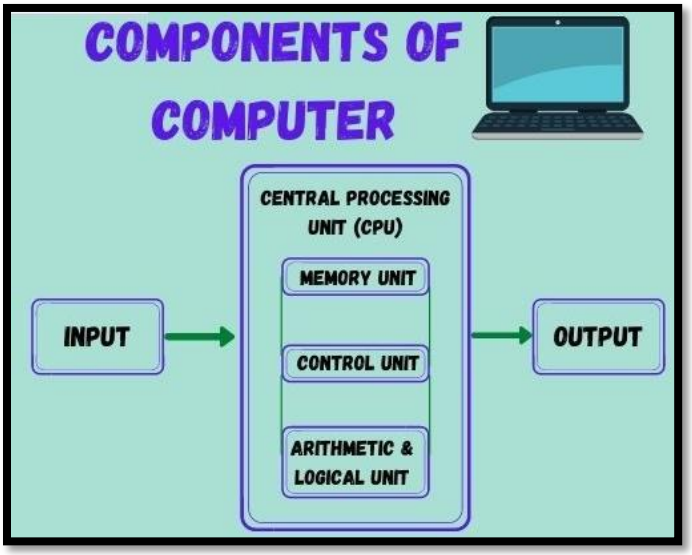
- You can store many types of information and data on your computer in very large quantities. Whenever you need this data in future, you can get that data in a few seconds matter why.
- You can get the data even after a long time. It depends on you, after how long or after how many years you need the data.

12. No IQ

- A computer is a dumb machine, without a user, a computer is a useless machine and device.
- Until a user does not give any instruction, it cannot do any work and only after completing the instruction, he completes that work very fast.
- A computer system is completely dependent on us humans how to work.
- For an example, if you want to multiply two numbers, then writing such 3 & 3, the computer will not give us any result, unless we instruct 3 * 3 =, the computer multiplies that number and gives the result. So a computer cannot make its own decision.

COMPONENTS OF COMPUTER

- Input Unit
- Memory or Storage Unit
- Output Unit
- Central Processing Unit



INPUT UNIT

Input unit is used for transfers' raw Data and control signals into the information processing system by the user before processing and computation. All the input unit devices provide the instructions and data are transformed into binary codes that is the primary memory acceptable format.

Example of Input unit devices: keyboard, mouse, scanner, joystick, MICR, Punched cards, Punched paper tape, Magnetic tape etc.

MEMORY OR STORAGE UNIT

Memory or Storage unit is used for storing Data during before and after processing. The capacity of storage is expressed in terms of Bytes.

The two terms Memory or Storage unit are used interchangeably, so it is important to understand what is the difference between memory and storage?

MEMORY

This unit retains temporarily results till further processing, For example, Random Access Memory (RAM).This memory is volatile, which means data is disappears when the power is lost.

STORAGE

The storage or "secondary storage" is used for retain digital data after processing for permanently. For example hard drive. The Storage is non-volatile in nature. CPU does not access directly to secondary storage memories, instead they accessed via input-output unit. The contents of secondary storage memories are first transferred to the main memory (RAM) and then CPU access it.

OUTPUT UNIT

Output Unit receives information from the CPU and then delivers it the external storage or device in the soft or hard processed form. The devices which are used to display output to the user are called output devices. The Monitor or printer is common output device

CENTRAL PROCESSING UNIT

The main chip in a computer is the microprocessor chip, which is also known as the CPU (central processing unit). The CPU is mounted on a printed circuit board called the main board or mother board. This chip is considered to be the controlling chip of a computer system since it controls the activities of other chips as well as outside devices connected to the computer, such as monitor and printer. In addition, it can also perform logical and computational tasks. Microprocessors work on a parallel system. Figure shows a typical structure of one of the first-generation microprocessors. The recent ones possess greater

complexity, although the basic design concept has not changed much.

The various activities that a microprocessor performs, such as storing data, doing arithmetic calculations (addition, subtraction, multiplication, division, etc.), are the result of instructions given to the CPU in the form of sequences of 0s and 1s. Microprocessors are designed to carry out a large number of instructions and all the instructions may be represented by different sequences of 0s and 1s. Each instruction is represented by a unique set of 0s and 1s.

The internal structure of a typical CPU consists of circuits which form a number of registers (the typical number is 16), an arithmetic unit for carrying out arithmetic operations, a logic unit, and a control unit.

ARITHMETIC LOGIC UNIT (ALU)

Arithmetic Logical Unit is used for processing data after inputting data is stored into primary unit. The major operations of Arithmetic Logical Unit are addition, subtraction, multiplication, division, logic and comparison.

Control unit (CU)

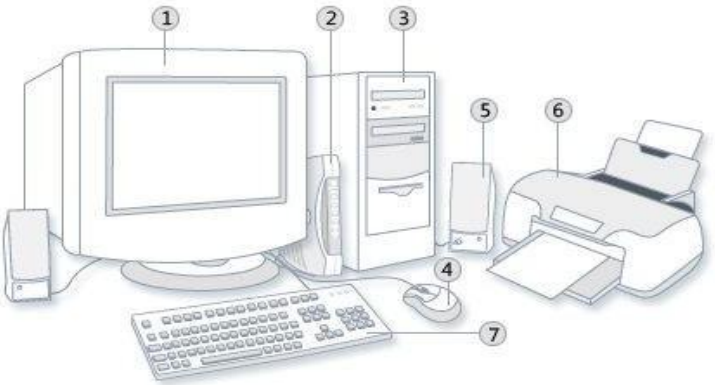
It is like a supervisor, that checks ordaining operations or check sequence in which instructions are executed.

HARDWARE AND SOFTWARE

Any kind of computers consists of **HARDWARE** AND **SOFTWARE**.

HARDWARE

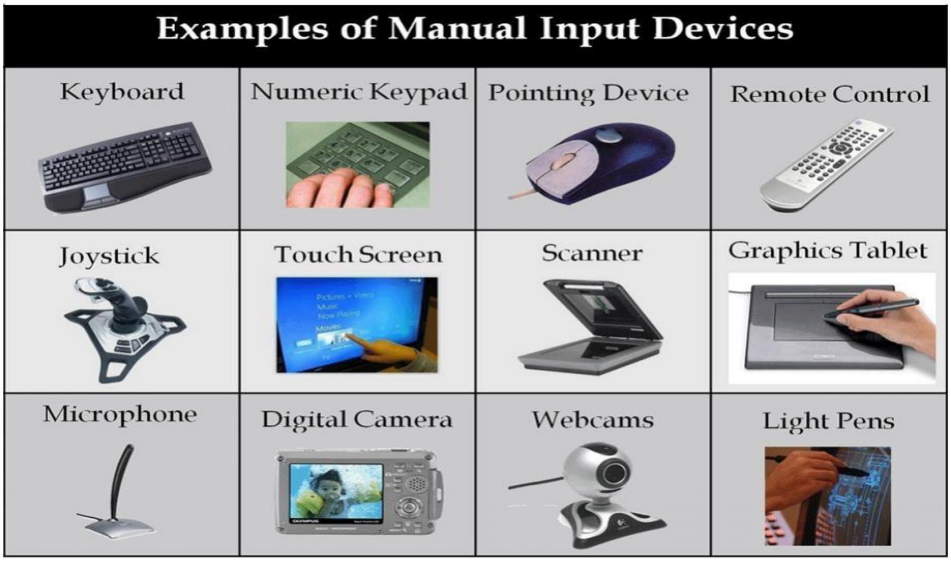
Computer hardware is the collection of physical elements that constitutes a computer system. Computer hardware refers to the physical parts or components of a computer such as the monitor, mouse, keyboard, computer data storage, hard drive disk (HDD), system unit (graphic cards, sound cards, memory, motherboard and chips), etc. all of which are physical objects that can be touched.



INPUT DEVICES

Input device is any peripheral (piece of computer hardware equipment to provide data and control signals to an information processing system such as a computer or other information appliance.

Input device Translate data from **form** that humans understand to one that the computer can work with. Most common are keyboard and mouse

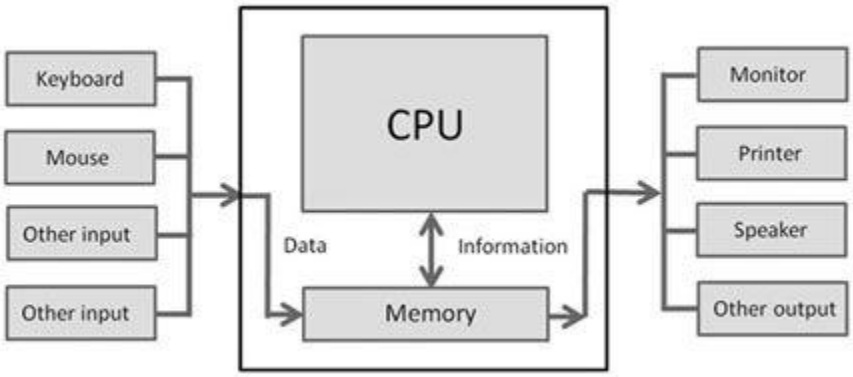


Example of Input Devices

1. Keyboard
2. Mouse (pointing device)
3. Microphone
4. Touch screen
5. Scanner
6. Webcam
7. Touchpads
8. MIDI keyboard
9.
10. Graphics Tablets
11. Cameras
12. Pen Input
13. Video Capture Hardware
14. Microphone
15. Trackballs
16. Barcode reader
17. Digital camera
18. Joystick
19. Gamepad
20. Electronic Whiteboard

CENTRAL PROCESSING UNIT (CPU)

A CPU is brain of a computer. It is responsible for all functions and processes. Regarding computing power, the CPU is the most important element of a computer system.



The CPU is comprised of three main parts :

- ***Arithmetic Logic Unit (ALU)***: Executes all arithmetic and logical operations. Arithmetic calculations like as addition, subtraction, multiplication and division. Logical operation like compare numbers, letters, or special characters
- ***Control Unit (CU):*** controls and co-ordinates computer components.
  1. Read the code for the next instruction to be executed.
  2. Increment the program counter so it points to the next instruction.
  3. Read whatever data the instruction requires from cells in memory.
  4. Provide the necessary data to an ALU or register.
  5. If the instruction requires an ALU or specialized hardware to complete, instruct the hardware to perform the requested operation.
- ***Registers*** :Stores the data that is to be executed next, "very fast storage area".

Primary Memory

RAM: Random Access Memory (RAM) is a memory scheme within the computer system responsible for storing data on a temporary basis, so that it can be promptly accessed by the processor as and when needed. It is volatile in nature, which means that data will be erased once supply to the storage device is turned off. RAM stores data randomly and the processor accesses these data randomly from the RAM storage. RAM is considered "random access" because you can access any memory cell directly if you know the row and column that intersect at that cell.

ROM (Read Only Memory): ROM is a permanent form of storage. ROM stays active regardless of whether power supply to it is turned on or off. ROM devices do not allow data

stored on them to be modified.

Secondary Memory

Stores data and programs permanently :its retained after the power is turned off

1. Hard drive (HD): A hard disk is part of a unit, often called a "disk drive," "hard drive," or "hard disk drive," that store and provides relatively quick access to large amounts of data on an electromagnetically charged surface or set of surfaces.
2. Optical Disk: an optical disc drive (ODD) is a disk drive that uses laser light as part of the process of reading or writing data to or from optical discs. Some drives can only read from discs, but recent drives are commonly both readers and recorders, also called burners or writers. Compact discs, DVDs, and Blu-ray discs are common types of optical media which can be read and recorded by such drives. Optical drive is the generic name; drives are usually described as "CD" "DVD", or "Bluray", followed by "drive", "writer", etc. There are three main types of optical media: CD, DVD, and Blu-ray disc. CDs can store up to 700 megabytes (MB) of data and DVDs can store up to 8.4 GB of data. Blu-ray discs, which are the newest type of optical media, can store up to 50 GB of data. **Flash Disk**

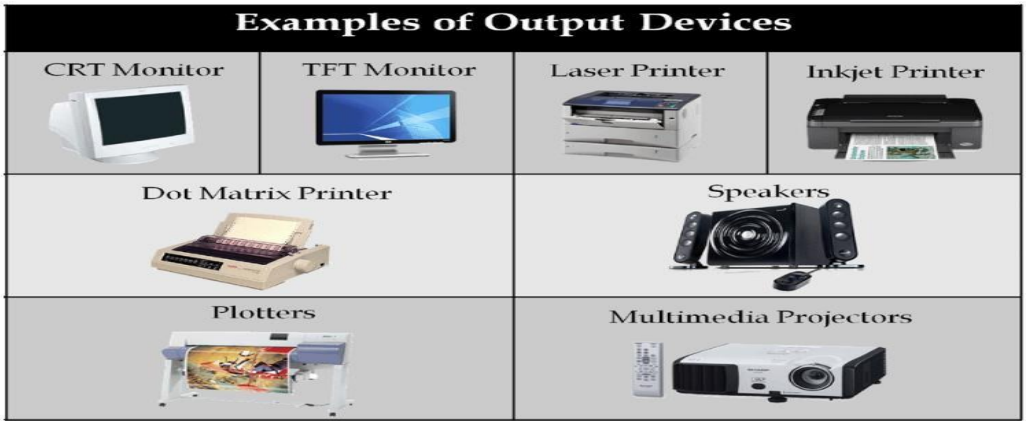
Comparison between Main memory (RAM) and Secondary Memory (Hard disk)

RAM	Hard Disk (Hard Drive)
Memory	Storage
Smaller amount (typically 500 MB-6 GB)	Much larger amount (typically 80GB to 1000 GB)
Temporary storage of files and programs	Permanent storage of files and programs
A little like your real desktop - has only your current work on it (which could be ruined by a spill of Coke or coffee!)	Like a file cabinet - has long-term storage of work (it's safe from spills!)
Contents disappear when you turn off power to the computer and when the computer crashes	Contents remain when you turn off the power to the computer (they don't disappear unless you purposely delete them), and when the computer crashes
Consists of chips (microprocessors)	Consists of hard disks (platters)
When you want to use a program, a temporary copy is put into RAM and that's the copy you use	Holds the original copy of the program permanently

A storage module made of flash memory chips. A Flash disks have no mechanical platters or access arms, but the term "disk" is used because the data are accessed as if they were on a hard drive. The disk storage structure is emulated.

Output devices

An output device is any piece of computer hardware equipment used to communicate the results of data processing carried out by an information processing system (such as a computer) which converts the electronically generated information into human- readable form.



Example on Output Devices:

1. Monitor	2. LCD Projection Panels
3. Printers (all types)	4. Computer Output Microfilm (COM)
5. Plotters	6. Speaker(s)
7. Projector	

Basic types of monitors are

(a) Cathode Ray Tube (CRT).

(b) Liquid Crystal Displays (LCD).

(c) light-emitting diode (LED).

Printer types:

1. Laser Printer.
2. Ink Jet Printer.
3. Dot Matrix Printer

SOFTWARE

Software is a generic term for organized collections of computer data and instructions, often broken into two major categories: system software that provides the basic non- task-specific functions of the computer, and application software which is used by users to accomplish specific tasks.

Software Types

(a) System software is responsible for controlling, integrating, and managing the individual hardware components of a computer system so that other software and the users of the system see it as a functional unit without having to be concerned with the low-level details such as transferring data from memory to disk, or rendering text onto a display. Generally, system software consists of an operating system and some fundamental utilities such as disk formatters, file managers, display managers, text editors, user authentication (login) and management tools, and networking and device control software.

(b) Application software is used to accomplish specific tasks other than just running the computer system. Application software may consist of a single program, such as an image viewer; a small collection of programs (often called a software package) that work closely together to accomplish a task, such as a spreadsheet or text processing system; a larger collection (often called a software suite) of related but independent programs and packages that have a common user interface or shared data format, such as Microsoft Office, which consists of closely integrated word processor, spreadsheet, database, etc.; or a software system, such as a database management system, which is a collection of fundamental programs that may provide some service to a variety of other independent applications.

Comparison Application Software and System Software

	System Software	Application Software
	Computer software, or just software is a general term primarily used for digitally stored data such as computer programs and other kinds of information read and written by computers. App comes under computer software though it has a wide scope now.	Application software, also known as an application or an "app", is computer software designed to help the user to perform specific tasks.
Example:	1) Microsoft Windows 2) Linux 3) Unix 4) Mac OSX 5) DOS	1) Opera (Web Browser) 2) Microsoft Word (Word Processing) 3) Microsoft Excel (Spreadsheet software) 4) MySQL (Database Software) 5) Microsoft PowerPoint (Presentation Software) 6) Adobe Photoshop (Graphics Software)

Interaction:	Generally, users do not interact with system software as it works in the background.	Users always interact with application software while doing different activities.
Dependency:	System software can run independently of the application software.	Application software cannot run without the presence of the system software.

DIFFERENCES BETWEEN HARDWARE AND SOFTWARE

A computer system is divided into two categories: Hardware and Software. Hardware refers to the physical and visible components of the system such as a monitor, CPU, keyboard and mouse. Software, on the other hand, refers to a set of instructions which enable the hardware to perform a specific set of tasks. The software must be installed in the hardware to function properly and similarly, the hardware must be present for the tasks to be performed. Both are interdependent, yet they are also different from each other.

Differences between Hardware and Software

Hardware	**Software**
Hardware is further divided into four main categories: • Input Devices • Output Devices • Secondary Storage Devices • Internal Components	Software is further divided into two main categories: • Application Software • System Software
Developed using electronic and other materials	Developed writing using instructions using a programming language
When damaged, it can be replaced with a new component	When damaged it can be installed once more using a backup copy
Hardware is physical in nature and hence one can touch and see hardware	The software cannot be physically touched but still can be used and seen
Hardware cannot be infected by Viruses	The software can be infected by Viruses
Hardware will physically wear out over time	Software does not wear out but it can be affected by bugs and glitches
An example of Hardware is hard drives, monitors, CPU, scanners, printers etc.	An example of software is Windows 10, Adobe Photoshop, Google Chrome etc.

UNIT II

OVERVIEW OF E-COMMERCE AND E-BUSINESS

E-commerce, Advantages, Disadvantages

Features, Models, Types, History , Examples

E-Business, Models, Advantages, Types, Challenges, Limitations

Online Trading, Benefits

E-Commerce vs. Traditional Commerce

E- Commerce vs E- Business

E-COMMERCE

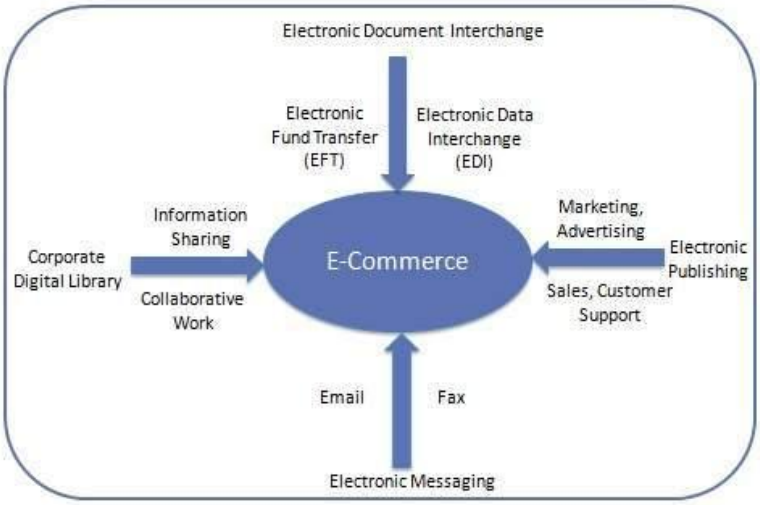
E-commerce is the buying and selling of goods or services via the internet, and the transfer of money and data to complete the sales. It's also known as **electronic commerce** or internet **commerce**.

Ecommerce, otherwise known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transport of money and data to perform these dealings. Ecommerce is repeatedly used to refer to the sale of physical products online, but it can also describe any kind of commercial transaction that is facilitated through the internet.

E-Commerce or Electronics Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery. Ecommerce refers to the paperless exchange of business information using the following ways –

- Electronic Data Interchange (EDI)
- Electronic Mail (e-mail)
- Electronic Bulletin Boards

- Electronic Fund Transfer (EFT)
- Other Network-based technologies



FEATURES

E-Commerce provides the following features −

- **Non-Cash Payment** − E-Commerce enables the use of credit cards, debit cards, smart cards, electronic fund transfer via bank's website, and other modes of electronics payment.
- **24x7 Service availability** − E-commerce automates the business of enterprises and the way they provide services to their customers. It is available anytime, anywhere.
- **Advertising / Marketing** − E-commerce increases the reach of advertising of products and services of businesses. It helps in better marketing management of products/services.
- **Improved Sales** − Using e-commerce, orders for the products can be generated anytime, anywhere without any human intervention. It gives a big boost to existing sales volumes.
- **Support** − E-commerce provides various ways to provide pre-sales and post-sales assistance to provide better services to customers.
- **Inventory Management** − E-commerce automates inventory management. Reports get generated instantly when required. Product inventory management becomes very efficient and easy to maintain.
- **Communication improvement** − E-commerce provides ways for faster, efficient, reliable communication with customers and partners.

HISTORY OF E-COMMERCE

The history of ecommerce begins with the first ever online sale: on the August 11, 1994 a man sold a CD by the band Sting to his friend through his website Net Market, an American retail platform. This is the first example of a consumer purchasing a product from a business through the World Wide Web—or "ecommerce" as we commonly know it today.

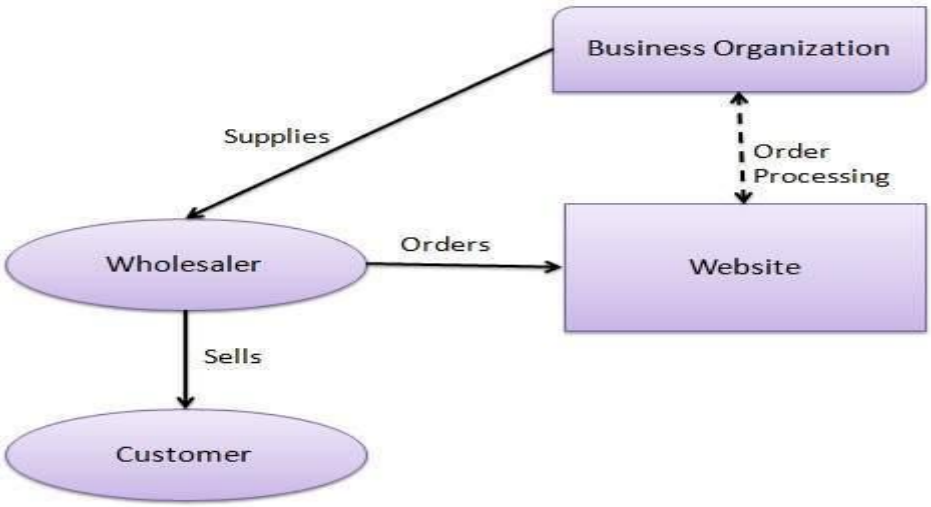
Since then, ecommerce has evolved to make products easier to discover and purchase through online retailers and marketplaces. Independent freelancers, small businesses, and large corporations have all benefited from ecommerce, which enables them to sell their goods and services at a scale that was not possible with traditional offline retail.

