

6CS5-13 ECOMMERCE AND ERP

Unit 1: Introduction

- Objective: To understand the concept of Ecommerce and its application.
 - To study different e commerce activities and there design principles.
 - To study the role of internet in ecommerce.
 - To study various technologies like ISP, WWW, XML , XHTML etc used for developing e commerce applications.
 - To study the concept of e marketing
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- Scope : To understand the concepts of e commerce and web technology required to implement e commerce applications.
 - Outcome : To get theoretical knowledge about various technologies related to ecommerce.
 - To get exposure to practical implementation of e commerce applications and managing it.
 - To understand marketing concepts related to ecommerce.
 - Introduction to E-commerce , Definition , benefits , components , types of e-commerce , functions , prerequisites , scope and E-business models.
 - E – commerce activities , modes of operations , opportunity development for ecommerce , design and development of ecommerce website and types of ecommerce providers and vendors.
 - Internet services , components , protocols , elements , and strategic capabilities of internet.
 - ISP WWW and portal , building home page , meta data , and publishing of website.
 - XML and data warehousing , comparison between HTML and XML , structure , applications , advantage and disadvantages and business importance of XML.
 - E-Marketing strategies for ecommerce
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- ***What is “Internet Commerce”?***
 - By Internet commerce, we mean the use of the global Internet for purchase and sale of goods, services, including service and support after sale.
 - Internet commerce brings some new technology and new capabilities to business, but the fundamental business problems are those that merchants have faced for hundred - even

thousands - of years: you must have something to sell, make it known to potential buyers, accept payment deliver the goods or services, and provide appropriate service after the sale.

- The Internet - - an efficient mechanism for advertising and distributing product information.
- - enabling complete business transactions..
- Internet commerce - one type of the more general “electronic commerce”.

- **What is Ecommerce?**

- Ecommerce, also known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions. Ecommerce is often 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.
- Whereas e-business refers to all aspects of operating an online business, ecommerce refers specifically to the transaction of goods and services.
- The history of e commerce 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 NetMarket, 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. It wasn’t until 1998 that security protocols were developed that would allow for safe financial transactions online. Initially, e-commerce was actually business-to business transactions.

- **Differences Between Traditional Commerce and e-Commerce:-**

- In traditional commerce, the transactions are processed manually whereas, in the case of e-commerce, there is automatic processing of transactions.
- In traditional commerce, the exchange of goods and services, for money can take place, only during working hours. in e-commerce, the buying and selling of goods can occur anytime.
- One of the major drawbacks of e-commerce is that the customers cannot physically inspect the goods before purchase, however, if customers do not like the goods after delivery they can return it within the stipulated time. Conversely, in traditional commerce physical inspection of goods is possible.
- In traditional commerce, the interaction between buyers and sellers is direct, face to face. As against this, there is indirect customer interaction, in the case of e-commerce, because it may be possible that the customer is miles away from where they place an order for the purchase of goods.
- The scope of business in traditional commerce is limited to a particular area, the reach of business is limited to the nearby places where it operates. On the contrary, the business has worldwide reach in case of e-commerce, due to its ease of access.

- Payment for transactions can be done by paying cash, cheque . On the other hand, payment in e-commerce transactions can be done through online payment modes like credit card, fund transfer, etc.
- The delivery of goods is immediate in traditional commerce but in the case of e-commerce, the goods are delivered at the customer's place, after some time, usually within a week.

• Characteristics of the Best eCommerce Websites:-

- Ease of Navigation :-

- This is one of the most important aspects on your website. If the navigation is lacking, then your customers are not able to browse through your store and find products they are looking for.

- Fast Load Times :-

- Having fast load times is essential to getting a good ranking . Besides that, glaring reason having a website that loads slow is subpar to a customer's expectations. If the website isn't loading, they will most likely bounce from the website and take their business elsewhere.

• - Clear Policies :-

- Clear Policies are crucial to having a successful business whether it is a physical store or an online store.

• - Seamless Checkout Experience :-

- The checkout experience is where a lot of shoppers become part of the shopping cart abandonment statistic. Some of the best checkout systems are at Amazon.com. Having customers create profiles where they can store their addresses and payment methods can speed up the checkout experience and really speed up the time your customer has to spend on your website.

• Branded :-

- Branding is important to establishing a business, and becoming a business that customers will remember.

• - Promotes Related Products :-

- Related products are so important when a customer is shopping on your website. Due to the fact that a lot of customers are looking for specific things, different designs, colors, or materials that the product is made out of showing related products can help make a sale. When shopping around I always feel relieved that I don't have to re-search for a product and I can just go look at things that are pretty similar.

• - Accurate Product Descriptions:-

- There is nothing worse than going to a product and reading the description and then receiving something completely different. It not only ruins the experience for the customer but it ensures