TYPES OF E-COMMERCE MODELS

There are quite a few different types of e-commerce. An ordinary classification system is with respect to the nature of transactions or the relationships among participants. There are seven major types of ecommerce:

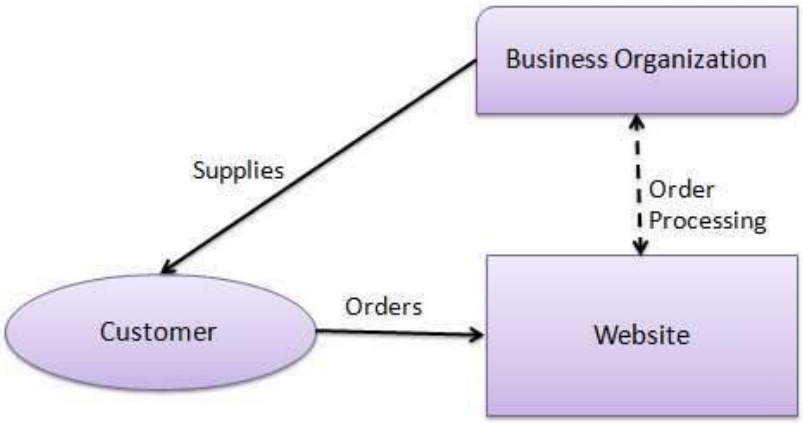
1. Business-to-business (B2B)

E-commerce, where businesses focus on selling to other businesses or organizations, is the largest form of e-commerce. Cisco, Staples, and Spice works (information technology [IT] and IT networks for the small- and medium-sized business) are all B2B companies.



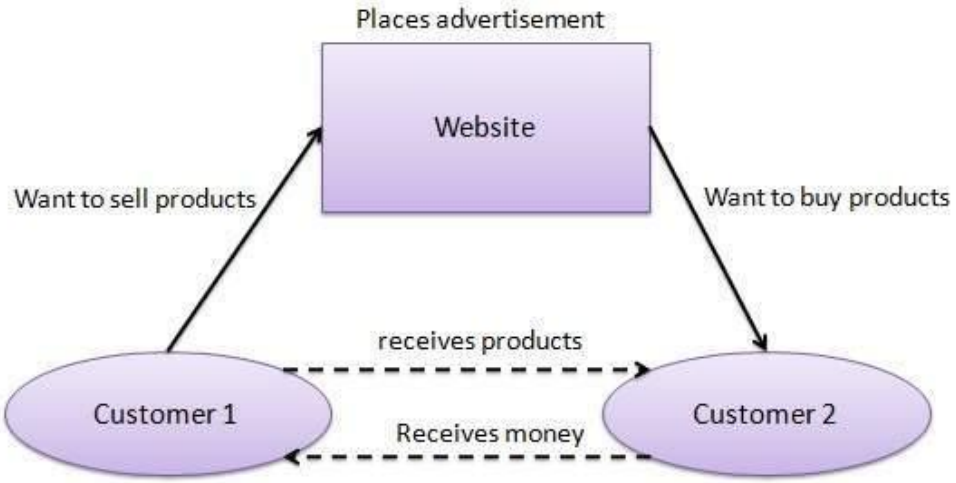
2. Business-to-consumer (B2C)

Is the earliest form of e-commerce, but it is second in size to B2B. It refers to retail sales between businesses and individual consumers. Consumers gather information; purchase physical goods, such as books and clothing; purchase information goods, such as electronic material or digitized content, such as software; and, for information goods, receive products over an electronic network.



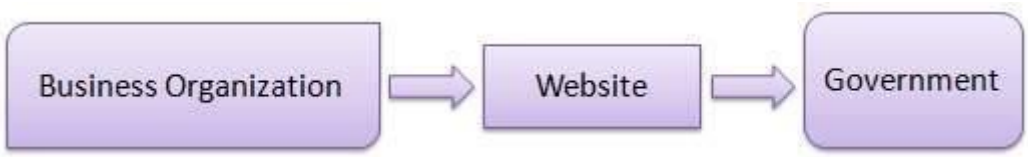
3. Consumer-to-consumer (C2C)

E-commerce is where consumers sell products and personal services to each other with the help of an online market maker to provide catalog, search engine, and transaction-clearing capabilities so that products can be easily displayed, exposed, and paid for. The most well-known C2C business is eBay, but there are many other online market makers as well. Craigslist is a tremendously well-liked small e-commerce business for placing classified ads.



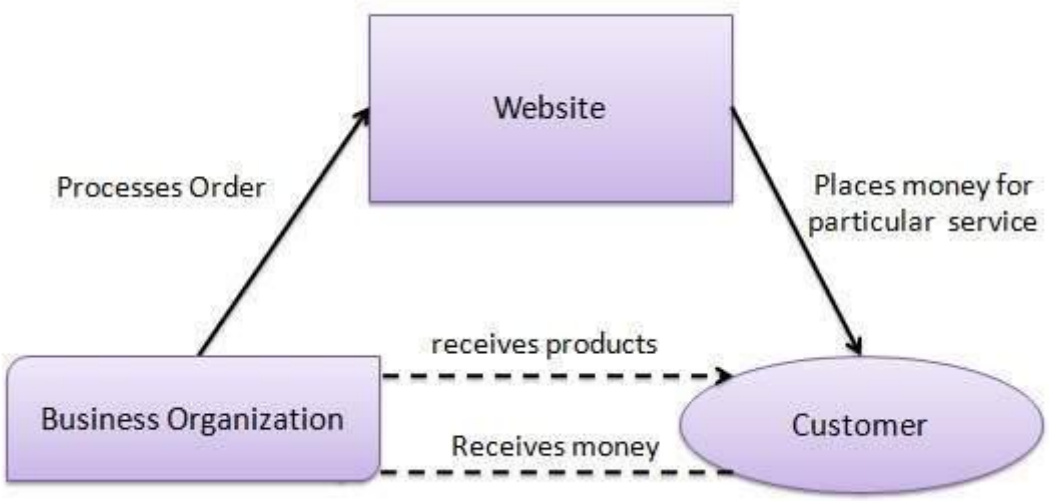
4. Business-to-government (B2G)

E-commerce can normally be defined as transactions with the government. The Internet is used for procurement, filing taxes, licensing procedures, business registrations, and other government-related operations. This is an irrelevant segment of e-commerce in terms of volume, but it is growing.



5. Consumer-to-business (C2B)

E-commerce is between private individuals who use the Internet to sell products or services to organizations and individuals who seek sellers to bid on products or services. Elance is an example of C2B where a consumer posts a project with a set budget deadline and within hours companies and/or individuals review the consumer's requirements and bid on the project. The consumer reviews the bids and selects the company or individual that will complete the project. Elance empowers consumers around the world by providing the meeting ground and platform for such transactions. The Best Deals on Hotels, Flights and Rental Cars. is a well-known example of C2B e-commerce.



6. Mobile commerce (m-commerce)

It refers to the purchase of goods and services through wireless technology, such as cell phones, and handheld devices, such as Blackberries and iPhones. Japan has the lead in m-commerce, but it is expected to grow rapidly in the United States over the next several years. E-Marketer predicts mobile content revenues will grow to more than $3.53 billion in 2014, a compound annual growth rate of nearly 20 percent for the period 2009–2014, with the fastest growth coming from mobile music.

7. Peer-to-peer (P2P)

Technology makes it possible for Internet users to share files and computer resources directly without having to go through a central web server. P2P began with Napster offering free music downloads via a file-sharing system. Tamago launched the world's first P2P commerce system in 2005, which allowed people to sell every type of digital media directly from their computers to customers all over the world. People who publish videos, photos, music, e-books, and so forth can earn royalties, while buyers earn commissions for distributing media

to others.

EXAMPLES OF ECOMMERCE

Ecommerce can take on a variety of forms involving different transactional relationships between businesses and consumers, as well as different objects being exchanged as part of these transactions.

- **Retail:** The sale of a product by a business directly to a customer without any intermediary.
- **Wholesale:** The sale of products in bulk, often to a retailer that then sells them directly to consumers.
- **Drop shipping:** The sale of a product, which is manufactured and shipped to the consumer by a third party.
- **Crowd funding:** The collection of money from consumers in advance of a product being available in order to raise the startup capital necessary to bring it to market.
- **Subscription:** The automatic recurring purchase of a product or service on a regular basis until the subscriber chooses to cancel.
- **Physical products:** Any tangible good that requires inventory to be replenished and orders to be physically shipped to customers as sales are made.
- **Digital products:** Downloadable digital goods, templates, and courses, or media that must be purchased for consumption or licensed for use.
- **Services:** A skill or set of skills provided in exchange for compensation. The service provider's time can be purchased for a fee.

ADVANTAGES

E-Commerce advantages can be broadly classified in three major categories −

- Advantages to Organizations
- Advantages to Consumers
- Advantages to Society

Advantages to Organizations

- Using e-commerce, organizations can expand their market to national and international markets with minimum capital investment. An organization can easily locate more customers, best suppliers, and suitable business partners across the globe.
- E-commerce helps organizations to reduce the cost to create process, distribute, retrieve and manage the paper based information by digitizing the information.

- E-commerce improves the brand image of the company.
- E-commerce helps organization to provide better customer services.
- E-commerce helps to simplify the business processes and makes them faster and efficient.
- E-commerce reduces the paper work.
- E-commerce increases the productivity of organizations. It supports "pull" type supply management. In "pull" type supply management, a business process starts when a request comes from a customer and it uses just-in-time manufacturing way.

Advantages to Customers

- It provides 24x7 supports. Customers can enquire about a product or service and place orders anytime, anywhere from any location.
- E-commerce application provides users with more options and quicker delivery of products.
- E-commerce application provides users with more options to compare and select the cheaper and better options.
- A customer can put review comments about a product and can see what others are buying, or see the review comments of other customers before making a final purchase.
- E-commerce provides options of virtual auctions.
- It provides readily available information. A customer can see the relevant detailed information within seconds, rather than waiting for days or weeks.
- E-Commerce increases the competition among organizations and as a result, organizations provide substantial discounts to customers.

Advantages to Society

- Customers need not travel to shop a product, thus less traffic on road and low air pollution.
- E-commerce helps in reducing the cost of products, so less affluent people can also afford the products.
- E-commerce has enabled rural areas to access services and products, which are otherwise not available to them.
- E-commerce helps the government to deliver public services such as healthcare, education, social services at a reduced cost and in an improved manner.

DISADVANTAGES

The disadvantages of e-commerce can be broadly classified into two major categories −

- Technical disadvantages
- Non-Technical disadvantages

Technical Disadvantages

- There can be lack of system security, reliability or standards owing to poor implementation of e-commerce.
- The software development industry is still evolving and keeps changing rapidly.
- In many countries, network bandwidth might cause an issue.
- Special types of web servers or other software might be required by the vendor, setting the e-commerce environment apart from network servers.
- Sometimes, it becomes difficult to integrate an e-commerce software or website with existing applications or databases.
- There could be software/hardware compatibility issues, as some e-commerce software may be incompatible with some operating system or any other component.

Non-Technical Disadvantages

- **Initial cost** − The cost of creating/building an e-commerce application in-house may be very high. There could be delays in launching an e-Commerce application due to mistakes, and lack of experience.
- **User resistance** − Users may not trust the site being an unknown faceless seller. Such mistrust makes it difficult to convince traditional users to switch from physical stores to online/virtual stores.
- **Security / Privacy** − It is difficult to ensure the security or privacy on online transactions.
- Lack of touch or feel of products during online shopping is a drawback.
- E-commerce applications are still evolving and changing rapidly.
- Internet access is still not cheaper and is inconvenient to use for many potential customers, for example, those living in remote villages.

E-BUSINESS

E-business or Online business means, business transactions that take place online with the help of the internet. The term e-business came into existence in the year 1996. E-business is an abbreviation for electronic business. So the buyer and the seller don't meet personally. E-business (electronic business) is the conduct of business processes on the internet. These e-business processes include buying and selling goods and services, servicing customers, processing payments, managing production control, collaborating with business partners, sharing information, running automated employee services, recruiting; and more.

E-business can comprise a range of functions and services. They range from the development of intranets and extranets to the provision of e-services over the internet by application service providers.

Today, as corporations continuously rethink their businesses in terms of the internet -- specifically, the internet's availability, reach and ever-changing capabilities -- they are conducting e-business to buy parts and supplies from other companies, collaborate on sales promotions, and conduct joint research.

The growth of e-business in recent decades has given rise to new business requirements. On the customer front, consumers expect organizations to offer self-service options for conducting transactions; they expect personalized experiences; and they want speedy, secure interactions. On the regulatory front, new laws and best practices for keeping electronic data secure have been instated. As e-commerce accelerated, companies have adopted stringent security protocols and tools, including encryption and digital certificates, to protect against hackers, fraud and theft.

With the security built into browsers and with digital certificates now available for individuals and companies from various vendors providing cyber security tools and technologies, cyber security has become ingrained in e-business. However, the security of business transactions on the web remains a pressing issue for consumers and enterprises alike, even as that concern has not slowed the growth of e-business.

According to Merriam Webster e-business is "usually commercial or mercantile activity engaged in as a means of livelihood."

E-BUSINESS MODEL

IBM was one of the first companies to use the term *e-business* when, in October 1997, it launched a thematic campaign to address the confusion many consumers had about internet-based businesses. The company spent approximately $500 million on an advertising and marketing campaign to demonstrate the value of the e-business model and to show that IBM had the "talent, the services and the products to help customers capture the benefits of this new way of doing business," according to the company website. By 2000, IBM's e-business revenue had grown to more than $88 billion from $64 billion in 1994, and net income had nearly tripled.

There are several types of e-business models. In the business-to-consumer (B2C) model, sellers offer products and service directly to consumers online and the buyer purchases them via the internet.

In today's world, we are exposed to various forms of e-Business. Since its emergence, it has grown by leaps and bounds. Some predict that it may very soon overtake brick and mortar stores completely. While that remains to be seen, we cannot ignore the immense role it plays in the current global economy.

FEATURES OF ONLINE BUSINESS

Some of the features of Online Business are as follows:

- It is easy to set up
- There are no geographical boundaries
- Much cheaper than traditional business
- There are flexible business hours
- Marketing strategies cost less
- Online business receive subsidies from the government
- There are a few security and integrity issues
- There is no personal touch
- Buyer and seller don't meet
- Delivery of products takes time
- There is a transaction risk
- Anyone can buy anything from anywhere at anytime
- The transaction risk is higher than traditional business

ADVANTAGES OF E-BUSINESS

E-business has drastically changed how corporations -- as well as nonprofits, government agencies and other such institutions -- operate, allowing them to increase productivity, lower costs and move more quickly.

Electronic communication systems, such as email, video conferencing and online collaboration platforms that incorporate the dynamics of social media, likewise increase productivity by decreasing delays between inquiries and responses. That's true whether the communication is between employees, employees and external business partners, or employees and customers.

The increased speed also results in faster decision-making, making companies more agile and responsive to stakeholder needs and market demands overall. Electronic communication systems also save money by eliminating, in some cases, employee travel for collaboration purposes, while also supporting more open, collaborative cultures by making it easier for employees in any position, in any department and wherever they're physically based to contribute ideas.

The digital systems that power e-business can also extend an organization's reach beyond its brick-and-mortar walls. Cloud-based business applications enable workers to perform their jobs from home and other remote locations, such as client sites. Similarly, cloud-based applications and the 24/7 nature of the internet allows business transactions to continue around the clock and around the globe, giving even solo practitioners and small businesses the ability to be global enterprises.

Digital systems, and particularly emerging technologies such as machine learning and artificial intelligence, have also improved the ease, speed and effectiveness of numerous e-business tasks, such as archiving information, searching stored data for insights, recording financial transactions and connecting with customers with personalized messaging.

More importantly, however, the rise of advanced e-commerce software and services have delivered new capabilities to organizations, such as email marketing, and created new avenues to sell their goods and services, such as online stores. E-commerce software has enabled the creation of entirely new business models, such as eBay's capacity for consumer-to-consumer and business-to-consumer sales and social networking sites such as Facebook. The e-commerce platform Shopify offers people the ability to create online stores by providing the infrastructure and e-commerce software to sell their own goods.

TYPES OF E-BUSINESS

Most organizations today have at least some e-business capabilities to support their core competencies or ancillary functions.

However, the amount of e-business happening within an enterprise varies. Some organizations have limited e-business capabilities: A small business that processes payments using a mobile payment service such as Square, but uses no other digital services, would be such a business. On the other end of the spectrum are those companies whose business model is fully empowered by electronic and digital services. Rocket Mortgage, an online and mobile-friendly loan product from Quicken Loans, would be an example of that type of e-business.

Although organizations are increasingly using digital services to support a host of functions and capabilities, even those organizations that could be classified as e-commerce entities or fully powered e-business tend to be categorized in traditional terms.

Business and digital authorities still frequently classify e-business as B2B, B2C, C2C and C2B. Some offer additional classes of e-business, such as business-to-government and business-to-employee.

CHALLENGES OF E-BUSINESS

The level and types of challenges with electronic business vary from one organization to the next, depending on a host of factors -- from whether they use digital services to enable e-business in only parts of their operations, to whether digital services power their core value proposition, to whether they have legacy technology infrastructure or were born digital.

However, some common challenges exist. Those challenges include the following:

- securing e-business services against cyber attacks;
- scaling services fast enough to meet demand without jeopardizing performance;
- evolving their technologies fast enough to keep pace with changing market dynamics;
- finding and training workers who can keep pace with skills that constantly need to evolve; and
- Keeping pace with e-business capabilities that, by their electronic nature, are always on.

Additionally, many companies struggle to progress from siloed instances of e-business within their organization to integrating e-business services and using them to transform themselves into digital operations, where the various e-business elements converge and work seamlessly

together.

Security and risks

E-business tactics offer advantages such as reaching a wider customer base and faster transactions, but they also come with associated risks. For example, e-business creates huge data security risks, because customers are often required to provide sensitive information, such as contact information and credit card numbers, during e-business transactions. This information is enticing to hackers and particularly vulnerable to data breaches, so e-business website owners are responsible for incorporating methods, such as data encryption, to ensure secure transactions. Failure to ensure data integrity and incorporate appropriate data security measures creates the risk of fines and the loss of customer loyalty.

Because successful e-business relies on swift, secure online transactions, even something as simple as a bad web hosting service creates a financial risk for these companies. Crashed servers and insufficient bandwidth lead to persistent website downtime and customer dissatisfaction, so companies must invest in well-known, reliable hosting providers that can, in turn, drive up the costs associated with running a successful e-business.

There are marketing risks when it comes to e-business, as well. All types of businesses rely on effective marketing to drive growth and sales, but online marketing techniques are much different from traditional, offline ones. Without an effective marketing campaign specifically tailored to promote e-business, an organization creates huge financial risk by investing in marketing resources that do not drive consumer traffic to the transaction websites. E-businesses are also vulnerable to systematic risk that influences the entire online market segment. For example, the dot-com crash of 2000 to 2001 began after several e-business startups went public and were purchased by other e-businesses. These e-businesses had little cash flow, and many valued growth over financial stability. This created an unsustainable economic bubble that ultimately put many of these companies out of business when it burst.

BENEFITS OF E-COMMERCE

The benefits of e-commerce can be seen to affect three major stakeholders: organizations, consumers and society.

Benefits of e-commerce to organizations

- **International marketplace**. What used to be a single physical marketplace located in a geographical area has now become a borderless marketplace including national and international markets. By becoming e-commerce enabled, businesses now have access

to people (consumer) all around the world.

- **Operational cost savings**. The cost of creating, processing, distributing, storing and retrieving paper-based information has decreased (see Intel mini-case).
- **Mass customization** .Mass customization defined as the process of delivering wide-market goods and services that are modified to satisfy a specific customer need. Mass customization is a marketing and manufacturing technique that combines the flexibility and personalization of "custom-made" with the low unit costs associated with mass production. Many applications of mass customization include software-based product configurations allow end-users to add and/or change certain functionalities of a core product. Sometimes called "made to order" or "built to order." E-commerce has revolutionized the way consumers buy goods and services. The pull-type processing allows for products and services to be customized to the customer's requirements. In the past when Ford first started making motor cars, customers couldn't have any **colour** so long as it was black.
- Enables reduced inventories and overheads by Facilitating 'pull'-type supply chain management –
- This is based on collecting the customer order and then delivering through JIT (just-in-time) manufacturing. This is particularly beneficial for companies in the high technology sector, where stocks of components held could quickly become obsolete (useless) within months. For example, companies like Motorola (mobile phones), and Dell (computers) gather customer orders for a product, transmit them electro electronically to the manufacturing plant where they are manufactured according to the customer's specifications (like color and features) and then sent to the customer within a few days.
- **Lower telecommunications cost.** The Internet is much cheaper than value added networks (VANs) which were based on leasing telephone lines for the sole use of the organization and its authorized partners. It is also cheaper to send a fax or e-mail via the Internet than direct dialing.
- **Digitization of products and processes**. Particularly in the case of software and music/video products, which can be downloaded or e-mailed directly to customers via the Internet in digital or electronic format?
- **No more 24-hour-time constraints**. Businesses can be contacted at any time

Benefits of e-commerce to consumers.

- **24/7 access**, this feature enables customers to shop or conduct other transactions 24 hours a day, all year round from almost any location. For example, checking balances, making payments, obtaining travel and other information. In one case a person set up web cameras in every room in his house, so that he could check the status of his home by logging onto the Internet when he was away from home on tour.
- **More choices**. Customers not only have a whole range of products that they can choose from and customize, but also an international selection of suppliers.
- **Price comparisons**. Customers can 'shop' around the world and conduct comparisons either directly by visiting different sites, or by visiting a single site where prices are aggregated from a number of providers and compared (for example www.moneyextra.co.uk for financial products and services).
- **Improved delivery processes.** This can range from the immediate delivery of digitized or electronic goods such as software or audio-visual files by downloading via the Internet, to the on-line tracking of the progress of packages being delivered by mail or courier.
- **An environment of competition:** Where substantial discounts can be found, as different retailers via for customers. It also allows many individual customers to aggregate their orders together in to a single order presented to wholesalers or manufacturers and obtain a more competitive price (aggregate buying), for example www.letsbuyit.com. Or www.ebay.co.uk

Benefits of e-commerce to society

- **Enables more flexible working practices**, which enhances the quality of life for a whole host of people in society, enabling them to work from home. Not only is this more convenient and provides happier and less stressful working environments, it also potentially reduces environmental pollution as fewer people have to travel to work regularly.
- **Connects people**. Enables people in developing countries and rural areas to enjoy and access products, services, information and other people which otherwise would not be so easily available to them.
- **Facilitates delivery of public services**. For example, health services available over the Internet (on-line consultation with doctors or nurses), filing taxes over the Internet

through the Inland Revenue website.

LIMITATIONS OF ECOMMERCE

Security: One of the main limitations of E -Commerce is security. In most cases, people are hesitant to provide their personal and financial details in spite of advanced data encryption security systems in place. Moreover, there are some websites that do not have the capability and features installed to authenticate transactions. As such, there are instances of fraudulent activities. The fear of providing financial information like credit card details hinders the growth of e Commerce

Lack of Privacy: To some extent, the privacy of a customer is compromised in E-Commerce. You need to provide your personal details, such as address, telephone number, and so on to the seller. There are still lots of sites that do not have the advanced technology to protect sensitive information. Moreover, there are also sites that illegally collect consumer statistics without permission. This is one reason why people get skeptical while using E-Commerce.

Tax Issue: In case of different geographical locations, sales tax becomes an issue. Many a time sellers have faced problems in the computation of sales tax. Moreover, physical stores have a risk of losing business if online transactions are exempted from taxation.

Fear: In spite of popularity, there still resides an element of doubt in the mind of people when it comes to online shopping. This is because the customer cannot physically examine the product and is not sure about the features and attributes. This is why a lot of people prefer shopping from physical stores.

Product Suitability: As already mentioned, it is not possible for people to physically examine the product in E-Commerce. In many cases, the original product may not match with the picture or specifications in the E-Commerce site. This absence of 'touch and feel' creates a discouraging effect.

Cultural Obstacles: As the process of E-Commerce encompasses customers across the globe, the habits, traditions, and culture differ. There may also be linguistic problems and all these may lead to issues between the seller and buyer.

High Labour Cost: In order to get the whole E-Commerce and delivery process right, a specialized workforce is required. To get all these in the right shape, companies have to shed a good amount of money and employ a talented pool of people.

Legal Issues: A lot of legal compliances and cyber laws that need to be taken care of in an E-Commerce business. These regulations may vary from country to country. All these

reasons deter businesses from going electronic.

Technical Limitations: E-Commerce requires advanced technology platforms for better performance. Some limitations, such as lack of proper domain, network and software issues and so on can affect the seamless performance of an E-Commerce site.

Huge Technological Cost: Last but not the least; a lot of money needs to be invested to be built up the technical infrastructure needed to run an E-Commerce business. Moreover, they need to be upgraded based to keep abreast with the changing technology.

In order to minimize these limitations, E-Commerce business should have a proper business plan and implement them with proper strategies.

ONLINE TRADING

Online Trading has created a lot of opportunities for new-age traders. If you are a stock market enthusiast and want to Trade Online then, this can be the best time to start investing online.

With the advent of the technologies that are used in the trading arena, it is becoming better day by day for the traders. Online trading is more or less like you do online shopping. You just need a few basic things like a bank account, internet connection, and internet banking facilities. Along with these, last but not the least, a device from which you can place the order.

It is the same for online trading as well – A Demat account, trading account and bank account, internet facility and trading platform on your device and you are sorted. So, here in this article, we will read about almost everything that you need to know about online trading. We will start with its basic and dig deeper into some of the more interesting facts about online trading.

Online Trading of Shares means you have an online platform where you can buy or sell shares. So, Online Trading Meaning is as simple as it sounds. You buy and sell the securities online and the fund is also transferred online. With the online trading platform, you can trade different types of investment vehicles. There are stocks – equities, commodities, mutual

funds, and other investment vehicles as well.

Online trading facilitates the trading process by bringing the complete trading setup at your convenience. You can trade anytime and from anywhere using the online platforms. There is no paperwork involved, no need to go to the brokerage house or the stock exchange to trade shares. It is all there on the device which you use – laptop/tablet/desktop or mobile. With a good internet connection, you can check your investment all the time. You can monitor and place your bids and trade shares anytime.

BENEFITS OF ONLINE TRADING

BENEFITS OF ONLINE TRADING ARE:

- It's Simple
- It is Less Expensive
- Quick & less time consuming.
- Complete Control
- Chances of Error is less
- Monitor Investment All time
- Access Reports.

It is simple:

It enables a trader to have a hassle free trading experience. Anyone can use these platforms as specific skill is not required to carry out trading online.

It is less expensive:

It is less expensive as compared to traditional mode of trading. Brokers also promote online trading as it reduces maintenance and other costs incurred by the broker.

Quick and less time consuming:

Trading can be done in a seamless manner and in less time. Before the advent of online technologies, trading was a cumbersome process as you had to visit the broker or call your

broker for placing or cancelling trade orders. Now, you can carry out trading even through a smartphone in the simplest way.

Complete control:

It allows you to have complete control over your portfolio. You can place trade orders from anywhere anytime. That is the kind of flexibility you get due to online trading.

Chances of error are less:

In case of traditional offline trading, there were more chances of errors due to miscommunication between the traders and brokers. But in online trading, you can place trade orders or cancel without broker's interference and hence can manage trade transactions by yourself.

Monitor investment at all times:

You can monitor investments anytime. There are mobile trading apps that can be downloaded in your smart phone which help you stay in touch with the markets and also monitor your investment anytime and take proper strategic moves accordingly. Loss making stocks can be removed and profit making stocks can be added to your portfolio by observing the way the market moves.

Access to research reports:

You can get access to top research recommendations, reports, analysis on stock price based on various charts. There are various brokerage websites through which you can have discussions with research experts as well. You can take the best move with the help of financial advisors too.

Safety measures that have to be taken in case of online trading:

- Trade orders should not be placed from shared PCs or cyber cafes.
- Always log out after carrying out trade in order to avoid any misuse of your account.
- Personal computers have to be protected against viruses by installing anti-virus solution.
- Do not click on "remember me" option when you sign in to your trading account from a different location. Investment in financial assets is offered by several brokers. You can choose that which suits your needs and demands after comparison of brokers on the basis of services, brokerage charges, etc. Online trading helps you trade or invest in the most secured way. Its simple, easy and fast to trade online.

E-COMMERCE VS TRADITIONAL COMMERCE

Traditional Commerce

Traditional Commerce or Commerce is a part of business, which encompasses all those activities that facilitate exchange. Two kinds of activities are included in commerce, i.e. trade and auxiliaries to trade. The term trade refers to the buying and selling of goods and services for cash or kind and auxiliaries to trade, implies all those activities like banking, insurance, transportation, advertisement, insurance, packaging, and so on, that helps in the successful completion of exchange between parties.

In finer terms, commerce encompasses all those activities that simplify the exchange of goods and services, from manufacturer to the final consumer. When the goods are produced, it does not reach to the customer directly rather it has to pass from various activities, which are included under commerce. Its main function is to satisfy the wants of consumers by making goods available to them, at the right time and place.

Advantages:

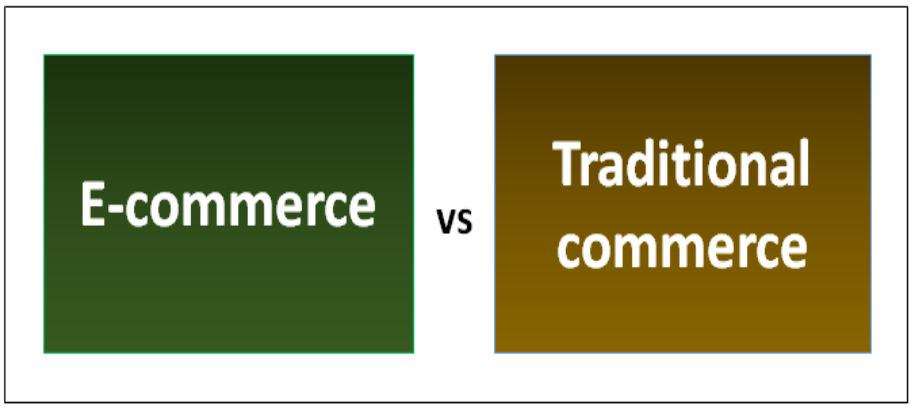
Consumers can test the product before purchase.

- It helps a person feel better about the environment they are in. (That is if it is in a shop)
- The owner cannot lose money since there are no hackers and scammers in the real world.
- People without internet can visit stores for items.
- Rip-off merchants can be caught easier than scammers

Disadvantages:

- Consumers have to travel a certain distance for the product.
- Not all store and businesses have the exact item for the customer.
- It costs money to build the physical atmosphere
- There is limited time of when the store is opened and shut.

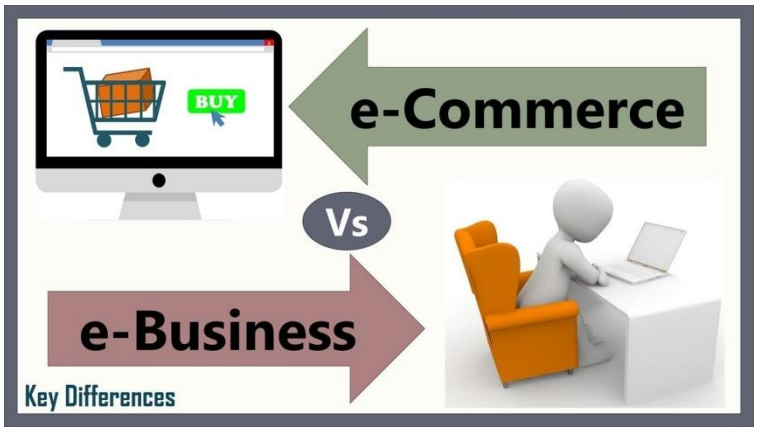
E-COMMERCE VS. TRADITIONAL COMMERCE COMPARISON TABLE



Comparison between E-commerce vs. Traditional commerce –

E-COMMERCE VS. TRADITIONAL COMMERCE	E-COMMERCE	TRADITIONAL COMMERCE
Definition	E-Commerce is a form of online shopping where users can buy goods and services from their electronic devices such as a laptop, mobile, tablet.	Traditional-Commerce is a traditional approach to buy goods and services in person which involves face to face dealing.
Usage	It is used to save valuable time and money.	It is ancient and still in usage where the digital network is not reachable.
Process	It is easier to use and operate if the customer has basic digital gadget knowledge.	It can be followed by any person irrespective of education or knowledge.
Mode	It is in electronic or digital mode only	It can be in any form which is non-electronic or manual form.
Time	It is available round the clock	It is available during the limited time as prescribed by the law and based on the type of business.
Purchase	Inspecting a product before purchasing is not possible in this type.	Inspecting a product before purchasing is possible in a traditional commerce business model.
Involvement	It involves only digital gadget engagement to place the order	It involves face to face involvement of both buyer and seller
Business	More business can be done easily without any hassles	It is difficult to perform more business in this model
Maintenance	Easier to maintain this as the only warehouse is enough to store the goods.	It is cost effective as display and showcase of the products are required to attract the customers.

E-COMMERCE VS E-BUSINESS



Difference Between e-Commerce and e-Business

eCommerce	eBusiness
Ecommerce involves commercial **transactions** done over internet.	Ebusiness is conduct of **business processes** on the internet.
Ecommerce is use of electronic transmission medium that caters for **buying and selling** of products and services.	In addition, Ebusiness also includes the **exchange of information** directly related to buying and selling of products.
Thus, Those activities which essentially involve monetary transactions are termed as "e-commerce".	In addition it includes activities like procurement of raw materials or goods, customer education, looking for suppliers etc.
Ecommerce usually requires the use of just a **Website**.	Ebusiness involves the **use of CRM's**, ERP's that connect different business processes.
Ecommerce involves the mandatory use of **internet**.	Ebusiness can involve the use of **internet, intranet or extranet**.

UNIT- III

CONSUMER ORIENTED E-COMERCE APPLICATIONS

Mercantile Process model- Consumers Perspective and Merchant's Perspective, Electronic payment systems-Advantages and risk,

Types of payment System (Credit cards, e-cash, smart cards, debit card)

Advantages, Disadvantages, Risk

MERCANTILE PROCESS MODEL

Mercantile Process defines interaction models between consumers and merchants for E-Commerce. Necessary: It is necessary because to buy and sell goods, a buyer, seller, and other parties must interact in ways that represents some standard business processes.

Mercantile models can be both retailer as well as consumer oriented.

Retailer Oriented:♣ From the prospect of retailer, an order management cycle may involve the following distinct phases:

Planning phase: During this phase, a forecast is prepared by amassing the valuable information from the customer. Manufacturing squad would draft the capacity plot. The production team would refurbish the final outline. Planning phase is regarded as the crucial phase, as this would emphatically lead towards order generation. The team to generate orders may undergo cold calls or perform direct marketing. Software supports have made the entire procedure simpler.

Costing and Pricing Phase: Pricing decisions must be undertaken after careful analysis. A passable data analysis followed by price elasticity would definitely yield accurate estimation. Moreover, each division of the organization must outline the possible cost involved in product development and hence, set off the final pricing accordingly. Availability of tools for tracking, trend analysis, customer tracking has made the entire procedure more effective.

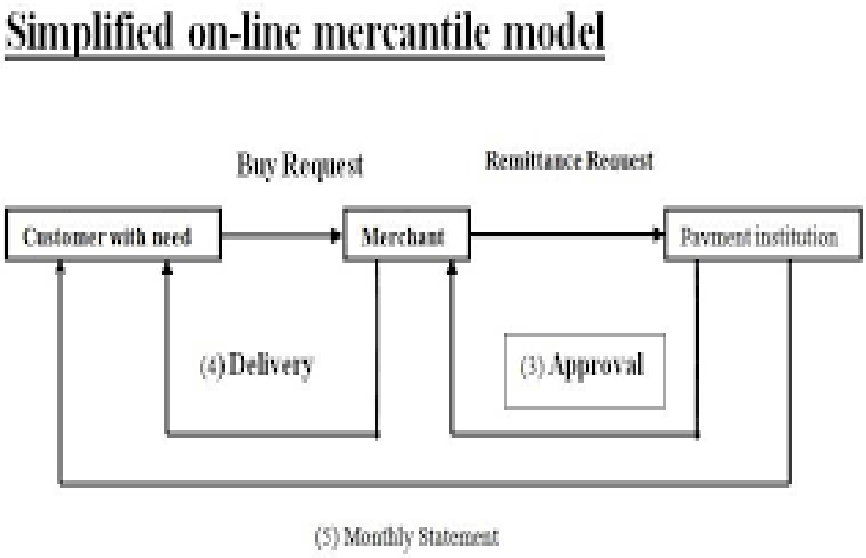
Order Acknowledgement Phase: An interface for order receipt is an indispensable requirement. Such an interface would enable the direct assignment of the product to the customer, impeding the competitor rage. Its due maintenance is also essential facilitating ease of tracking of shipment. Further, such interface when annexed with the database, would direct customer's order over to the representative who will ensure order verification in order for its completion

Scheduling Phase: Different orders are first prioritized and hence scheduled. Entire organizational departments are involved to entangle the schedules. Hence, sync among the

various functional units is a mandate. Production team tend to minimize switch-over's, customer representatives may demand distinctive offerings to elite customers. Effective communication may deliver commitments.

Order Accomplishment Phase: Several times, different components of a product may be manufactured at different plant locations or produced at one location and ensconced at the other. Longer is the fulfillment, more will be the requisite of dexterity.

Billing: After the order accomplishment phase, finance department will dish up bill for the customer. Normally such bills are structured in accordance to the organizational expediency.



Consumer Oriented Consumer acquainted models comprise of the following three phases:

Pre-purchase♣

Fruition♣

Post-purchase♣

Pre-purchase Phase: For an effectual presentation over the web, mere creating a lucrative web page would not generate revenue for the firm. This phase must be designated with: Contemplation, Juxtaposition and deliberation. Contemplation: The contemplation phase demarcate the time lapse between a consumers's first thought of purchasing a product and his factual product buying. Quests for information search do accompany with juxtaposition, followed with negotiations of price. The time duration of such a phase is dependent upon the type of product. For instance purchase of a vehicle would definitely involve compilation of information a careful scrutiny. Moreover, consumer would categorically affirm the different set of variables which create a profound impact on purchasing. In case of impulsive buying

the time lapse is small. Juxtaposition and Deliberation: Consumers often seek comparisons about price, quality etc. Endorsement tactics followed by organizations creates awareness among general masses about the pricing policies. Existent platforms over the net enable comparisons quite simpler. Even organizations undergo rummage, but the costs of sourcing as well as maintaining such information can be lofty. It is believed that information about the product constructive today may not be lucrative tomorrow. Hence, incessant upgrading of accurate information is also essential.

Fruition: With the conclusion of pre-purchase, the vendor and purchaser work together to accomplish the transaction, this involves the following: As soon as the purchaser decides upon the purchase of the product, vendor would reveal the finalised price per unit. Following up which the buyer would realize the amounts (if satisfied). Vendor then would try to gain the encrypted imbursement information, in response to which the billing service would detail the authorisation number of the purchaser, yielding to which the goods will be transited by the vendor towards the purchaser. Upon the attainment of the goods the merchant would sign the receipt form with which the vendor may finish the transaction. Solitary model would not go up with each purchaser hence multiple models are a requisite. Order Acknowledgement Phase Scheduling Phase Order Accomplishment Phase Billing 691 | P a g e Now-a-days software support eases the entire billing modus operandi. For instance Microsoft merchant solution constitutes a server and solution array. This array also enables card authorization with the help of SET protocol in order to transfer information among different parties. Microsoft's has also planned to introduce a shopping utility which will facilitate vendor to expound their business with the help of customized platform. Interfaces deploy additive results.

Post-Purchase: Services delivered after purchase will bring trust and loyalty among customer, resulting into more satisfaction. Simple return and refund policies will drive better outcomes and the current shopping would become his favourite option to shop for Businesses of today have traversed beyond boundaries. Liberalisation as well as globalization has made every corner of the world as a marketplace. So, mercantile models in consonance to the business are vital. These models must designate the consumer's requirements. From the vendor's point of view, such a model would entail the complete order management cycle i.e. from planning to billing. However, from customer's perspective from his pre-purchase to

post-purchase servicing are important. Ever changing technology puts forth several additional constraints, but an optimum choice would be one which stays forever

CONSUMER PERSPECTIVE AND MERCHANTS PERSPECTIVE

CONSUMER PERSPECTIVE

Consumer perspective is a way of looking at life through eyes that have been categorised as 'mad' or distressed enough to require intervention from a mental health professional. Such a perspective is acquired as a result of receiving, or being unable to receive when you wish to, services in the mental health system.

Consumer perspective is *not* about:

- interpreting others' behaviour using the tools supplied by the medical establishment;
- blindly accepting the language supplied by the medical model;
- assuming any one of us can speak for others;
- setting up our own groups and organisations which merely imitate the inequitable power relationships we have experienced in services;
- assuming that any of us is different and somehow better placed to mentor others whom we perceive and categorise as less able.

How are 'consumer views' different from 'consumer perspective'?

We have an infinite number of different views within consumer perspective

While the idea of 'consumer perspective' can be understood as singular, consumer views can never be understood in this way. There are as many different views as there are individuals diagnosed with 'mental illness'!

This is important to keep in mind because people often confuse an individual consumer's experience with 'consumer perspective' (so, for example, if one consumer is happy with a service, they might say "consumers are happy with our service"). This has implications for consumers representing other consumers.

We can offer our consumer perspective - speaking from the lived experience, and stressing the importance of this lived experience being respected. Our views are shaped by:

- **Social Institutions:** We use this term to include governments, the family, the media, legal systems, etc. It is impossible to live in the social world without being influenced by social institutions. Each of us is affected differently, depending on our position within these institutions.
- **Personal History:** Our own personal history affects our views too. This includes our

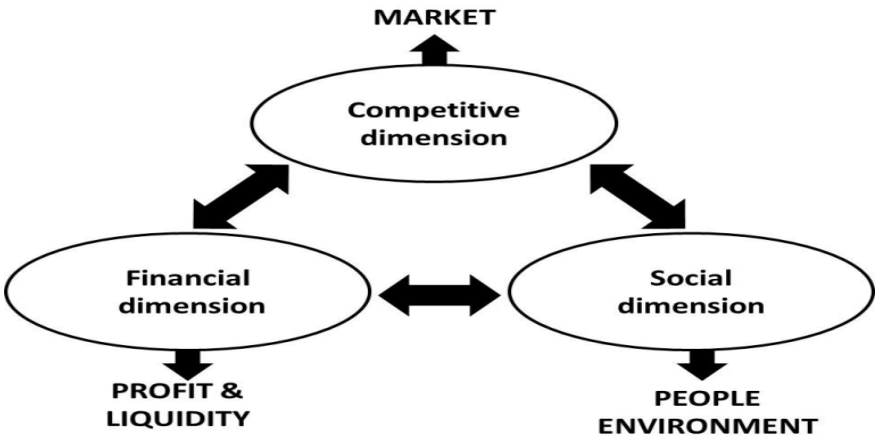
childhood, whether we lived through child abuse or neglect, sexual abuse, absent parents or anything else that deeply affected our ability to operate within the institutions of our community. Personal history doesn't stop with childhood - we make it every day, and every day it continues to make us.

- **World View:** The modern world is fast changing, fragmented and stressful. To survive as individuals and as a culture we need a way to understand new information - sometimes called our "world view". It helps us see the big picture, make decisions about what information is important and what can be discarded; what becomes a priority; what is worth fighting for; whether we are convinced by medical definitions of what is happening in our lives and whether we choose to become politicised as consumers or whether we put our energy somewhere else.

Changing customer perspective

- **Providing added value:** advertising on a number of web sites drawing more people into the web site which would provide a large profit. This also means from a e-commerce point of view that they don't have to have a shop fall of products that might or might not sell they can just import the soporific products that they need meaning that they are saving money.
- **Providing service:** some people like I have mentioned before are housebound or don't have time to go out. E-commerce provides services to make people who are housebound lives easier. For example these days you can have your weekly shopping delivered to your front door (for an example of a company would be Tesco with a twenty four hour service). Other services are banking, travel agencies etc.
- **Ease and security**: with the internet and e-commerce expanding it has become easier for customers to shop online. This also means that they can shop from anywhere in the world or in the comfort of their own homes, this has change the customers perspective in a way that they now don't have to stand in queues and wait to pay or try on their products for example they can just chose their products and give their bank details in and their products will be delivered the very next day making it easier for the customers. But with butting your details in the required sections you would have to put trust in the company to provide a secure web page and to prevent hackers from stealing their/your information. But as I said before with the internet and e-commerce expanding so is the security. But there is still the risk of finding false web

dealers or hackers tricking web detailers which could also make people wary of using e-commerce.



MERCHANTS PERSPECTIVE

As online purchasing grows in volume and the use of cash continues to decline, the need for efficient and effective digital payment methods not only increases but also diversifies. Simply put, payment services and their providers must take into account the specific constraints or conditions that are relevant to merchants' primary business processes. Further opportunities and challenges from the revised Payment Services Directive (PSD2) and 'access-to-the-account' are considered, especially regarding the stipulations on strong customer authentication and transaction authorization.

Chargeback's shouldn't have to be part of the of the cost of doing business, but for many merchants this is their reality. The payments industry uptick in chargebacks and their associated costs have made it very challenging for merchants to stay true on their path of success.

Because merchants absorb the majority of costs resulting from chargebacks and fraud, it is in their best interest to take action. This means deploying advanced payment solutions, accessing data, and working with issuers to improve and increase resolutions on consumers' purchase issues.

By continuing the current broken chargeback process, costs will continue to escalate for merchants and issuers. In 2017, chargebacks were a $31 billion problem with $19 billion of the burden falling squarely on merchants. To make matters worse, 63% of consumers ceased merchant patronage after a dispute, which is not a sustainable trend.

Three Key Challenges Facing Merchants

Merchants are in a precarious position when it comes to chargebacks. They typically find out

about the dispute too late in the process to take active measures. Merchants face three key challenges within the chargeback process:

- Accessing all pertinent transaction documentation from a variety of sources and presenting it with issuers or consumers in a timely manner
- Deciding which disputes are worth contesting
- Keeping track of dispute timelines and customer histories

Stacking odds against merchant success even higher are the short and long-term impacts on customer retention and lost brand loyalty.

How Chargebacks Cost Merchants

Merchant chargeback liability can include fines and fees, refund costs, recovery of lost merchandise, and the loss of customer loyalty.

Busy merchants typically don't have the time to understand the breakout of their chargeback costs. Here are the most common charges:

- **Retrieval Requests**. The merchant pays a processing fee of $5 – $15 each time an issuer requests an electronic copy of the purchase receipt from the acquirer.
- **Chargeback Fee**. Merchants pay up to a $100 acquirer fee for every chargeback, even when the claim is denied.
- **Arbitration Costs**. For claims that reach arbitration, the merchant must pay the associated arbitration costs. If the merchant loses the case, they may have to absorb a $500 network fee.
- **Chargeback Penalties**. When the merchant's chargeback ratio exceeds 1% or 1.5% of their total sales volume (depending on multiple card association requirements), they are placed in a chargeback monitoring program. Each subsequent chargeback comes with an additional $100 fee. The ultimate penalty results in the termination of the merchant's account by the acquirer.
- **Other Fees**. Some credit card associations may charge 'review fees' for merchants that do not have a transaction dispute reduction plan. Dollar costs are only one component of the problem. Fraud vulnerabilities and the resulting revenue drain continue to be a threat.
- **Increased Fraud**. Merchants frozen out of the early dispute process must play catch up, giving fraudsters more time to commit further criminal acts.
- **Manual Reviews**. The manual process required to review disputes is a drain on resources and time.

- **Lost Goods/Services**. Merchants frequently do not recover the lost (or stolen) goods or services and associated shipping costs.
- **Lost Consumers and Brand Damage**. Consumers have low tolerance for a lengthy dispute process and are quick to abandon merchants.
- **Consumer Experience**. A merchant-consumer relationship is almost non-existent in digital sales. This lack of relationship means consumers don't know who to contact or trust to resolve their dispute, so they typically bypass the merchant and contact the issuer
- **False Positives**. Highly sensitive fraud controls can trigger a false positive, resulting in declines for legitimate purchases. By the time this problem is discovered, the consumer is long gone.

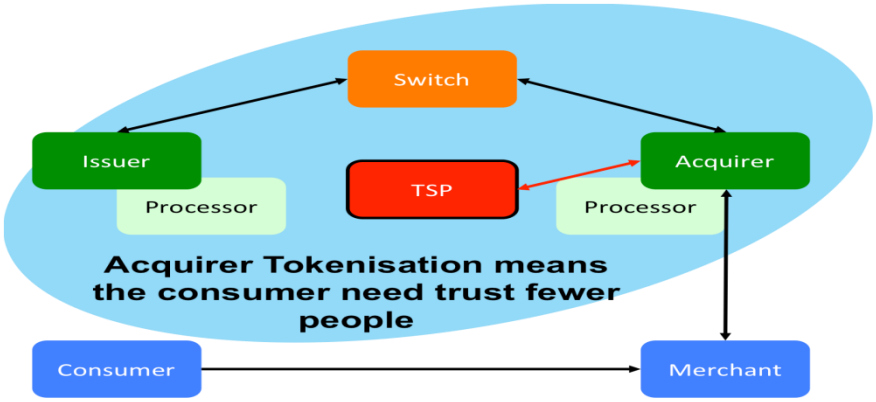
Resolving the Broken Chargeback Process

While most merchants agree that the chargeback process is outdated and inefficient, they may not know that they have the power to make substantial changes that will reduce disputes and associated costs.

This starts with a thorough accounting of how chargebacks are hurting them and then working with their customer service team, issuers, and consumers to create an open and collaborative environment.

Payment solutions like Verifi's Order Insight are designed to reduce transaction disputes for both merchants and issuers by enabling communication without tying up valuable resources.

The benefits of collaboration between merchants, issuers, and consumers can be significant. When the right party has the right information about a transaction at the right time, a dispute can be resolved before it becomes a chargeback. When that happens, everyone wins.



ELECTRONIC PAYEMENT SYSTEMS

An e-**payment system** is a way of making transactions or paying for goods and services

through an **electronic** medium, without the use of checks or cash. ... The **electronic payment system** has grown increasingly over the last decades due to the growing spread of internet-based banking and shopping.

With the rise of online shopping and e-commerce businesses, electronic payment systems have been growing in popularity. Essentially, an electronic payment system is a way for a consumer to buy goods and services via an electronic medium instead of using cash or paper checks.

Electronic payments allow customers to pay for products or services electronically. Electronic payments are what allow you to purchase clothes via your favorite online store or pay your cable bill online. So if you're planning to **create an online store**, you need to have an ecommerce payment system and learn exactly how it works.

Even if you're not planning to invest in **ecommerce**, it's important to understand how electronic payments work (as a customer) and the role they play in the evolution of the **payment processing** ecosystem.

HOW DO ELECTRONIC PAYMENT SYSTEMS WORK?

Understanding how an electronic payment works can get technical since there are a lot of moving parts. Here's a breakdown of the main participants required for an electronic payment transaction:

- The **cardholder** is identified as the consumer who purchases a product or service online.
- The **merchant** is the person or business that sells goods and services to the cardholder.
- The **issuer** is the financial institution that provides the cardholder with the payment card. This is usually the cardholder's bank
- The **acquirer**, or merchant account provider, is the financial institution that establishes an account with the merchant. The acquirer authorizes the legitimacy of the cardholder account.
- The payments processor **handles** the official transaction between the cardholder and merchant.
- The payment gateway **p**rocesses merchant payment messages and uses security protocols and encryptions to ensure transaction safety.

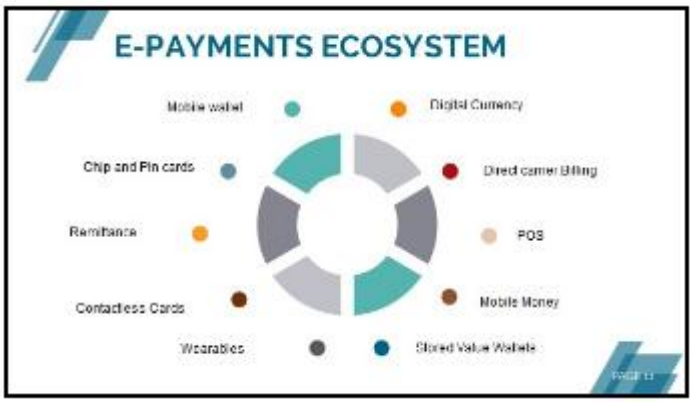
Electronic payment transactions are divided into two types: one-time vendor payments and recurring customer vendor payments.

- **One-time vendor payments** are commonly used on eCommerce websites. A cardholder types in the card or banking information on a checkout page and simply clicks to purchase.
- **Recurring customer vendor payments** are used when the cardholder is paying for a product or service regularly. Customers enter their information once and then opt in for a recurring billing option with a set date for the payment to go through. This is often used by car insurance agencies, phone companies, loan management companies, and other types of businesses.

ELECTRONIC PAYMENT METHODS

All transactions require a method of payment. With traditional payment processing systems, a customer can use cash, checks, magstripe cards, EMV chip cards, or mobile payment options. Electronic payment methods differ slightly. E-payments are orchestrated by an electronic funds transfer (EFT), which is the process of transferring money from one bank account to another without any exchange by hand. Online payment methods that use EFT include:

- **Credit and debit cards.** Businesses must have **eCommerce software to ac**cept payments online. A customer enters the debit or credit card information in a virtual terminal or online invoice when a product or service is purchased.
- **eChecks.** Instead of inputting card information, a customer can use an electronic check to pay online by entering the checking account and routing numbers from the bank.
- Are electronic payments secure?

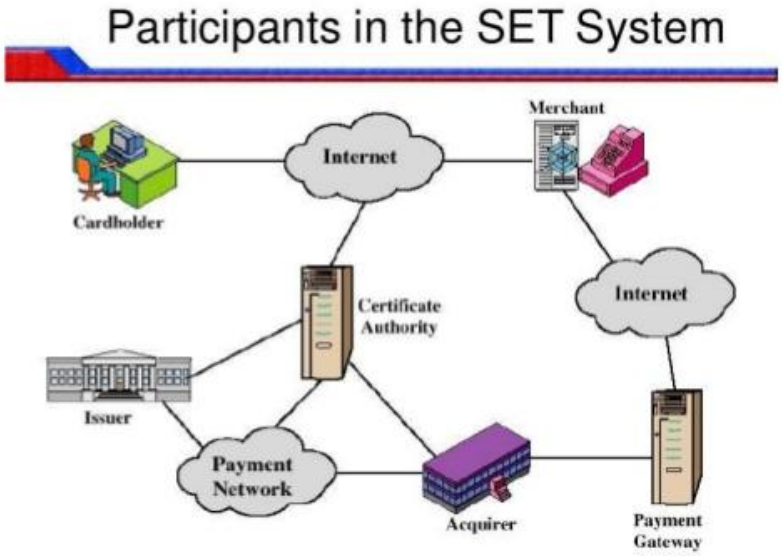


Credit card security is a top priority for any business, especially if you have an online store or use the internet to complete transactions in any way. But don't worry, there are a number of security standards and protocols in place to ensure the security of online transactions.

Here's how you can abide by industry standards and keep sensitive data secure.

SECURE ELECTRONIC TRANSACTION SYSTEM.

The Secure Electronic Transaction system (**SET**) is a set of security protocols used to facilitate electronic payments. With SET, a few components are integrated to authenticate and ensure confidentiality: digital wallet software, merchant software, and payment gateway server software.



Ensure your electronic payment system is PCI compliant**.**

When you are assessing different options for an electronic payment system, make sure you select one that is PCI compliant. The Payment Card Industry Data Security Standard (PCI DSS) sets a list of requirements for payment systems to securely accept, store, and process payments.

Create an eCommerce site that uses SSL encryption technology.

Secure socket layer (SSL) technology is a security model that meets the following security provisions: encryption, authentication, non-reputability, and integrity. It ensures that all electronic payment transactions made on your e-commerce site are safe and secure.

Set up digital signatures.

Digital signatures are an electronic fingerprint that associates a cardholder with an online transaction. These signatures use public key infrastructure to keep each transaction secure.

Why do electronic payments benefit your eCommerce business?

Now you understand how electronic payment systems work. How do they work for your business?

Reach a new audience.

eCommerce opens up your target market substantially. Because you don't have geographic or time limits, customers can access your website and purchase products from anywhere and at any time.

Improve purchasing efficiency.

Customers don't have to wait in line to buy products or services when using an electronic payment system. This kind of purchasing efficiency can actually encourage consumers to buy from your business more often.

Increase payment security.

There are a plethora of security measures and protocols in place to ensure your online transactions are safe and secure.

Other alternative electronic payment methods that are steadily growing in popularity include:

Bitcoin and other cryptocurrencies

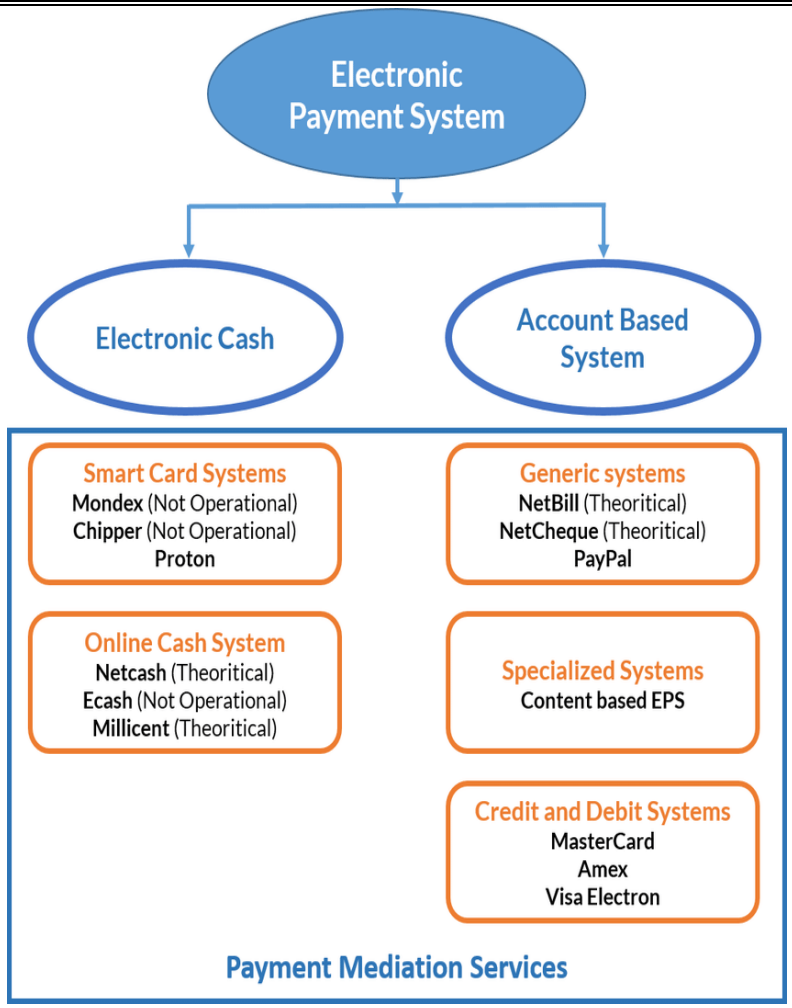
Bank transfers

Electronic wallets

As more businesses develop an online presence and open their products and services up for purchase on online platforms, we'll continue seeing an increase in electronic payment systems, along with new types of payment processing portals and devices.

The casualties of this rise to power will be transactions made via cash and paper checks.

TYPES OF ELECTRONIC PAYMENT SYSTEMS



There are two different electronic payment system types, including cash payment systems and credit payment systems. The systems vary depending on what type of electronic payment method you choose for any given transaction. Let's take a look at each of the different types of electronic payment systems.

Cash Payment System

Although the frequency of transactions made via paper money is decreasing, cash payment systems will be around for a while. These include transactions made via direct debit or with an e-check.

- **Direct Debit:** During this type of transaction, an account holder sends a message to their bank to debit, or collect, a certain amount of money from their account to pay for services or goods electronically.
- **E-Check:** This type of transaction involves a digital version of a paper check. The transaction functions much like an electronic funds transfer from an account holder's checking or savings account without the need for a physical paper check.

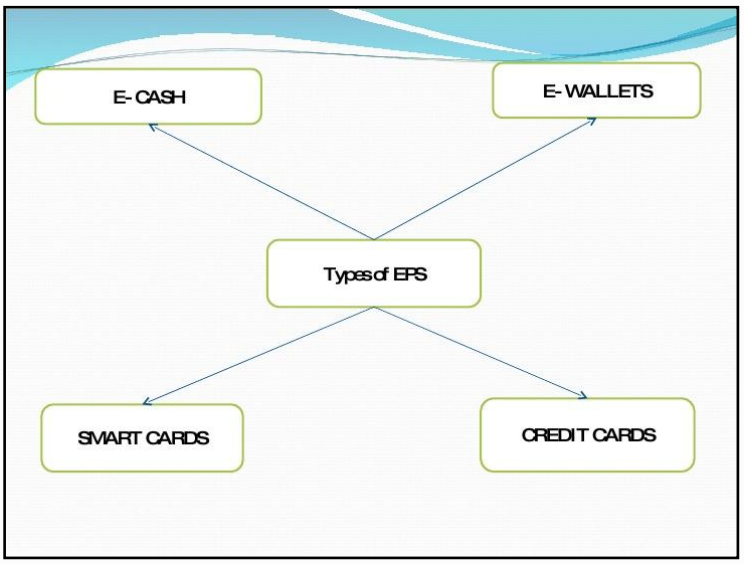
Credit Payment System

Of the two payment systems, the credit payment system is the most widely used among consumers of all ages. It includes transactions made via credit cards and e-wallets.

- **Credit Cards:** Financial institutions issue credit cards to cardholders. The cards allow cardholders to buy goods and services online or through electronic payment portals without the use of cash. They're very convenient and allow cardholders to build credit histories, which play a big role in credit scores. One of the most convenient features of credit cards is they allow merchants to receive funds for their goods or services at once instead of having to wait an untold amount of time for an invoice to process.
- **E-Wallet:** E-wallet refers to an electronic wallet. Simply put, an e-wallet is a type of prepaid account that securely stores a user's credit or debit card information. Having this information securely stored online makes it more convenient for users to make online purchases.

TYPES OF EPAYMENT SYSTEM

E-commerce sites use electronic payment, where electronic payment refers to paperless monetary transactions. Electronic payment has revolutionized the business processing by reducing the paperwork, transaction costs, and labor cost. Being user friendly and less time-consuming than manual processing, it helps business organization to expand its market reach/expansion. Listed below are some of the modes of electronic payments –



- Credit Card
- Debit Card
- Smart Card
- E-Money

CREDIT CARD

Payment using credit card is one of most common mode of electronic payment. Credit card is small plastic card with a unique number attached with an account. It has also a magnetic strip embedded in it which is used to read credit card via card readers. When a customer purchases a product via credit card, credit card issuer bank pays on behalf of the customer and customer has a certain time period after which he/she can pay the credit card bill. It is usually credit card monthly payment cycle. Following are the actors in the credit card system.

- **The card holder** – Customer
- **The merchant** − seller of product who can accept credit card payments.
- **The card issuer bank** − card holder's bank
- **The acquirer bank** − the merchant's bank
- **The card brand** − for example , visa or Mastercard.
- Credit Card Payment Process

Step	Description
Step 1	Bank issues and activates a credit card to the customer on his/her request.
Step 2	The customer presents the credit card information to the merchant site or to the merchant from whom he/she wants to purchase a product/service.
Step 3	Merchant validates the customer's identity by asking for approval from the card brand company.
Step 4	Card brand company authenticates the credit card and pays the transaction by credit. Merchant keeps the sales slip.
Step 5	Merchant submits the sales slip to acquirer banks and gets the service charges paid to him/her.
Step 6	Acquirer bank requests the card brand company to clear the credit amount and gets the payment.
Step 6	Now the card brand company asks to clear the amount from the issuer bank and the amount gets transferred to the card brand company.

DEBIT CARD

- Debit card, like credit card, is a small plastic card with a unique number mapped with the bank account number. It is required to have a bank account before getting a debit card from the bank. The major difference between a debit card and a credit card is that in case of payment through debit card, the amount gets deducted from the card's bank account immediately and there should be sufficient balance in the bank account for the transaction to get completed; whereas in case of a credit card transaction, there is no such compulsion.

- Debit cards free the customer to carry cash and cheques. Even merchants accept a debit card readily. Having a restriction on the amount that can be withdrawn in a day using a debit card helps the customer to keep a check on his/her spending.

SMART CARD

Smart card is again similar to a credit card or a debit card in appearance, but it has a small microprocessor chip embedded in it. It has the capacity to store a customer's work-related and/or personal information. Smart cards are also used to store money and the amount gets deducted after every transaction.

Smart cards can only be accessed using a PIN that every customer is assigned with. Smart cards are secure, as they store information in encrypted format and are less expensive/provides faster processing. Mondex and Visa Cash cards are examples of smart cards.

E-MONEY

E-Money transactions refer to situation where payment is done over the network and the amount gets transferred from one financial body to another financial body without any involvement of a middleman. E-money transactions are faster, convenient, and saves a lot of time.

Online payments done via credit cards, debit cards, or smart cards are examples of emoney transactions. Another popular example is e-cash. In case of e-cash, both customer and merchant have to sign up with the bank or company issuing e-cash.

UPI - UNIFIED PAYMENTS INTERFACE

UPI is a single platform that merges various banking services and features under one umbrella. A UPI ID and PIN are sufficient to send and receive money. Real-time bank-to-bank payments can be made using a mobile number or virtual payment address (UPI ID).

Who initiated UPI?

UPI is an initiative taken by the National Payments Corporation of India (NPCI) together with the Reserve Bank of India and Indian Banks Association (IBA). NPCI is the firm that handles RuPay payments infrastructure, i.e. similar to Visa and MasterCard. It allows different banks to interconnect and transfer funds. Immediate Payments Service (IMPS) is also an initiative of NPCI. UPI is considered as the advanced version of IMPS.

What is UPI ID and PIN?

A UPI ID is a unique identification for a bank account that can be used to send and receive funds. UPI PIN is a 4-digit personal identification number that must be entered to authorise the transfer of money via UPI. The PIN can be chosen by the account holder.

How does UPI work?

UPI has made the money transfer process a lot easier. You do not have to remember the receiver's account number, account type, IFSC, and bank name. Instead, you can do the money transfer only by knowing their Aadhaar number, mobile phone number registered with the bank account, or UPI ID. You can set up UPI ID on one of the apps that support UPI service. Mostly, a UPI ID begins with your mobile number followed by '@' symbol and ends with the app you are using. For example, if your mobile number is 90xxxxxx60 and if you are using Paytm app, the UPI ID can be '90xxxxxx60@paytm'. The ID can be set up by providing the details of your bank account on the app. The app will send an OTP to your registered mobile number to make sure that you are an authorised person. Once you enter the OTP, you will be prompted to create a PIN for the UPI ID. Upon completing the registration, you can choose any mobile number from your contacts and send money. You can also request money from anyone on your contacts list.

What are the features and benefits of using UPI?

- Online payments are simplified.
- Pay for your hailing services, food delivery services, and shopping sites with UPI payments for instant fund transfer.
- Pay at the nearest restaurants, grocery stores, and departmental stores online.
- Rent, mobile recharge, and utility bill payments can be done online instantly.

Is it secure?

UPI transactions use highly secure encryption format that is not easy to tamper. NPCI's IMPS network handles about Rs.8,000 crore worth transactions every day. This is expected to exponentially increase with UPI technology. It uses a two-factor authentication method, similar to OTP, for verifying every transaction. However, UPI PIN will be used in the place of OTP for validation.

Banks that support UPI

The major banks that support UPI services are:

- State Bank of India (SBI Pay)
- ICICI Bank (iMobile)
- HDFC Bank (HDFC Bank MobileBanking)

- Axis Bank (Axis Pay)
- Bank of Maharashtra (MahaUPI)
- United Bank of India (United UPI)
- Vijaya Bank (Vijaya UPI)
- Union Bank of India (Union Bank UPI)
- Federal Bank (Lotza)
- UCO Bank (UCO-UPI)
- Yes Bank (Yes Pay)
- Karnataka Bank (KBL Smartz)
- Punjab National Bank (PNB UPI)
- Bank of Baroda (Baroda MPay)
- South Indian Bank (SIB M-Pay)

What apps allow UPI usage?

There are many apps coming up every day that supports UPI payments, such as Google Pay, PhonePe, FreeCharge, Mobikwik, and others. You need to verify your bank account information to generate UPI ID on the app before you begin transactions.

NEFT - NATIONAL ELECTRONIC FUNDS TRANSFER (NEFT)

National Electronic Funds Transfer (NEFT) is a mode of online funds transfer that is introduced by the Reserve Bank of India (RBI). It quickly transfers money between banks throughout India. A bank branch must be NEFT-enabled for a customer to be able to transfer the funds to another party.

What are the permitted timings to make an NEFT transaction?

Though various banks have set their own timings, the general timings are given below:

- **Monday-Friday: 8 a.m. to 6:30 p.m.**
- **Saturday: 8 a.m. to 12 p.m.**

However, the government is considering the suggestion to make the service available 24/7 for free from December 2019. The proposal is in line with the RBI's Payments Settlement Vision 2019 to 2021.

Does NEFT come with a transfer limit?

You can initiate an NEFT fund transfer starting from Re.1. On the other hand, RBI has not set any maximum limit for the same. When it comes to cash transactions, you can transfer up to Rs.50,000 per transaction. Also, there is no limit on the total amount you can transfer. Few

banks have set their own upper limit, such as HDFC Bank has set the upper limit of Rs.25 lakh per day per customer ID via online NEFT.

Are charges applicable to NEFT?

The details related to applicable transaction charges on remitter and receiver ends are listed below:

- Inward transactions at the recipient bank branches for credit to beneficiary account—free of cost, no charges for beneficiaries.
- Outward transactions at the transaction initiating bank branches—transaction charges applicable to remitter are given below:

Transfer Amount	**Transaction Charges**
Up to Rs.10,000	Rs.2.5 + GST
Rs.10,000-Rs.1 lakh	Rs.5 + GST
Rs.1 lakh-Rs.2 lakh	Rs.15 + GST
Above Rs.2 lakh	Rs.25 + GST

How can I make an NEFT transfer?

Step 1: Log on to the internet banking page of your bank. **Step 2:** In the home screen, choose the 'Fund Transfer' option. **Step 3:** Choose the 'NEFT' option in the funds' transfer page. **Step 4:** Choose the beneficiary from the list to send money. **Step 5:** If you wish to add a new beneficiary, click on 'Add Beneficiary' button on the page. Enter details such as account number, name, IFSC, bank branch, and type of account. **Step 6:** Verify the entered details and confirm. **Step 7:** Enter the 4-digit OTP you receive on the registered mobile number to confirm the beneficiary addition. **Step 8:** After the prescribed time, the beneficiary added will be ready for fund transfer. **Step 9:** Choose the beneficiary, select the bank account from which funds must be transferred, enter the amount to be transferred, and click the 'Confirm' button to initiate the transaction.

BENEFITS OF NEFT

- It is economical to use NEFT for money transfer.
- NEFT is built on a secure platform.
- No need of using a cheque or demand draft for money transfer.
- Transferring money does not require you to visit the bank.
- Initiate funds transfer online.
- The transfer can be completed faster, with convenience.

RTGS - REAL-TIME GROSS SETTLEMENT (RTGS)

The term real-time gross settlement (**RTGS**) refers to a funds **transfer** system that allows for the instantaneous **transfer** of money and/or securities. **RTGS** is the continuous process of settling payments on an individual order basis without netting debits with credits across the books of a central bank.

- Real-time gross settlement is the continuous process of settling interbank payments on an individual order basis across the books of a central bank.
- This system's process is opposed to netting debits with credits at the end of the day.
- Real-time gross settlement is generally employed for large-value interbank funds transfers.
- RTGS systems are increasingly used by central banks worldwide and can help minimize the risks related to high-value payment settlements among financial institutions.

IMPS - MEANS IMMEDIATE PAYMENT SERVICE

IMPS means Immediate Payment Service. This is another type of EFT that transfers funds in real time. Although there are other mediums of EFT available in the country right now such as NEFT (National Electronic Funds Transfer) and RTGS (Real Time Gross Settlement) but IMPS has become widely popular in a short span of time and especially among the younger population of the country.

This is because IMPS is a no-fuss service and does not require complete bank details of the beneficiary. The service runs through mobile banking facility provided by the bank and requires only the bank account registered mobile number and MMID of the beneficiary to receive funds. Another reason for IMPS being so popular is that it is available 24/7 and 365 days. This means you can send and receive money seamlessly regardless of bank holidays and public holidays.

DIFFERENCES BETWEEN NEFT, IMPS, AND RTGS

Category	NEFT	RTGS	IMPS
Minimum transfer value	Rs.1	Rs.2 lakh	Rs.1
Maximum transfer value	Depends on the customer segment	No upper limit	Rs.2 lakh
Type of settlement	Batches	One-on-one settlement	One-on-one settlement
Speed of settlement	2 hours (subject to cut-off timings and	Immediately	Immediately

	batches)		
Service availability	24/7	Depends on the bank	24/7
Online/Offline	Both	Both	Online

IMPORTANT THINGS TO CONSIDER BEFORE INITIATING A FUND TRANSFER

- **Timings:** Depending on the bank, the timings for each transfer will vary. In the case of RTGS, depending on the bank and the location, the operating hours will vary. IMPS and NEFT payment modes are available 24x7.
- **Transaction Fee:** A separate fee is levied for the transfer of money. However, in case you are receiving the money, no fee is levied.
- **GST:** As per the latest norms, GST will be applicable on the transaction fee.
- **Network:** Both the banks must be part of the scheme for the transfer to take place.

IMPORTANT TERMS

Given below are some of the important things to know when using the different methods to transfer money:

- **Fund Transfer Charges:** Any transfer of money will involve certain charges. According to the RBI, the banks decide the charges that are levied for different fund transfers.
- **Fund Settlement Speed:** Depending on the type of transfer, the fund settlement speed will be different. The amount of time that is required to transfer money from one bank account to another bank account is the fund settlement speed.
- **Service Availability:** Depending on the type of transfer, the timings will vary. IMPS and NEFT are available 24x7, while RTGS operates only during banking hours.
- **Fund Transfer Limit:** The amount of money that can be transferred is the fund transfer limit. The limit will be different for different payment methods.

ELECTRONIC PAYMENT SYSTEMS: BENEFITS

There are many benefits associated with electronic payment systems. Not only do they simplify the buying process for customers trying to make online and electronic purchases, but they're often more secure and make it easier for merchants to conduct business from virtually anywhere if they have an online presence or equipment on hand to process transactions.

Take a look at some of the other benefits below:

- **More Merchant Sales:** Electronic payment systems make it easy for merchants to reach more clients across the globe, resulting in more revenue and overall business growth.
- **Efficiency:** These systems are more efficient than other payment methods because of their ability to process transactions quickly from virtually anywhere that has an internet connection.
- **Convenience:** Electronic payment methods make it easy for customers to make purchases online anytime from anywhere.
- **Lower Transactions Costs Compared to Other Payment Systems**
- **User-Friendly**
- **Security:** Electronic payment systems are more secure than other payment systems thanks to security and anti-fraud tools embedded within electronic payment gateways.

ELECTRONIC PAYMENT SYSTEMS: DRAWBACKS

As with any type of payment system, electronic payment systems have their share of drawbacks. Some of these drawbacks include the following:

- **Security:** Even with anti-fraud and other security tools embedded within electronic payment gateways, there is no denying the fact that e-commerce fraud is on the rise. When a payment system isn't totally secure, there will always be a risk of a security breach occurring, which may result in identity theft.
- **Lack of Anonymity:** It's pretty much common knowledge now that once you input some of your personal data online into a payment system database, some of those details will be out on the web forever.
- **Electronic Payment Systems Require Internet Access:**If you don't have access to the internet, you will not be able to complete a transaction via an electronic payment system, plain and simple.

ADVANTAGES

1. **GREATER SPEED AND COMFORT**

   Electronic payment is very convenient compared to conventional payment methods, such as cash or check. Because you can pay for products or services online from anywhere in the world at any time of the day or night, your customers don't have to spend time online waiting for their turn. To treat. They also don't have to wait for a

check to free the bank to access the funds they need to make purchases. Electronic payment also eliminates security risks when handling cash.

2. **HIGHER SALES**

   With the spread of internet banking and shopping, the number of cash payments are decreasing. Based on the bank rate, more than two terms of users use less than $ 50 per day, which means that electronic alternatives are increasingly becoming the preferred payment option. With electronic payment, businesses can sell to customers who choose the electronic payment and gain a competitive advantage over customers who only accept traditional methods.

3. **REDUCED TRANSACTION COSTS**

   While there are no additional costs to pay in cash, trips to the store generally cost money, and checks must also be paid in advance. On the other hand, there are generally no very low or very low fees for swiping your card or paying online. In the long term, electronic payments could save hundreds of thousands of dollars in transaction costs for individuals and businesses.

DISADVANTAGES

1. **SECURITY ISSUES**

   Although there are strict measures such as symmetric encryption for the security of electronic payment, it is still susceptible to piracy. For example, scammers use phishing attacks to engage unsuspecting users into providing credentials for their electronic wallets that they collect and use to access victims' personal and financial information. Inadequate authentication also damages electronic payment systems. Without superior identity verification measures like biometrics and facial recognition, anyone can use someone else's electronic cards and wallets and run away without getting caught. These security concerns can make some people reluctant to use electronic payment systems.

2. **CONTROVERSIAL TRANSACTIONS**

   If someone uses your company's electronic money without your permission, identify the unknown fees, and file a claim with your bank, online payment service, or Credit Card Company. However, without enough information about the person who made the transaction, it can be difficult to win the claim and get a refund.

INCREASED BUSINESS COSTS

Electronic payment systems are associated with an increased need to protect confidential financial information stored in a company's computer systems from unauthorized access. Companies with internal electronic payment systems have to pay additional costs for the purchase, installation, and maintenance of advanced payment security technologies.

RISK IN E PAYMENT SYSTEM

The Risk of Fraud

Electronic payment systems are not immune to the risk of fraud. The system uses a particularly vulnerable protocol to establish the identity of the person authorizing a payment. Passwords and security questions aren't foolproof in determining the identity of a person. So long as the password and the answers to the security questions are correct, the system doesn't care who's on the other side. If someone gains access to your password or the answers to your security question, they will have gained access to your money and can steal it from you.

The Risk of Tax Evasion

The law requires that businesses declare their financial transactions and provide paper records of them so that tax compliance can be verified. The problem with electronic systems is that they don't fit very cleanly into this paradigm and so they can make the process of tax collection very frustrating for the Internal Revenue Service. It is at the business's discretion to disclose payments received or made via electronic payment systems in a fiscal period, and the IRS has no way of knowing if it's telling the truth or not. That makes it pretty easy to evade taxation.

The Risk of Payment Conflicts

One of the idiosyncrasies of electronic payment systems is that the payments aren't handled by humans but by an automated electronic system. The system is prone to errors, particularly when it has to handle large amounts of payments on a frequent basis with many recipients involved. It's important to constantly check your pay slip after every pay period ends in order to ensure everything makes sense. Failure to do this may result in payment conflicts caused by technical glitches and anomalies.

The Risk of Impulse Buying

Impulse buying is already a risk that you face when you use non-electronic payment systems. It is magnified, however, when you're able to buy things online at the click of a mouse. Impulse buying can become habitual and makes sticking to a budget almost

UNIT IV

ELECTRONIC DATA INTERCHANGE

Non-EDI system

Partial EDI system

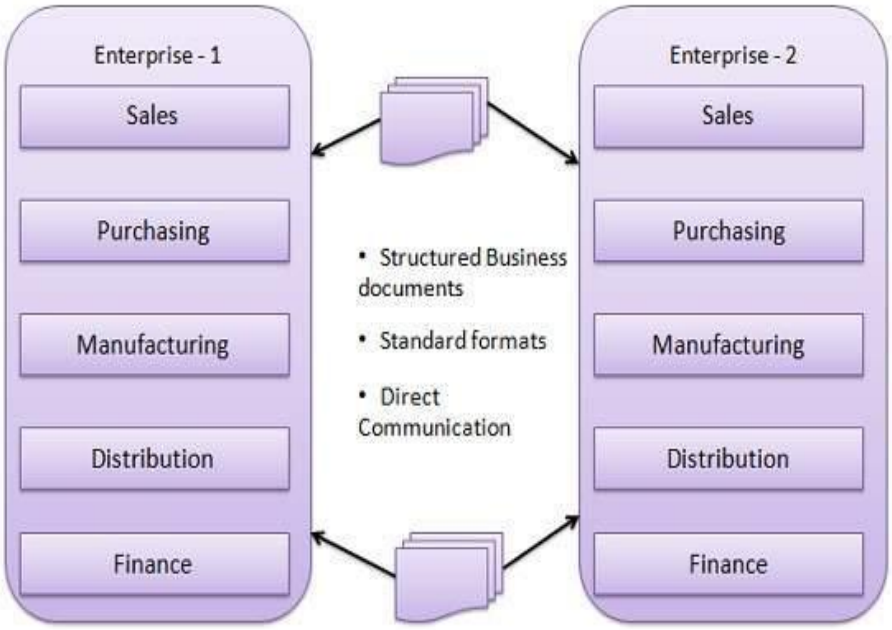
Fully Integrated EDI System

Pre-requisites of EDI- EDI vs Email

EDI

EDI refers to the exchange of electronic business documents i.e. purchasing orders, invoices, etc. between applications. The exchange involves no paper, no human intervention and takes place in a matter of seconds. EDI documents are formatted using published standards.

EDI requires a network connection between the two companies exchanging business documents. EDI has provided great value to trading partners especially those in certain "EDI – ENABLED" industries such as retail, automotive, and petroleum. The advent of the internet has created a common information and communications platform upon which business can be conducted. Internet provides the communications. Capabilities of EDI over a Value-Added network at a much lower

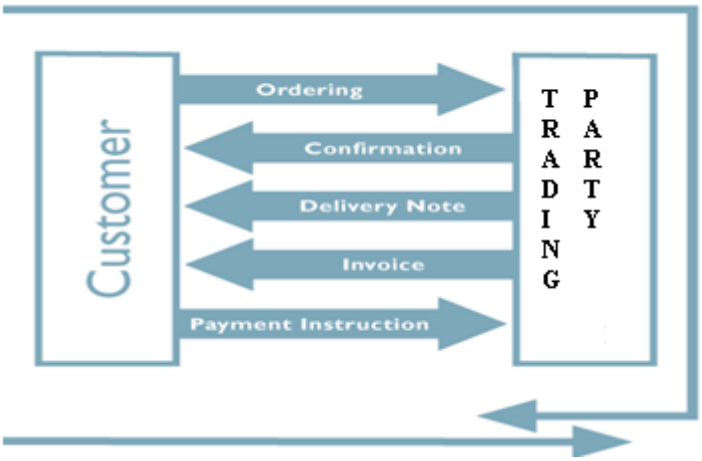


EDI DOCUMENTS

Following are the few important documents used in EDI −

- Invoices
- Purchase orders

- Shipping Requests
- Acknowledgement
- Business Correspondence letters
- Financial information letters



Steps in an EDI System

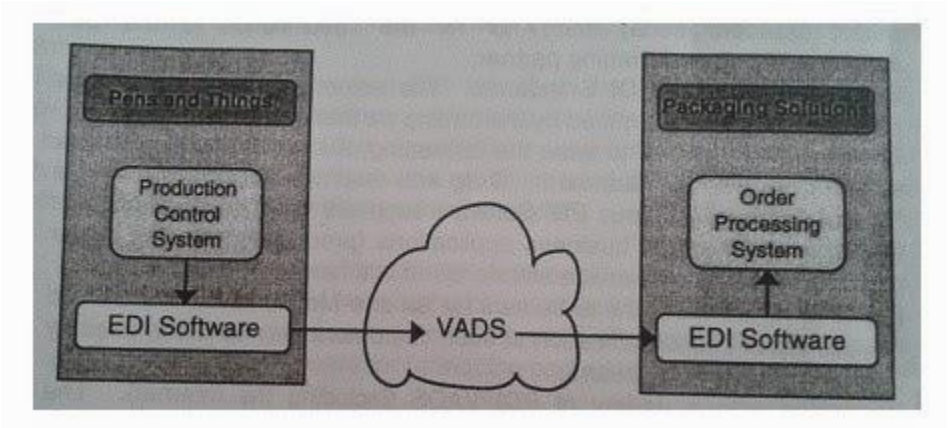
Following are the steps in an EDI System.

- A program generates a file that contains the processed document.
- The document is converted into an agreed standard format.
- The file containing the document is sent electronically on the network.
- The trading partner receives the file.
- An acknowledgement document is generated and sent to the originating organization.

EDI IMPLEMENTATION

- The First Technical element of the EDI system is the EDI software. It is a complete suite of software for creating, transmitting, receiving, managing and tracking EDI documents. It contains the tools needed to fine-tune EDI invoicing, from EDI document editing, to document review, to document selection.
- The system design is comprehensive and can convert invoices, returns, change notices, statements, purchase orders, and title catalogues into the EDI format.
- If pens & things is to send an order from its production control system to packaging solutions it needs to code that order into the agreed EDI standard &'squirt' it into the chosen VADS. To pickup the order at the other end, packaging solutions has a similar need to extract the data from the network & to decode the data from EDI message into its order processing system. The coding/Decoding of EDI messages & interfacing

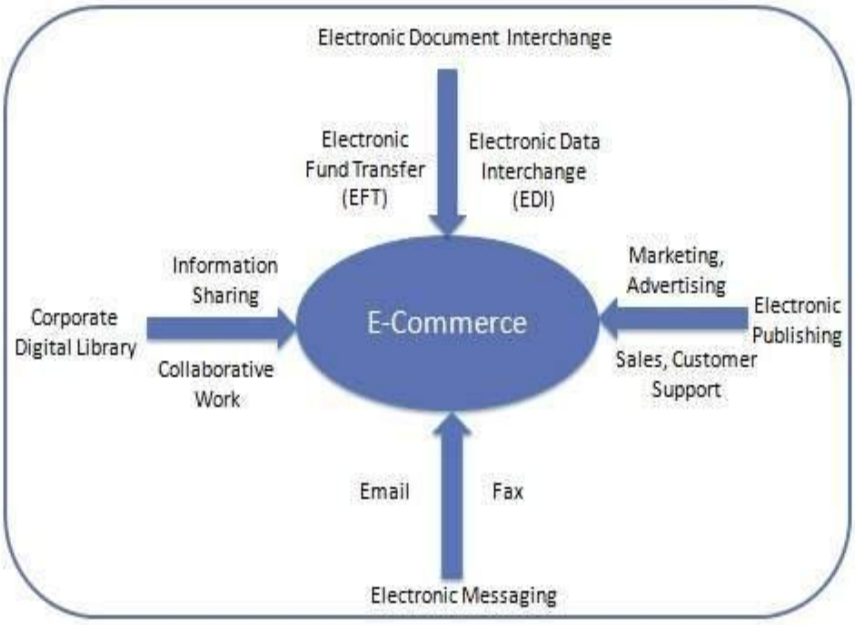
with VADS in normally achieved using EDI software as shown in Fig.



ADVANTAGES OF AN EDI SYSTEM

Following are the advantages of having an EDI system.

- **Reduction in data entry errors.** − Chances of errors are much less while using a computer for data entry.
- **Shorter processing life cycle** − Orders can be processed as soon as they are entered into the system. It reduces the processing time of the transfer documents.
- **Electronic form of data** − It is quite easy to transfer or share the data, as it is present in electronic format.
- **Reduction in paperwork** − As a lot of paper documents are replaced with electronic documents, there is a huge reduction in paperwork.
- **Cost Effective** − As time is saved and orders are processed very effectively, EDI proves to be highly cost effective.
- **Standard Means of communication** − EDI enforces standards on the content of data and its format which leads to clearer communication.



BENEFITS OF EDI

ADVANTAGE OF EDI

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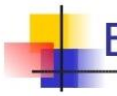
Disadvantages of EDI

- 1) **Expensive**
  Setup and maintenance of some of the formats of EDI is expensive.

2) **Initial setup is time consuming**
Initial cost to setup EDI is time consuming.

3) **EDI standard changes**
The business process depends on EDI standard format. If any of the standard format changes then the business process has to be changed accordingly.

4) **System electronic protection**
An EDI enabled system needs electronic protection from viruses, hacking, malware and other frauds.



EDI Drawbacks

- Very high initial costs
- Barrier to entry
- Not using EDI is also a problem
- Technologically non-savvy companies cannot use EDI with ease

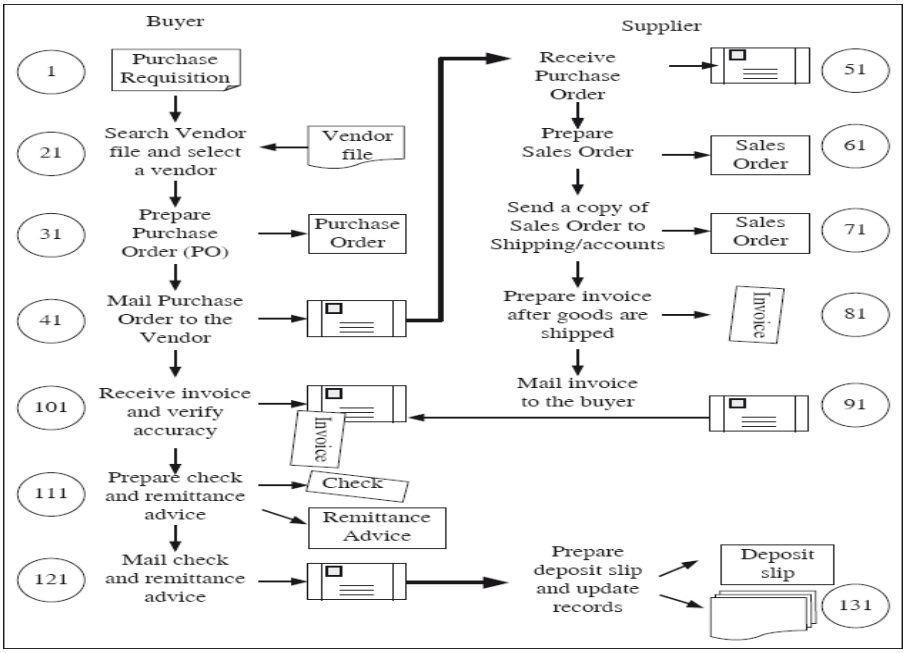
BUSINESS SYSTEMS ARE OF 3 TYPES:

- **PARTIALLY EDI SYSTEMS**
- **FULLY INTEGRATED SYSTEMS**
- **NON-EDI SYSTEMS:**

NON EDI SYSTEM

- EDI today is most widely used in large business and by smaller companies trading with larger businesses. The entire non- EDI process requires the use of multiple clerks by both the customer and vendor to complete the transaction. The typical clerks involved in the buying cycle are Inventory control, purchasing, receiving, accounts payable, etc.. The typical clerks involved in the selling cycle are sales order processing, credit, warehouse, shipping, accounts receivable and cash receipt

Non-EDI:Let us now take a look in greater detail at how EDI works. However, for understanding and appreciating this point fully, we should first take a look at a non-EDI system so as to appreciate EDI.EDI is primarily used by two categories of businesses: (a) Large business houses, and (b) Smaller companies that trade with large business houses. Let us now compare how a typical procurement function works in a large business shows how a procurement cycle happens when the business is not using EDI systems.



The left hand portion of the figure shows the operations that take place inside the large business house for initiating the procurement request. The right hand portion shows what happens in the supplier's house, when they are trying to fulfill the procurement request. The typical steps in this process can be summarised as follows. We have assumed in the example that the goods ordered are available in the warehouse for immediate dispatch. (Then they do not have to be procured or manufactured by the organisation [depending on whether it is retail or manufacturing organisation])

The production-planning department, or any other department that needs some equipment or items to be procured, within the buyer organisation, completes the purchase requisition.

A person in the purchasing department then searches the vendor files to find out which vendors (i.e., suppliers) supply these items. Negotiations about prices and delivery schedule may take place here, after selecting the vendor based on the criteria such as quality, price and timely delivery.

Based on this search, the person prepares a purchase order. The purchase order contains details such as the items to be purchased, quantities, prices, discounts delivery address and schedule, etc., apart from, obviously, the vendor name and address, etc.

This purchase order is then physically mailed to the vendor.

The supplier receives the purchase order, which was mailed by the buyer.

Based on the details contained therein, the supplier has to deliver these items to the buyer. Therefore, the sales department of this supplier now prepares a sales order. The sales order contains the items to be sold, to which party, by what date, at what price, etc.

A copy of the sales order is then sent to the warehouse, so that they can keep the items ready. The warehouse then dispatches the goods, after they are ready. Another copy is sent to the accounts department, etc. As mentioned earlier, we have assumed a trading organisation. If it is a manufacturing organisation, a sales order may result into a shop floor order to manufacture the goods before they are dispatched.

After the goods are dispatched, a delivery or dispatch note is prepared stating the goods as well as their quantities (if quantity available is less than the quantity ordered, goods have be dispatched in parts). Using the delivery or dispatch note, the sales department of the supplier prepares an invoice for the goods sold.

The supplier then sends the invoice to the Accounts Department. Many a times this is sent along with the dispatch note.

The purchase department at the purchasing organisation receives the goods and prepares a Goods Receipt Note (GRN) mentioning the goods received and accepted (quality checked) with respect to one (or more) purchase order (s), and sends it to the Accounts Department.

The Accounts Department tallies the GRN with the vendor's invoice to ensure that everything is OK. After this, the invoice (or bill) is approved for payment.

Once the accuracy of the invoice is approved for payment, the Account Department prepares a check for payment, and the corresponding remittance advice. by mail to the seller.

The Accounts Department at the selling organisation receives the check and the remittance advice. It verifies the details and updates its own records.

We shall notice that this system has several undesirable features, as described below. There are too many clerical people from too many departments (such as purchase, sales, inventory controls, accounts payable and receivable, cash, etc.) involved in this process. This is true for both the purchasing as well as the selling organisation.

The process is time consuming. Since there is scope for plenty of paperwork and manual interventions, this is unavoidable.

The scope for errors is also high. At every stage, each document needs to be manually examined, and certified. Since organisations felt the need for making their purchases with minimum delay and costs, they thought of using more advanced tools and technologies. This was the reason for EDI systems getting prominence.

However, it should be noted that EDI plays a role in exchanging documents such as sales and purchase order, invoices, etc., electronically and speedily. The other processes like checking the available inventory stocks, dispatching, updating the inventory records, matching the GRN and the PO and the invoice for approving the bills or invoices for payment, etc., is a part of general data processing. EDI only compliments it. Once a sales order becomes a purchase order directly through the EDI process, the remaining process has nothing to do with EDI.

NON-EDI DATA CAN INCLUDE THE FOLLOWING TYPES OF FILES:

- Fixed-length flat files
- Variable-length flat files (such as .csv files)
- XML files
- Binary files (such as .pdf files)

Sterling B2B Collaboration Network performs two types of non-EDI processing:

- Content-based
- Context-based

Content-based routing enables Sterling B2B Collaboration Network to dynamically define flat-file formats for processing during implementation. This enables you to use other Sterling B2B Collaboration Network services such as carbon copy alert services and translation services. Data can be batched and parsed like standard EDI data. Data that uses content-based routing also can be sent through the same mailbox as EDI data or through a separate mailbox.

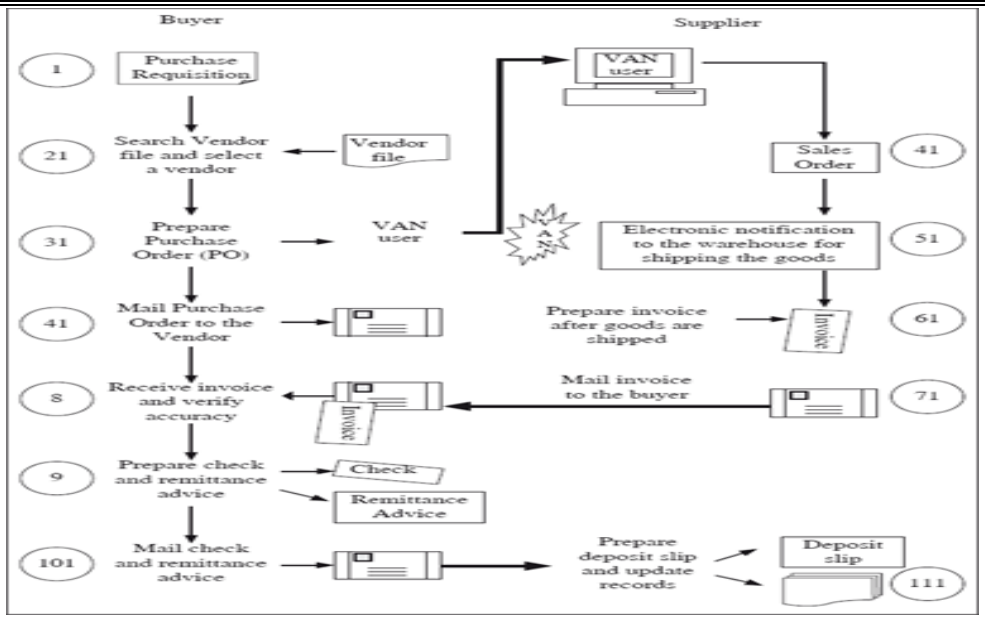
Context-based routing enables the Sterling B2B Collaboration Network to pass unstructured or binary data to trading partners based on the context of how the data is sent to the network. Data that uses context-based routing can also use specific services such as carbon copy translation and document tracking. For context-based routing the carbon-copy service only works at the mails lot level and document tracking works only at the file level.

Sterling B2B Collaboration Network handles electronic data in virtually any standard or format. However the format of your data affects which services Sterling B2B Collaboration Network can provide to you. Services such as Sterling Document Tracking and reports are available for both content- and context-based routing but with different levels of detail.

PARTIALLY INTEGRATED EDI SYSTEMS

Not all EDI systems are fully automated to the extent that they could be. In many situations, organisations employ a partially integrated EDI system. In such a scenario, the purchase order process begins in the same way as it does in case of a manual purchase order system. However, it then shifts to EDI-based features, as shown in Figure. 1.18, and discussed step-by-step. Let us understand the process involved in a partially integrated EDI system, step-by-step. The process begins with a requesting department completing a purchase requisition form, just like a manual system. This form arrives at the purchasing department. A person working in the purchasing department receives the purchase requisition form and reviews it. He might combine it with many other purchase requisitions, if they are similar in nature, to take advantage of quantity discounts. The person then manually consults a list of vendors for availability of the item, and its price, etc.

From this point, the EDI process takes over. This marks the end of the manual system. Rather than manually creating a purchase order (PO) and sending it, the person in the purchasing department now logs on to a computer system that shows him an online purchase order form. The person enters the appropriate data similar to what he would have done in the manual system, and submits the purchase order to the computer system upon entering data in all the necessary fields. Note that the computer system is now responsible for checks to ensure that the data is correct, and also to perform operations such as calculating totals, basic validations, etc.



Now, the VAN takes over, and routes the purchase order to the mailbox of the appropriate vendor in a secure fashion. The VAN is responsible for ensuring that the purchase order travels successfully across to the vendor (supplier), without errors. At the vendor's end, the VAN retrieves this document, and automatically produces a sales order out of it. Note that another data entry step is removed here, thus reducing the chances of errors further. This might follow by an automatic credit checking procedure, which can be done either by the EDI systems, or can be a part of the organisation's computer application. The EDI system at the vendor's end would send an electronic notification to the warehouse personnel for shipping the goods. At this stage, the role of the EDI system would end. The remaining steps would be manual or done by a computer system outside of EDI, similar to a non-EDI system, involving invoice-processing functions. We shall not repeat these steps, as they are described in steps 8 to 14 of the description of a non-EDI system earlier.

Historically, it is observed that a partially integrated EDI system reduces the time required for completing the chain of events by about three to seven days. The reason for this is the elimination of traditional methods such as manual data entry and checks, use of postal services for dispatching documents, etc. Also, the scope for a lot of paperwork, and therefore, the possibility of errors and duplication of information, is reduced.

Fully integrated EDI

Rather than using EDI systems in bits and pieces, as it is done in case of the partially integrated EDI, fully integrated EDI employs the EDI technology to the entire lifecycle of an activity, such as a purchase order processing. A sub-portion of the fully integrated EDI deals with the actual payment and remittance advice processing, and is called as financial EDI.

Fully integrated EDI provides for speed and accuracy of information processing. Of course, this comes at the cost of expensive set up and maintenance of the EDI systems. In fully integrated EDI, almost everything is left to the automated processing features of EDI with the help of computer-based systems. The only human interventions required are for activities such as pulling goods out from a warehouse, and loading them into a vehicle for dispatch. The rest is the EDI system's responsibility.

PRE-REQUISITE OF EDI

The EDI Manager provides the tools you need to manage electronic commerce transactions with your trading partners. To assist you in setting up the EDI Manager for recruiting and admissions application and transcript transactions, we have created some sample definitions in the EDI Manager. However, before processing EDI transactions, you might need to modify the setup to fit your particular needs. Therefore, it is important that you become familiar with PeopleSoft EDI architecture and recruiting and admissions processes to understand the implications of your EDI implementation decisions. The following paragraphs explain how this information *can* be set up.

When a trading partner submits an EDI transaction, it needs to address it to a specific business unit. In other words, the EDI agent needs to know in some way to which business unit to forward the transaction. Therefore, you must define entity codes that tell the EDI Manager where to forward the transaction. This PeopleSoft system includes sample entity codes for admissions transcript and application transactions, as well as sample internal and external partner definitions.

- The sample entity code provided for the Admissions Transcript Transaction (TS130) is ADTR - Admission Transcript Process.
- Two sample entity codes are provided for the Application for Admissions Transaction (TS189): ADAP - Admissions Applicant Processing and ADST - Admissions Applicant Student.
- The sample internal partner definition provided (for both the EDI TS130 and TS189 transactions) is Admissions - Admissions Office.
- The sample external partner definition provided (for both the EDI TS130 and TS189 transactions) is ADM_EDI_STX - Admissions EDI Supply Tech. As mentioned earlier, you might use another external partner as your EDI translator.

When you receive an EDI transaction from a trading partner, the first record of the transaction includes a *Transaction ID* that identifies the transaction type. The EDI agent uses the transaction ID, in conjunction with the trading partner ID, to determine which inbound map to use to process the transaction data. Similarly, when you initiate an outbound transaction, the EDI agent puts the appropriate transaction ID in the first transaction record so that the recipient knows what kind of transaction you have sent. The PeopleSoft system includes sample transaction definitions, partner profile definitions and conversion data profiles.

- The sample transaction definition provided for your ADM_TRNS_130 Admissions Transcript Transaction is ADM_TRNS_TS130 Inbound - Admissions Transcript Transaction.
- The sample transaction definition provided for your ADM_TRNS_189 Admissions Applicant Transaction is ADM_TRNS_TS189 Inbound - Admissions Applicant Transaction.
- The sample partner profile definition provided (for both the EDI TS130 and TS189 transactions) is ADM_EDI_P - Admissions EDI Transaction Profile.
- The sample conversion data profile provided is EDI_CONV - EDI TS130/TS189. Conversion Profile lists the conversion values used in your EDI load processing (for both the EDI TS130 and TS189 transactions).

Electronic commerce maps specify how the EDI Agent transfers data between PeopleSoft business documents and the staging tables in the PeopleSoft database. The EDI agent uses inbound maps to transfer data from PeopleSoft business documents to the staging tables, in preparation for processing by your Recruiting and Admissions application. PeopleSoft has created sample inbound map definitions.

- The sample inbound map definition provided for the Admissions Transcript Transaction (ADM_TRNS_TS13O) is EC Map ID TS130_MAP.
- The sample inbound map definition provided for the Admissions Applicant Transaction (ADM_TRNS_TS189) is EC Map ID TS189_MAP.

When you add a trading partner, you assign to it a *map profile,* which lists the electronic commerce maps that the EDI agent can use to process transactions from the partner. The PeopleSoft system includes sample data mapping profile definitions.

The example data mapping profile definition provided is ADM_EDIMP - Admissions EDI Map Profiles. This definition lists the map assignments for the Admissions Transcript

Transaction (ADM_TRNS_TS13O) and the Admissions Applicant Transaction (ADM_TRANS_TS189).

STANDARD LANGUAGE

For documents to be exchanged electronically between two business partners there needs to be a **standard language** in place. Inbound and outbound documents are converted into this format through the system, ensuring that all documents can be interpreted, filed, and archived correctly. There are several different **standard EDI language formats** that can be used, amongst others EDIFACT, XML and X12.

A SaaS platform

Both sender and recipient companies must have a **SaaS EDI platform** at their disposition. This platform allows users to manage all incoming and outgoing documentation, create new documents, access all documents whenever necessary, and archive them. A **SaaS solution** will allow this document management to take place in compliance with existing electronic exchange laws. Amongst other advantages, **SaaS EDI solutions** also provide an important business attribute for companies: the ability to **track and monitor exchanges** in a high-quality manner.

SECURE COMMUNICATION NETWORKS

EDI exchanges must take place via **secure networks** that have been adapted to deal with these types of transactions. There are currently several approved options; the most used being **Value-Added Networks** (VANs). Basically, a company needs to ensure their exchanges are passed through private networks with high security protocols, ensuring the security of each document at every step of its journey.

With these three conditions in mind, migrating to a **completely paperless system** should be headache-free for most companies

VISION AND PLANNING

This speaks to proper implementation planning and architecture, to having an integration vision. This is standard stuff in the SAP world where there are strict methodologies, structured projects, and lots of controls.

As critical as EDI is the success of the business, and to the integrity of the data in SAP, the same care is not always taken to implement an EDI system and to run it after go-live, especially in smaller companies. This discrepancy also crops up during SAP implementation projects that include streamlining, upgrading, or replacing an EDI system.

This can lead to project delays and increased costs of as much as $45,000 a day and more in multi-million dollar ERP implementations, according to a study released on September 21, 2009 by AMR Research. The study was funded by GXS, which runs a major B2B exchange, a VAN (value added network), and sells EDI outsourcing services.

Yes, GXS has a really big dog in this fight and that's why they sponsored the AMR research. But these problems are real. I've seen them first-hand on large projects and in mid-size businesses that implemented SAP and EDI.

Implementation and running of the EDI system needs to be handled with the same care and devotion as the SAP system. The professionals who manage the EDI project and who design and build the EDI system should have the same level of skill as the professionals who build and maintain the SAP system.

That's my little sermon for today. Consider it a statement of principles that should guide the joint SAP-EDI implementation. But it's about more than just EDI. We're concerned with all integration requirements, with external trading partners and between internal systems. Integration is difficult and complex and it needs to be approached with vision and good planning.

SO WHAT DO YOU NEED IN AN EDI SYSTEM?

For now, I just want to talk about the basic requirements for an EDI system. What do we need at a minimum to make EDI work with SAP and other internal systems such as CRM or VMI or data warehouses or whatever?

I'm not advocating any particular approach to EDI here nor am I favoring building and maintaining an in-house over an outsourced EDI system, although I do love to build systems. And I'm not distinguishing between standalone EDI systems and EDI adapters for SAP XI/PI. I'm just outlining what I believe any EDI system must have before it's ready for prime-time, regardless of how it's built or where it's hosted.

These opinions are based on my experience with practical EDI: with evaluating EDI vendor offerings for purchase, designing and building end-to-end SAP EDI systems, and with running them in a daily production environment.

If I were responsible for selecting an EDI system for my employer I would look for these features and evaluate how the vendor handles them.

COMPLETE LIBRARY OF EDI STANDARDS

To me this is probably the most important requirement. EDI is all about standards, after all. I would not even consider an EDI system that did not include as standard all transactions and messages from all major EDI standards including X12, HIPPA, EDIFACT, TRADACOMS, VDA, and so on in all versions.

I would also insist on regular upgrade of these standards by the vendor. Software vendors routinely force their customers to upgrade even if an older version of their product serves the customer well. If the customer is forced into the expense of this upgrade cycle, the very least that the vendor can do is include the latest changes to all EDI standards with the upgrade.

It's not enough to support the EDI standards. They must be included complete in the package before you buy or the vendor must be prepared to provide them, including all upgrades to the standards. If you take on a new trading partner you don't want to find yourself scrambling to buy an EDI transaction or message or version because it's not part of your library. You need to be prepared for whatever your trading partners may throw at you.

I would consider this a deal breaker and could not recommend a vendor that does not provide the complete library of usable EDI standards with an upgrade path as part of the delivered package.

TRADING PARTNER MANAGEMENT

This is about managing the relationship with your EDI Trading Partners. An EDI transaction or message is a legal contract between two parties that have a trading relationship that is defined by an agreement between them.

Trading partner management in the EDI system defines the technical details that governs this relationship, including:

1. EDI trading partner IDs and qualifiers used by both parties in the relationship.
2. Contact information.
3. EDI standards, transactions or messages, and versions used to exchange data between the partners.
4. Enveloping and developing requirements for the trading partner
5. Acknowledgement requirements.
6. Communication protocols and connection parameters.
7. Security requirements, encryption protocols, certificate requirements and so on.

Trading partner management feeds into every corner of the EDI system so you really need to be comfortable with how it's being handled by your potential vendor.

ENVELOPING AND DEENVELOPING

All EDI transmissions contain envelopes, regardless of the standard. Envelopes contain identifying data used by the EDI system to recognize the source and nature of the transmission and to make decisions about what to do with them.

Enveloping packages an outbound interchange while developing unravels an inbound transmission.

An envelope is more than just a thing, an identifier. It's a complex process of data mapping and reformatting and the best EDI systems hide this complexity. In other words, you should not have to develop custom processes or write custom code to handle standard enveloping and developing.

There are times, of course, when trading partners have funky requirements, like a need for an "intelligent" (imagine my finger quotes here) interchange control number that would probably require custom coding.

Which leads to another point for consideration that is shared by all of our other development requirements: you want robust and easy to use custom development tools.

Acknowledgements

This is a much bigger issue in North America than Europe. But North America — the United States and Canada — is still by far the greatest consumer of EDI in the world. Acknowledgements are required for every EDI transmission in North America.

This is handled by the X12 997, in its many versions, generally at the group, or functional, level, or the EDIFACT CONTRL message. This is why the EDIFACT group level is mandatory for transmissions to and from North America. In Europe it's optional although there are some EDI consumers who do acknowledgements at the interchange level using the CONTRL message.

Any EDI system that is going to be used for North American traffic must include the ability to automatically generate acknowledgements, whether at the functional group (GS or UNH) or interchange (ISA or UNB) levels. The level is determined by the trading partner agreement.

Like enveloping and developing, this should be a standard feature that does not require custom development. I would not consider an EDI system that does not include automatic generation of acknowledgements as a standard feature.

Communications

The EDI system should include adapters and services to support all forms of communications including AS1, AS2, AS3, HTTP, HTTP/S, FTP, SFTP, file transfer, and so on.

You'll also need an SAP adapter that supports JCo (Java Connector) or XI/PI connections to move IDocs — ASCII through JCo and XML through XI/PI — into and out of SAP.

On the inbound, IDoc adapters use the Java connection classes in JCo to make RFC calls into SAP to log in and call function module EDI_DATA_INCOMING to kick off IDoc processing in SAP.

On the outbound, IDoc adapters receive RFC calls from SAP through a registered TCP/IP type RFC destination set up in SM59. The RFC call triggers a registered program or process in the EDI system to kick off processing and transmission of the outbound IDoc.

A Good Mapping Program

This goes without saying. You need to be able to convert EDI transactions or messages to IDocs and IDocs to EDI. You also need to be able to convert many other standards and custom flat file formats to and from many other formats.

The mapping program should be able to import metadata structures and qualifiers for use in maps in a number of standard formats including XSD, DTD, DDF, and so on.

It should also have a graphical interface that allows drag and drop linking of data elements on both sides, an ability to handle mapping of looping groups and levels within those groups to different looping levels on the output, and a flexible and powerful rules or programming language to accommodate data conversion and special processing requirements.

I do most of my mapping in code in my EDI mapping tool. I quickly realized when I first started to build maps that there are a lot of issues that can only be handled in code. You want the ability to write your own code in your mapping tool and to be able to create and use custom Java objects or to call Java customer exits to handle processing that can't be done in the mapper's rules or programming language.

A Graphical Business Process Modeling Tool

Business Process Modeling (BPM) is supported by SAP and pretty well all major EDI vendors on the market. It's a convenient and relatively easy way to build interfaces, allows for standardization of processes, and is practically self-documenting.

A graphical BPM modelling tool provides a workspace for linking together interface program objects into a processing chain that generates BPML (Business Process Modeling Language) or BPEL (Business Process Execution Language) for execution at run-time. BPML and

BPEL are both dialects of XML used to define and run BPMs.

Typically, the objects in a graphical BPM tool are dropped onto a workspace and linked together with connectors. Objects are configured with parameters and provide services such as a call to a map or a timing event or routing to a communications adapter and so on.

Conditional processing is applied through rules, in XPath or some other language, at the object or connector level. These rules are evaluated during execution and control the process flow of the interface based on data that is only available at run-time.

This is all straightforward programming stuff, with a different face perhaps. And different systems implement BP modeling in different ways, but most do it. You want to be comfortable with how your vendor handles it, which also means that you should consider the skills within your organization, consulting and training requirements, before you make a decision.

EDI Transformation and Translation

Your EDI software should support all types of translation systems to convert all standard EDI formats into other formats. It should also promote integration with ERP and accounting solutions. There are standalone systems, but they require a small amount of manual work. Fully-integrated systems are also fully-automated. This means there's even less chance for human error to make its way into your processes.

You also should look for a solution that can securely transfer files over both public and private networks. EDI software uses encrypted file transfer protocols like VAN, AS2, FTP/sFTP and HTTPS. Additionally, EDI software may support several different formats such as ASC X12, EDIFACT, Tradacoms, XML and others. ASC X12 is the most popular in North America and EDIFACT is the most popular outside of the continent. Tradacoms is getting replaced more and more by EDIFACT but is still popular enough that you may want to consider a system that can handle the format as well.

- EDI Translation
- EDI Formats/EDI Standards
- Transliteration (EBCDIC, ASCII, UTF)
- EDI Data File Transfer/Managed Communication
- Windows Scripting
- Shell Scripting
- EDI Technical Requirements For Delhaze America Business Partners
- EDI technical requirements and guidelines given in the post refer to all trading

partners planning EDI relationships with Delhaze America company.

Hardware Required

In order to become EDI capable you will need some type of computer. Many types of computers can be used to become EDI capable, from a personal computer to a mainframe system. You will need to select the computer that best meets your business needs and EDI technical requirements.

- **Computer processor :** Software is available for mainframes, midrange processors, and PC's. Consult your current supplier for more information.
- **Communications card, board, or port** This depends on whether you will be communicating ASYNC (asynchronously), BSC (bisynchronously), or SDLC (synchronously).
- **Communications cable** This connects your modem to the communications port. It may not be needed if you have an internal modem.
- ***Modem*** The modem depends on the communication interface.
- **Modem cable** This is a power cord for the modem and a telephone cable to connect the modem to the phone jack.
- **Dial or leased line connection** : Use existing telephone jacks, or a dial jack dedicated for data. Dedicate a data line or multi-dropped line for leased line attachments.

EDI Software

EDI technical requirements for the software should be mentioned in order to allow you to:

- Create the EDI documents you need to create in the standard and version you need to support
- Provide yourself with a readable document that you can use on your computer system
- Maintain a database for storing your EDI documents and EDI trading partner information
- Send and receive EDI documents to your EDI trading partners at any time

There are many EDI software providers available to assist you in selecting the software according to the EDI technical requirements. EDI software can be traditional translator based software, or can be a web form EDI solution. In order to select the EDI software that will work best with your system, contact your current computer support personnel and current computer software provider. Listings of EDI software suppliers can also be found on the Internet.

Internet EDI Transport

Delhaze America is committed to leveraging the Internet to support the secure exchange of business information with our trading partner community. Here are just a few of the benefits that you'll experience once you Internet-enable your EDI transactions:

- Cutting communications costs dramatically by eliminating VAN Charges
- Speeding and securing traditional supply chain transactions (e.g., purchase orders, invoices, advance ship notices, etc.)
- Faster and more efficient product delivery by connecting with large and small partners
- Ensuring products are ordered and delivered in real time to fulfill demands
- Improving Item/Data Synchronization.

Functional Acknowledgments

EDI documents transmitted by Delhaze America must be confirmed using X.12 997 Functional Acknowledgment. Purchase Orders must be confirmed by 2:00PM next business day after transmitted by Delhaze America. Daily inventory totals (852) must be confirmed by 2:00PM next business day after transmitted by the company.

EDI VS EMAIL

Email : Email is a service which allows us to send the message in electronic mode over the internet. It offers an efficient, inexpensive and real time mean of distributing information among people.

E-Mail Address : Each user of email is assigned a unique name for his email account. This name is known as E-mail address. Different users can send and receive messages according to the e-mail address.

E-mail is generally of the form username@domainname. For example, webmaster@tutorialspoint.com is an e-mail address where webmaster is username and tutorialspoint.com is domain name.

- The username and the domain name are separated by **@ (at)** symbol
- E-mail addresses are not case sensitive.
- Spaces are not allowed in e-mail address.

E-mail Header : The first five lines of an E-mail message is called E-mail header. The header part comprises of following fields:

- From
- Date
- To

- Subjec
- CC
- BCC

From

The **From** field indicates the sender's address i.e. who sent the e-mail.

Date

The **Date** field indicates the date when the e-mail was sent.

To

The **To** field indicates the recipient's address i.e. to whom the e-mail is sent.

Subject

The **Subject** field indicates the purpose of e-mail. It should be precise and to the point.

CC

CC stands for Carbon copy. It includes those recipient addresses whom we want to keep informed but not exactly the intended recipient.

BCC

BCC stands for Black Carbon Copy. It is used when we do not want one or more of the recipients to know that someone else was copied on the message.

Greeting

Greeting is the opening of the actual message. Eg. Hi Sir or Hi Guys etc.

Text

It represents the actual content of the message.

Signature

This is the final part of an e-mail message. It includes Name of Sender, Address, and Contact Number.

Advantages

E-mail has prooved to be powerful and reliable medium of commmunication. Here are the benefits of **E-mail:**

- Reliable
- Convenience
- Speed
- Inexpensive
- Printable
- Global

- Generality

Reliable

Many of the mail systems notify the sender if e-mail message was undeliverable.

Convenience

There is no requirement of stationary and stamps. One does not have to go to post office. But all these things are not required for sending or receiving an mail.

Speed

E-mail is very fast. However, the speed also depends upon the underlying network.

Inexpensive

The cost of sending e-mail is very low.

Printable

It is easy to obtain a hardcopy of an e-mail. Also an electronic copy of an e-mail can also be saved for records.

Global

E-mail can be sent and received by a person sitting across the globe.

Generality

It is also possible to send graphics, programs and sounds with an e-mail.

Disadvantages

Apart from several benefits of E-mail, there also exists some disadvantages as discussed below:

- Forgery
- Overload
- Misdirection
- Junk
- No response

Forgery

E-mail doesn't prevent from forgery, that is, someone impersonating the sender, since sender is usually not authenticated in any way.

Overload

Convenience of E-mail may result in a flood of mail.

Misdirection

It is possible that you may send e-mail to an unintended recipient.

Junk

Junk emails are undesirable and inappropriate emails. Junk emails are sometimes referred to as spam.

No Response

It may be frustrating when the recipient does not read the e-mail and respond on a regular basis.

EMAIL VS EDI

EDI – Electronic Data Interchange, Contact between companies exchanging orders via intra- or internet. (EDI) is the computer-to-computer exchange of structured information, by agreed message standards, from one computer application to another by electronic means and with a minimum of human intervention. In common usage, EDI is understood to mean specific interchange methods agreed upon by national or international standards bodies for the transfer of business transaction data, with one typical application being the automated purchase of goods and services.

EDI documents contain the same data that would normally be foundin a paper document used for the same organisational function. However, EDI is not confined to just business data related to trade but encompasses all fields such as medicine (patient records, laboratory results..), transport (container and modal information…), engineering and construction, etc.-(Electronic Data Interchange) The exchange of information between two or more companies with mutual interests over a network.

i) E-mail is an acronym of electronic mail
ii) E-mail system is basically used for sending message electronically to individuals or group of individuals in an inter and intra office environment. It requires network to connect them.
iii) No such need.
iv) One of the advantages of E-mail is that if gives users ability to review, respond message qui No processing of the message received.
v) No such facility

EDI

- EDI is an acronym of Electronic Data interchange
- EDI is the inter-organisatonal exchange of business documentation in structured, machine process able form.
- EDI provides communication between trading partners that agree to exchange EDI

transactions.

- EDI eliminates the paper documents associated with common business transactions.
- EDI message can be immediately processed by receiving computer without any human intervention or interpretation or re-keying

Electronic Data Interchange (EDI)	*Electronic Mail*
There is typically no human involvement in the processing of the information, as the interface has software-to-software orientation. The data are structured in a software-understandable way.	The data are not necessarily structured to be software-understandable. A human-to-software interface is involved at a minimum of one end of the interchange.
The interchange is composed by one software for interpretation by another software. If a reply is involved, it is composed by a software to be interpreted by another software.	The message is composed by a human and/or interpreted by a human and/or a reply is composed by a human and/or interpreted by a human.

UNIT-V

MARKETING TECHNIQUES

Meaning-Applications of Marketing

5P's(Product, Price, Place, Promotion, Personalization),

E-Advertising Techniques: Banners, Sponsorships, portals and online coupons

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MARKETING

Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large. (Approved 2017)

Marketing refers to activities a company undertakes to promote the buying or selling of a product or service. Marketing includes advertising, selling, and delivering products to consumers or other businesses. Some marketing is done by affiliates on behalf of a company.

Professionals who work in a corporation's marketing and promotion departments seek to get the attention of key potential audiences through advertising. Promotions are targeted to certain audiences and may involve celebrity endorsements, catchy phrases or slogans, memorable packaging or graphic designs and overall media exposure.

UNDERSTANDING MARKETING

Marketing as a discipline involves all the actions a company undertakes to draw in customers and maintain relationships with them. Networking with potential or past clients is part of the work too, and may include writing thank you emails, playing golf with prospective clients,

returning calls and emails quickly, and meeting with clients for coffee or a meal.

At its most basic level, marketing seeks to match a company's products and services to customers who want access to those products. Matching products to customers ultimately ensures profitability.

Product, price, place, and promotion are the Four Ps of marketing. The Four Ps collectively make up the essential mix a company needs to market a product or service. Neil Borden popularized the idea of the marketing mix and the concept of the Four Ps in the 1950s.

Marketing is currently defined by the American Marketing Association (AMA) as "the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large".However, the definition of marketing has evolved over the years. The AMA reviews this definition and its definition for "marketing research" every three years. The interests of "society at large" were added into the definition in 2008. The development of the definition may be seen by comparing the 2008 definition with the AMA's 1935 version: "Marketing is the performance of business activities that direct the flow of goods, and services from producers to consumers". The newer definition highlights the increased prominence of other stakeholders in the new conception of marketing.

Recent definitions of marketing place more emphasis on the consumer relationship, as opposed to a pure exchange process. For instance, prolific marketing author and educator, Philip Kotler has evolved his definition of marketing. In 1980, he defined marketing as "satisfying needs and wants through an exchange process", and in 2018 defined it as "the process by which companies engage customers, build strong customer relationships, and create customer value in order to capture value from customers in return". A related definition, from the sales process engineering perspective, defines marketing as "a set of processes that are interconnected and interdependent with other functions of a business aimed at achieving customer interest and satisfaction".

Besides, customers some definitions of marketing highlight marketing's ability to produce value to shareholders of the firm as well. In this context, marketing can be defined as "the management process that seeks to maximise returns to shareholders by developing relationships with valued customers and creating a competitive advantage". For instance, the Chartered Institute of Marketing defines marketing from a customer-centric perspective, focusing on "the management process responsible for identifying, anticipating and satisfying customer requirements profitably".

In the past, marketing practice tended to be seen as a creative industry, which included advertising, distribution and selling, and even today many parts of the marketing process (e.g. product design, art director, brand management, advertising, inbound marketing, copywriting etc.) involve the use of the creative arts. However, because marketing makes extensive use of social sciences, psychology, sociology, mathematics, economics, anthropology and neurosciene, the profession is now widely recognized as a science. Marketing science has developed a concrete process that can be followed to create a marketing plan.

DIFFERENT MARKETING STRATEGIES

Marketing is not just one single strategy, but rather a combination of many different techniques and tactics. Below we've listed some essential marketing strategies that you should know about. Click on the red links to learn more about each of these strategies.

- **Marketing Plan:** Discover what a marketing plan is, why you need to design one, and the keys to creating a strong plan. Without a marketing plan, a company or brand can't reach its goals.
- **Digital Marketing:** D**igital marketing** is the discipline of **marketing** which focuses on developing a strategy solely within the digital environment.
- **Direct Marketing: Direct marketing** is a type of campaign based on direct, two-way communication that seeks to trigger a result from a specific audience.
- **Email Marketing: Email Marketing** is one of the most profitable and effective techniques in terms of return. Naturally, it consists of sending emails to your audience, but make sure to define your segments well in order to be effective.
- **Mobile Marketing: Mobile Marketing** is a broad concept which brings together all marketing campaigns and actions focused exclusively on mobile platforms (i.e. smartphones and tablets).
- **Viral Marketing:** Having something go viral is every company's dream. **Viral Marketing** spreads from one person to the next and is capable of going incredibly far incredibly fast.
- **Performance Marketing: Performance Marketing** is a methodology which applies various marketing methods and techniques and guarantees advertisers that they only have to pay for achieved results.

- **Inbound Marketing:** This methodology focuses on **creating valuable content to attract qualified traffic** and work towards the final sale.

THE HISTORY OF MARKETING

Do you know how marketing has evolved over time?

Not too long ago, marketing mostly consisted of outbound marketing, which meant chasing potential customers with promotions without really knowing if that person was interested in purchasing. Thanks to the digital transformation and the rise of new communication channels, marketing has drastically changed over the years.

To understand how marketing has changed, let's take a look at this timeline HubSpot has assembled showcasing the innovations of this industry.

1450-1900: PRINTED ADVERTISING

- **1450**, Gutenberg invents the printing press. The world of books and mass copies is revolutionized.
- **1730**, the magazine emerges as a means of communication.
- **1741**, the first American magazine is published in Philadelphia.
- **1839**, posters become so popular that it becomes prohibited to put them in London properties.

1920-1949: NEW MEDIA

- **1922**, radio advertising begins.
- **1933**, more than half of the population in the United States (55.2%) has a radio in their home.
- **1941**, television advertising begins. The first advertisement was for Bulova watches and reached 4,000 homes that had television.
- **1946**, more than 50% of the homes in the United States already had a telephone.

1950-1972: MARKETING IS BORN AND GROWS

- **1954**, for the first time revenue from television advertising surpasses revenue from radio and magazine ads.
- Telemarketing grows as a means of contacting buyers directly.
- **1972**, print media suffers an exhaustion of the outbound marketing formula.

1973-1994: THE DIGITAL ERA FLOURISHES

- **1973**, Martin Cooper, a Motorola researcher, makes the first call through a cell phone.
- **1981**, IBM launches its first personal computer.
- **1984**, Apple introduces the new Macintosh.
- **1990-1994**, major advances in 2G technology, which would lay the foundation for the future explosion of mobile TV.
- **1994**, the first case of commercial spam through e-commerce is produced.

1995-2020: THE ERA OF SEARCH ENGINES AND SOCIAL MEDIA

- **1995**, the Yahoo! and Altavista search engines are born.
- **1995-1997**, the concept of SEO is born.
- **1998**, Google and MSN launch new search engines.
- **1998**, the concept of blogging arises. By mid-2006, there are already 50 million blogs worldwide.
- **2003-2012**, the era of inbound marketing begins.
- **2003-2004**, three social networks are launched: LinkedIn, MySpace and Facebook.
- **2005,** the first video is posted on YouTube
- **2006**, Twitter is born.
- **2009**, Google launches real time searches.
- **2010**, 90% of all American households have a cell phone. Instagram is created in October 10.
- Young people between the ages of 13 and 24 spend 13.7 hours on the Internet, compared to 13.6 hours watching television.
- **2011**, Snapchat is created, driving even more young users to their phones and fueling the social media app craze.
- **2012**, there are already 54.8 million tablet users.
- **2014,** the rise of Influencer marketing begins. Users and brands alike begin to realize the power of social media users with large followings
- **2014**, for the first time ever mobile usage outweighs desktop usage. More users are checking social media, reading emails, and making purchases on their phones.
- **2015-2016**, big data and marketing automation are explored and used more robustly to advertise to users.
- **2018**, video marketing continues to grow, especially with Instagram's launch of

IGTV. Video content is no longer just limited to YouTube and Facebook.

- **2019-2020**, Move over millennials! Gen Z is the new focus and they have a hot new app: TikTok.

It will be interesting to see where marketing continues to grow. With new world events, like the COVID-19 crisis of 2020 causing millions of people to stay in doors, social media and marketing trends are sure to change, and we'll be right here to track them.

MARKETING TECHNIQUES

Marketing techniques are a series or set of strategic methods or actions aimed at promoting a business' goods or services. The aim is to maximize sales and maintain a competitive good or service.

It refers to a business's overall game plan for reaching prospective consumers and turning them into customers of their products or services. A marketing strategy contains the company's value proposition, key brand messaging, data on target customer demographics, and other high-level elements. A thorough marketing strategy covers "the four Ps" of marketing: product, price, place, and promotion.

- A marketing strategy is a business's game plan for reaching prospective consumers and turning them into customers of their products or services.
- Marketing strategies should revolve around a company's value proposition.
- The ultimate goal of a marketing strategy is to achieve and communicate a sustainable competitive advantage over rival companies.

UNDERSTANDING MARKETING TECHNIQES

A clear marketing strategy should revolve around the company's value proposition, which communicates to consumers what the company stands for, how it operates, and why it deserves their business. This provides marketing teams with a template that should inform

their initiatives across all of the company's products and services.

MARKETING STRATEGIES Vs. MARKETING PLANS

The marketing strategy informs the marketing plan, which is a document that details the specific types of marketing activities a company conducts and contains timetables for rolling out various marketing initiatives.

Marketing strategies should ideally have longer lifespan than individual marketing plans because they contain value propositions and other key elements of a company's brand, which generally hold consistent over the long haul. In other words, marketing strategies cover big-picture messaging, while marketing plans delineate the logistical details of specific campaigns.

Academics continue to debate the precise meaning of marketing strategy, and so multiple definitions exist. The following quotes from industry experts help crystallize the nuances of (modern) marketing strategy:

- "The sole purpose of marketing is to sell more to more people, more often and at higher prices."
- "Marketing is no longer about the stuff that you make, but about the stories you tell."
- "The aim of marketing is to know and understand the customer so well the product or service fits him and sells itself."
- "Marketing's job is never done. It's about perpetual motion. We must continue to innovate every day."
- "Take two ideas and put them together to make one new idea. After all, what is a Snuggie but the mutation of a blanket and a robe. The Creation of Marketing Strategy

The ultimate goal of a marketing strategy is to achieve and communicate a sustainable competitive advantage over rival companies by understanding the needs and wants of its consumers. Whether it's a print ad design, mass customization, or a social media campaign, a marketing asset can be judged based on how effectively it communicates a company's core value proposition.

Market research can help chart the efficacy of a given campaign and can help identify untapped audiences to achieve bottom-line goals and increase sales.

DEFINING MARKETING TECHNIQUES

Simply put, a marketing technique is anything you do to bring in new business or increase your firm's visibility and reputation.

We're not talking about strategies for closing sales once you have the opportunity – marketing techniques are all about generating those opportunities in the first place. These are methods for targeting promising markets, building your brand and generating and nurturing leads to drive faster growth and higher profits.

There are many different marketing techniques both online and offline. Major Offline examples include trade shows, networking and in-person speaking engagements. Key online techniques include a firm's website, ongoing search engine optimization (SEO) efforts, and industry webinars.

Taken together, online and offline marketing techniques allow you to reach clients wherever they may be. Traditional, offline networking has been an important part of the professional services industry for some time, but these days crucial relationships are forged more and more often through social media like LinkedIn.

MARKETING TECHNIQUES

In this evolving, increasingly complex marketing world, how can professional services succeed? Which techniques are the most important for building a powerful reputation?

1) Specialization and niche targeting

Our research has repeatedly shown that the fastest-growing firms tend to be specialists in a carefully targeted niche – an area of the industry that they understand thoroughly.

Not everyone recognizes specialization as a marketing technique, but in fact, it is among the most powerful. Why? Specialization impacts every aspect of your business, from the audiences you target to the messages you craft. Specialization makes all of your marketing efforts easier, because it tends to define exactly what you do and distinguish you from the competition.

Often, specialization forms the basis of a firm's competitive advantage. If you understand a very particular slice of the marketplace better than anyone else, then you're best-equipped to recognize what matters to them and speak to their needs. Specialization is perhaps the most powerful differentiator.

2) Visible Experts®

Visible Experts are exactly what they sound like: high-visibility experts in your industry. They are leading figures who advance big ideas and draw clients through the sheer power of their names.

Our research shows that firms with in-house Visible Experts experience a variety of important benefits. These highly visible experts generate more leads, command billing rates that are up to thirteen times higher and close sales more easily.

Many firms have subject matter experts, but they're not often widely visible, and there's no focused plan to increase their visibility. Many firms simply don't recognize the benefits of high visibility.

If they do, they don't realize that there are proven strategies for building an expert's profile. By giving experts a platform to educate audiences – like books, blogs or webinars – firms can support an individual's reputation and ultimately encourage growth for the firm as a whole.

For firms with rising experts on their teams, cultivating Visible Experts from within is a powerful strategy. When your firm has a clear specialization and a nationally-recognized Visible Expert, you're in an excellent position to accelerate your marketing efforts and your growth.

3) Blogs and articles

There are two sides to publishing blogs and articles: maintaining your own firm's blog, and also contributing blogs or articles to outside industry publications.

Written content is a great way to project your firm's particular expertise, way of thinking, and problem-solving acumen. Our recent research shows that more than 50% of buyers would read articles or publications to learn more about a topic important to them professionally. By educating your audiences, you demonstrate your relevance to them and show them your qualifications as an expert.

There is also a second key benefit to blogging. It is an excellent way to increase the drawing power of your website. Search engines like Google look for fresh content on your website. They also give preference to content that is linked to by other sites. A robust guest blogging program coupled with engaging content on your own site is a great marketing technique to deliver these twin benefits.

This is also why blogs and articles are an important part of any effort to cultivate Visible Experts – not to mention a cornerstone of online marketing.

4) A lead-generating website

A website carries your identity and message to an ever-growing online audience. But it can do more. A lead-generating website is carefully crafted to serve as the hub of your online marketing efforts. Attractive, easy-to-find content is served alongside relevant offers designed to convert visitors into leads, all integrated into a comprehensive lead-generating and nurturing ecosystem. In fact, our latest research shows that going to a firm's website is the second most common way buyers "check out" a professional services provider, with almost 80% reporting have done so.

Because of its central role, a lead-generating website is sometimes called the "Queen of Marketing Materials." It's a key ingredient for turning visitors into fans and fans into clients.

5) Search engine optimization (SEO)

Going hand-in-hand with a lead generating website is a thoughtful strategy for search engine optimization. SEO is really an umbrella term for a variety of techniques designed to make sure that your valuable content gets in front of the right audiences online.

And one of the most important of those strategies is to ensure that your content really is valuable. There is no shortcut here. You must develop well-written content that is truly useful to your specific target audience.

There are also a host of important technical issues to attend to. Your website must be structured and tagged properly and pages should contain the appropriate keywords to signal to the search engine what it is about. It is indeed an art and a science.

SEO isn't a one-time effort, but an ongoing strategy to create quality content that is easy for your audience to find. This is an absolutely crucial technique for generating low-cost, high-quality leads online – and the only reason it's not higher on the list is that its impact is primarily on the online side of your marketing equation.

6) Speaking engagements

Speaking engagements are one of the most powerful lead generating techniques of high-visibility experts – and a great way to build one's reputation. Speaking engagements confer credibility and often put you in front of a highly-targeted audience, presenting an excellent opportunity for generating leads.

But all speaking engagements are not created equal. You must be in front of your target client group or folks who are in a position to recommend you to your potential clients. And, of course, you must have something valuable to say.

7) Trade show participation

Much like speaking engagements, trade shows are a great way to get a high concentration of potential clients all in one place at same time.

One of the major advantages of trade shows is that they allow organizations to come together around a common theme. This means that your audience can be truly targeted.

At a trade show, you can share content, network, connect with other professionals, and exhibit. By choosing (or organizing) the show strategically, you keep your cost-per-interaction low, engaging closely but also efficiently with many potential clients in a short span of time.

The keys to success are careful targeting, planning, and follow-through. Done right, trade shows are a lot of work, but yield a lot of reward.

8) LinkedIn

When it comes to networking, trade shows are an efficient offline technique. But you can achieve many of the same aims in the online space with LinkedIn. As the premier social network for professional services, it is a rich source for influential and engaged professional contacts.

Other social media like Twitter are also helpful, but LinkedIn is really the top of the social media food chain for the B2B world. It's not only a way to connect one-on-one, but a hub of focused professional services communities.

9) Online video

Online video allows for many of the benefits of face-to-face interaction. You can "meet" the people you're working with, get a glimpse of their world and give them a more personal impression.

With live streaming video you can also pick up on visual cues like body language. Video also allows you to share detailed, highly visual tutorials or demonstrations easily.

You can use video as a live communication tool with distant prospects or clients, through services like FaceTime or Zoom or Google Hangouts. Other times, you might distribute recorded video on platforms like YouTube.

Professional services are ultimately all about people, and video is an exceptional way to showcase your people. In addition to communication and tutorials, some common uses for video include:

- Firm overviews
- Overviews of your service areas

- Video case studies
- Video blogging
- A “meet the team” video

10) Develop a signature piece of content

When you produce an authoritative work on a topic in your industry, it is a major source of credibility for your firm. You are demonstrating what is the most important criteria potential clients look for in a new firm…expertise Think of it as a short cut to the short list.

The most widely recognized and effective form of signature content is a book about your specialty. In fact, writing such a book is one of the characteristics that distinguishes the fastest-rising Visible Experts from the rest.

But a book is not the only possible approach. Other forms of signature content might include a major research study that is relevant to your audience or a significant best practices guide The key is that it has to be truly noteworthy. In other words, you must offer resources so valuable to your potential clients that they make your reputation.

The ten most effective marketing techniques are a diverse group of online and offline strategies. Each technique is most effective when it is working in concert with the others.

Effective search engine optimization might help draw relevant audiences to a video of a speech delivered by one of your Visible Experts – all hosted on your lead-generating website, where a targeted offer helps convert visitors into leads.

When you use a diverse array of thoughtful marketing techniques, and they build on one another, they allow you to take your reputation to the next level. With commitment and the right techniques, professional services marketing success is within reach.

APPLICATION OF 5P’S

THE FIRST P STANDS FOR PEOPLE

Your customers are the main reason for the existence of your brand. As a company, you look for a group of people with a specific need and answer it. The first P of Digital Marketing is People. The target market is a segment of the community that a company wants to sell its products and offer its services to. The development of a marketing plan relies on this segment.

A.DEMOGRAPHICS FACTORS

It refers to the study of population and their behavior relative to the changes in the environment. Factors such as age, gender, race, education, career and other categories define the demographic aspect of the market.

An example of a demographic segmentation regarding age includes Baby Boomers who were born from 1946 to 1964 and Millennials who were born from 1980 to 2000. Another classification comprises of teenagers, young adults, and senior citizens.

Example Scenario: You are a preschool institute, and you have a social media page promoting your summer classes for 2018. Regarding demographic factors, create a marketing campaign that will reach a target segment with the following description: start up couple or parents (married or single parents) in class A to higher C regarding social class. Avoid marketing towards young professionals (without kids) because your campaigns will be irrelevant.

B. GEOGRAPHICAL FACTORS

Geographical factors define the target market regarding location. The market is further segmented into towns, cities, regions, states, countries, and continents. Geographic locations

may also refer to different places, may they be in rural or urban areas.

C. BEHAVIORAL FACTORS

A company's target market can also be defined according to different behavioral factors. Behavioral factor refers to how an individual identifies, responds and uses a product or service offering. A customer considers many things before making the purchase decision. Furthermore, a customer behaves differently regarding occasion, the frequency of usage and purpose.

Some of the key factors about consumer behavior include mood, brand loyalty, responsiveness to price, reaction to alternatives or substitute products, and among others.

Example Scenario: The target market for flowers and chocolates during Christmas or Valentine's day are particular because of the season. These products may sell in other months, but the sales performance is not at par.

D. PSYCHOGRAPHIC FACTORS

Market segments can also be categorized in terms of Psychographic Factors. This is how people choose to live their daily lives. These factors can be related to as the values, personalities, attitudes, lifestyles and general interests.

THE SECOND P STANDS FOR PRODUCT

What Are You Selling?

Once the target market is identified correctly, a marketer or business owner now has a clear understanding of what the customers need or want.

A product can be in any form that satisfies the needs of customers. This can be information, a physical product, a service or an offer that a customer will make use of. It can be a tangible product or an intangible service. In the digital world, a product can be a file, access to another web page, or a service that can be obtained a few moments after an online transaction.

Guide Questions in Creating a Product

- What are the needs and wants of the target market?
- Does the product or service satisfy the needs of the customers?
- With your product or service, what are the features of the product or service?
- How will the customer use the product or service?
- What is the branding proposition of the offering?
- Given the overall offering, how is the product differentiated from competitors?

THE THIRD P STANDS FOR PRICE

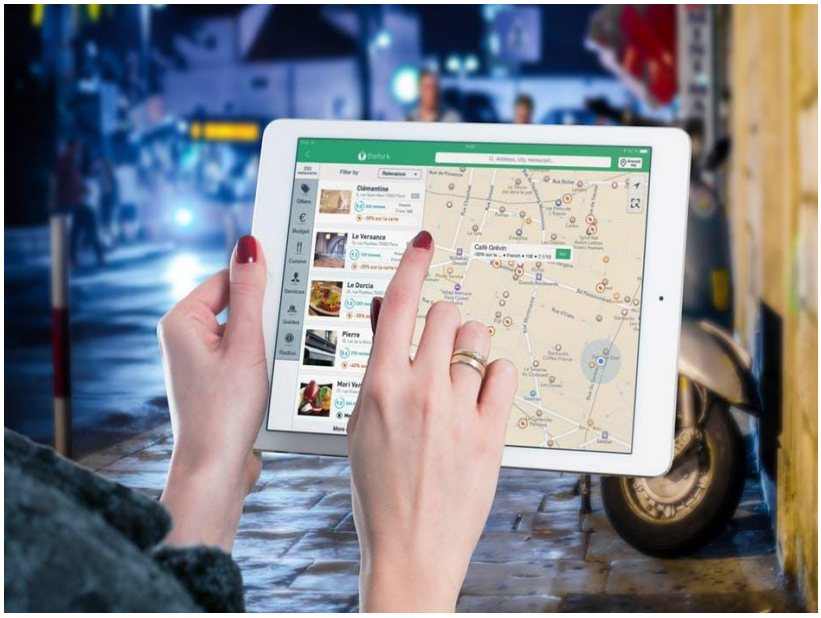
How Much Is the Target Market Willing to Pay?

You have to consider the amount of money each customer is willing to let go in return for the value they get from your offerings. As a business owner, you have to factor in the level of willingness of your customer to pay because the price is part of your unique selling proposition.

A robust pricing scheme should be clear and transparent on other charges. Price is one of the 5Ps of Digital Marketing that has to be carefully crafted because your customers have access to different other products online. It is easier to compare the benefits and prices of other brands.

Also, pricing is something you have to be careful with in Digital Marketing. Online shoppers want high-quality brands with differentiated benefits at competitive price offers. Paying a higher price needs to be justified. The same goes with paying a low cost, because low pricing may suggest that your product has low quality.

THE FOURTH P STANDS FOR PLACE



Where Can Your Customers Find You?

The place is about the location or channel where your products or service are found or can be availed. Place refers to the distribution of your offering. Remember that the more accessible and visible your products or services are, the more significant chance that your target market will see and buy your brand.

In digital marketing, the place is the virtual channel where you can display and sell your brand. There are various places you can sell, and your brand can be accessed anytime, anywhere. Below are some of the digital marketing channels a marketer or business owner can explore:

Search Engine Optimization (SEO) – Your customers should be able to easily find you and your products in search engines and SEO helps you rank better and get more traffic.

Social Media Marketing Tools – Do not get left behind, especially when it comes to social media. Social media platforms are not just designed to promote products. Sellers can also sell and customers can actually make purchases through social media sites.

Social Media Channels

- Facebook: Biggest social network with an estimated 2.2 billion monthly active users.
- Instagram: Gained 800 million monthly active users.
- Twitter: Average of 330 million monthly active microbloggers.
- Pinterest: Fastest growing site to date; reaching 175 million monthly active users.

- LinkedIn: Professional social media platform with over 250 million monthly active users.

THE FIFTH P STANDS FOR PROMOTION

What's in It for Your Customers?

Promotion includes all manners in which you inform your customers about your product and entice them to make the purchase decision. You can make the best product for your customers, but it can only be satisfied with the right promotion. You can use various distribution channels online, but it will not be successful if not paired with the appropriate promotional plans.

When it comes to promotion as one of the 5Ps of Digital Marketing sense, make sure to stand out from the competition because of your accessibility via the Internet, that is why

Personalization

Personalization is a popular word these days. Companies who can personalize their experiences win over customers. I recently attended the Internet Retailers Conference and Expo (IRCE) in Chicago and listened to a number of keynote and breakout presenters talk about how personalization is becoming one of the major differentiators. So, let's talk about what this really means.

Traditional personalization came from remembering past customers, using their name, building rapport and other personal, human-to-human, interactions. A good customer relationship management program (CRM) could help in certain sales and support situations. And today we have amazing technology that plays a part in personalization. Artificial Intelligence puts different types of customers into "personas," grouping customers by

common interests and buying patterns, which allows the company to target customers with extremely relevant promotions. Websites "welcome back" customers, reminding customers what they looked at and bought the last time they visited the site. Better technology has allowed a static website to become interactive and personal – as if you were coming back to a favorite sales person at a favorite store. Consumer expectation is clear - treat them as individuals or see them walk...

The results of the Salesforce State of Marketing Report back up this demand, showing that 79% of customers are willing to share data in exchange for contextualised engagement, and 88% will do so for personalised offers.

The challenge for marketers is two-fold. First, given only 47% of marketers say they have a completely unified view of customer data sources, how can a brand offer a personalised service with such limited information?

Second, how do marketers make engagement with the consumer relevant, interesting and personal without stepping over the line into invasive? When does engagement become an infringement of privacy? Afterall, there's personal and then there's creepy.

The answer might be more straightforward than you'd expect: create a customer data strategy based on clear business objectives (so one that doesn't hold any more customer data than is necessary to achieve those objectives), put the people in place that can deliver it, then, and only then, look for the technology that can help you execute the strategy.

THE 4 PS OF MARKETING: UNDERSTANDING THE MARKETING MIX

The marketing mix is a tool used to help brands understand what elements must be combined in order to meet their marketing goals and objectives. Ultimately, this includes the 4 Ps of marketing: product, price, place and promotion.

The evolution of the digital age has caused the standard methods and practices of nearly every industry to change and grow to work within this new paradigm, and marketing is certainly no exception. In fact, the marketing industry has arguably seen the most benefit from the growth of digital.

Today's marketers have access to a wealth of information and access through new tools for customer profiling, artificial intelligence, and response analysis to name just a few. Add to that Big Data, or the ability to collect, analyze, and act on enormous amounts of customer and product information, and the idea of providing reliable, predictive one-to-one marketing becomes very real.

The core tenants of marketing have stood the test of time. The Internet age has caused some changes in the way that marketers work, meaning revising old marketing processes, concepts, and priorities, and then reconstructing them into forms that work better and more effectively in this new world of communications. But through it all, those tenants and fundamentals remain the same.

THE 4 PS OF MARKETING

The 4 Ps of marketing include product, price, place, and promotion. These are the key elements that must be united to effectively foster and promote a brand's unique value, and help it stand out from the competition.

Jerome McCarthy first proposed the modern form of the 4 Ps in his 1960 textbook, Basic Marketing: A Managerial Approach. These elements have since provided a standard method to describing marketing programs for over 50 years.

But, what makes the 4 Ps of marketing so important that they have withstood the test of time, including the growth of the internet age? Below we break down each P, and reexamine the ways that each has remained critical to marketing.

PRODUCT

A product refers to any item that intends to satisfy the needs and wants of a target customer. It can be a tangible good, such a clothing item or piece of software, or intangible, like a service or experience (think legal services or a cruise).

Marketers must always have a clear concept of what their products stand for, and what differentiates them from the competition, before they can be marketed successfully. Today, the internet can be considered either the medium for purchase, via e-commerce, or the product itself, such as a social media service. Because of this, it's vital that marketers fully understand the product they are selling, how it meets the needs of their target customer, and what makes their product stand above the competition.

Some key questions that marketers need to answer include:

What do customers want from your product/service? Does it satisfy their needs?

What features of your product/service work to meet your customer's needs? Have you missed out on any features?

How and where will the customer use it?

How will the customers experience it?

PRICE

First comes the product, and immediately after comes a determination of its value among target audiences. Pricing strategy is an art and a science, in that it involves both market data and careful calculations, as well as skillfully balancing between pricing that is too high or too low, and understanding how skewing either way might damage the brand.

Price not only refers to the monetary value of a product, but also the time or effort the customer is willing to expend to acquire it. Determining this will be a critical factor in revenue for the brand as it will impact profit, supply, demand, and how much marketers should spend on a promotion or marketing strategy. This, in and of itself, is why this 'P' is

one of the most important. If a product is priced too high or too low, the product – and brand – could fail.

Some key questions that marketers need to answer include:

What is the value of the product or service to the buyer?

How will your price compare to competitors?

Are there any possible established price points for the product/service in this area?

PLACE

The internet age has introduced new challenges when it comes to reaching your customers. Place refers to providing customers access to the product, and it also calls into play convenience for the customer. Marketing, through digital means or otherwise, is about putting the right product, in the right place, at the right price, at the right time, in front of the customer.

Some key questions that marketers need to answer include:

Where are target customers shopping?

Are they using desktops or mobile devices?

Are they shopping for similar products online, or in brick-and-mortar stores?

Where are they engaging on social media?

Even though transactions with your company may take place exclusively in-store or online, customers likely interact with your brand or your specific products in a variety of places. It's important to consider how each of these places influences the overall customer experience.

PROMOTION

Now, how to make an audience aware of the product? Within the framework of the four Ps, promotion refers primarily to marketing communications.

These communications use channels such as public relations, advertising, direct marketing, email marketing, social media marketing, or sales promotions; think of it as any way marketers disseminate relevant product information to their target customers.

Promotion is the area that has arguably seen the greatest growth and change as a result of the digital age. With the exceptional access offered by B2C marketing solutions, marketers can now promote products easier, more effectively, and with more personalization than ever before, thus leading to greater outcomes and ever-increasing expectations.

Some key questions that marketers need to answer include:

How will you reach your target audience?

Where will you send your marketing messages to your target audience?

How does your competition promote their product? Does that influence your own promotional activity?

When is the best time to promote?

E-ADVERTISING TECHNIQUES

Advertising, the techniques and practices used to bring products, services, opinions, or causes to public notice for the purpose of persuading the public to respond in a certain way toward what is advertised. Most advertising involves promoting a good that is for sale, but similar methods are used to encourage people to drive safely, to support various charities, or to vote for political candidates, among many other examples. In many countries advertising is the most important source of income for the media (e.g., newspapers, magazines, or television stations) through which it is conducted. In the noncommunist world advertising has become a large and important service industry.

In basic terms, **marketing** is the process of identifying customer needs and determining how best to meet those needs. In contrast, **advertising** is the exercise of promoting a company and its products or services through paid channels. In other words, **advertising** is a component of **marketing**.

Online advertising, also known as online marketing, Internet advertising, digital advertising or web advertising, is a form of marketing and advertising which uses the Internet to deliver promotional marketing messages to consumers. Many consumers find online advertising disruptive and have increasingly turned to ad blocking for a variety of reasons.

When software is used to do the purchasing, it is known as programmatic advertising.

Online advertising includes email marketing, search engine marketing (SEM), social media marketing, many types of display advertising (including web banner advertising), and mobile

advertising. Like other advertising media, online advertising frequently involves a publisher, who integrates advertisements into its online content, and an advertiser, who provides the advertisements to be displayed on the publisher's content. Other potential participants include advertising agencies who help generate and place the ad copy, an ad server which technologically delivers the ad and tracks statistics, and advertising affiliates who do independent promotional work for the advertiser.

Attracting visitors to websites is a key component to a successful web-based commerce site. The must common sources of revenue come from allowing advertisers to pay for banners on their sites is to be listed as site sponsors.

Different Techniques in online Advertising are:

1. Banners
2. Sponsorships
3. Portals
4. Online Coupon

BANNERS:

According to interest advertising bureau (IAB), the must popular form of on-line advertising is banner advertising. Banner advertising is used to attract visitors to a site. Banner advertising containing text and graphic that are placed on the screens of search engines, web browser software and websites to attract the attention of www users. Banner advertising is of two types • Click through advertisement. • Not click- thorough advertisement. Click through advertisement contain hypertext links to the site about which the banner is advertising. Non Click through advertisements which does not contain hypertext links to the site. Banner advertising is typically measured and priced according to two features

CPM- Cost per thousand impressions

CTR- Click through rate

CPM- an impression refers to each time a page is viewed that is displaying the banner. CTR- the click through rate is considered to be more important by many advertisers since it measures the no. of users ”delivered” to a site. Firms are also interested in tracking whether visitors they make a purchase from the site. So software tracking devices are available for tracking such items. Dr.P.RAMAR, M.Com., M.Phil., Ph.D. Dr.P.RAMAR

SPONSORSHIPS: Sponsorship is another popular on-line advertising method. Sponsorships are similar to banner in that a business gets to display a message typically just a logo, on a site a clickthorough may be allowed. Sponsorships typically allow the firms banner to stay on a site for a longer period of time or for a certain no. of days. Sponsorships are a good mechanism for generating brand recognition's.

PORTALS:A portal is referred to a site that serves the "post of entry" on to the web. Portals are designed to give web users the information they need as they first enter the www. Customized pages are an option, as well a customized news items and stock quotes. Portals types sell advertising space on their sites.

ONLINE COUPONS: Online coupons are printed for use in stores or requested and sent via portal mail for use in stores when the visitor expenses the produce in which they are interested the store mails the coupons to them. On-line coupons are also distributed from sites that specialize in distributing such coupons for businesses that subscribe to their services.

ANOTHER WAY OF ON-LINE ADVERTISING MECHANISMS:

- Directories
- Search engines

Directories: Directory services on the www provide an index that lists and provides links websites. The sites may be listed in one of many ways: Alphabetically or by subject, category, or region. Websites can be registered at no charge to a no of directory services such as info seek internet mall, the yellow pages and yahoo. Registering with multiple directories is important in order to cast as wide a net as possible and because users are traversing the net using many different directories.

SEARCH ENGINES: Using search engines is a more popular met of finding sites than the use of directories. Web search engines take user different strings and Boolean expressions and return a list of closely matched websites in the order of the closeness of match. Search engines periodically "crawl" through the internet looking for new pages and updation their exciting databases.

WHAT ARE SEVERAL COMMON TYPES OF ADVERTISING?

As with marketing, advertising has evolved significantly in the 21st century. The digital age has opened new advertising avenues for companies to take advantage of, from search engines to social media and websites of all shapes and sizes. In this new reality, businesses can achieve advertising goals and reach potential customers just about anywhere, particularly with the prevalence of smartphones.

Within the realm of common advertising techniques, many businesses prioritize any or all of the following methods:

- **Traditional Advertising** — This term refers to ad placement in traditional print and broadcast media. Common examples of traditional advertising include newspaper ads, TV commercials and radio infomercials.
- **Retail Advertising** — This terms refers to ad and placement within retail stores to maximize sales. Common examples of retail advertising include product placement within stores, ads on shopping carts and featured product displays.
- **Online Advertising** — This term refers to ad placement on the internet in media and other websites. Common examples of online advertising include contextual ads in search engines, banners on websites, promotional videos and sponsored content.
- **Mobile Advertising** — This term refers to ad placement on mobile phones and smartphones. Common examples of mobile advertising include automated dialers, banners to download apps and click-to-call ads.
- **Outdoor Advertising** — This term refers to ad placement on outside structures, generally in heavily trafficked areas to attract the most attention. Common examples of outdoor advertising include billboards, banners on the outside of buildings and branded vehicles.
- **Pay Per Click (PPC) Advertising** — This term refers to online ad placement designed to drive traffic to a company's website. Companies derive extensive customer data from these ads, only paying when users click on the link.

WHAT IS THE DIFFERENCE BETWEEN MARKETING AND ADVERTISING?

The main difference between these two business practices is that advertising is a part of marketing. A successful marketing strategy typically dedicates resources to advertising at multiple levels, placing corporate marketing communications in various types of media.

To dig a little deeper into this question, it be helpful to review the differences between paid, owned and earned media:

- **Paid Media** — This type of media involves a company paying a publisher to place marketing communications. Examples of paid media include billboards, broadcast and print ads, search engine ads, social media ads and direct mail or email.
- **Owned Media** — This type of media involves a company using its own channels to place marketing communications. Examples of owned media include retail merchandising, websites and business blogs, brochures, corporate social accounts and press releases.
- **Earned Media** — This type of media involves external communications about a company from third-party actors. Examples of earned media include online reviews, newspaper or magazine articles, social media endorsements, customer demonstrations and types of external publicity.

About the Editor

Dr .C. SUBATHRA, is a woman with ambition, She was graduated in Commerce from SNDT Women's University, Mumbai, and completed PG and M.Phil in Commerce form Madurai Kamaraj University. She has been awarded with Ph.D in Commerce from Manonmaniam Sundaranar University, Tirunelveli , now acting as a Research Supervisor and Guiding M.Phil and Ph.D Scholars. She has also completed M.A.Sociology, PGDHRM and M.Sc.Psychology. She is working as an Assistant Professor of Commerce in Pioneer Kumaraswamy College, Nagercoil, Since 2013. She has 18 years of Teaching and Administrative experience in Schools, Colleges and NGO's. She has participated in more than 200 National and International Seminars, Webinars, and Training Programs and published more than 70 Research articles and 14 Books. She is a NLP, Soft Skill Trainer and Counselor. She Served as Resource person and delivered her Expertise in Various Institutions.

She acts as the resource person for National and International seminars and Conferences and had delivered several guest lecturers for Academic upliftment. She received Best Women Leader Award, The Real Super Women Award, Women Achiever Award, Young Educator and Scholar Award, Kaviyarasar Kalaimani Award, Agimsai Gandhi Award, Dr. Radhakrishna Shikshana Ratna National Award, Best NSS Program Officer Award, 4 Best Paper and Best Paper Presenter Awards. She founded a Trust in 2017, Registered under Indian Trust Act, named CAPE FORUM - YOU TRUST, Kanyakumari District, Tamilnadu. An initiative towards the fivefold activities of the TRUST is her passion.

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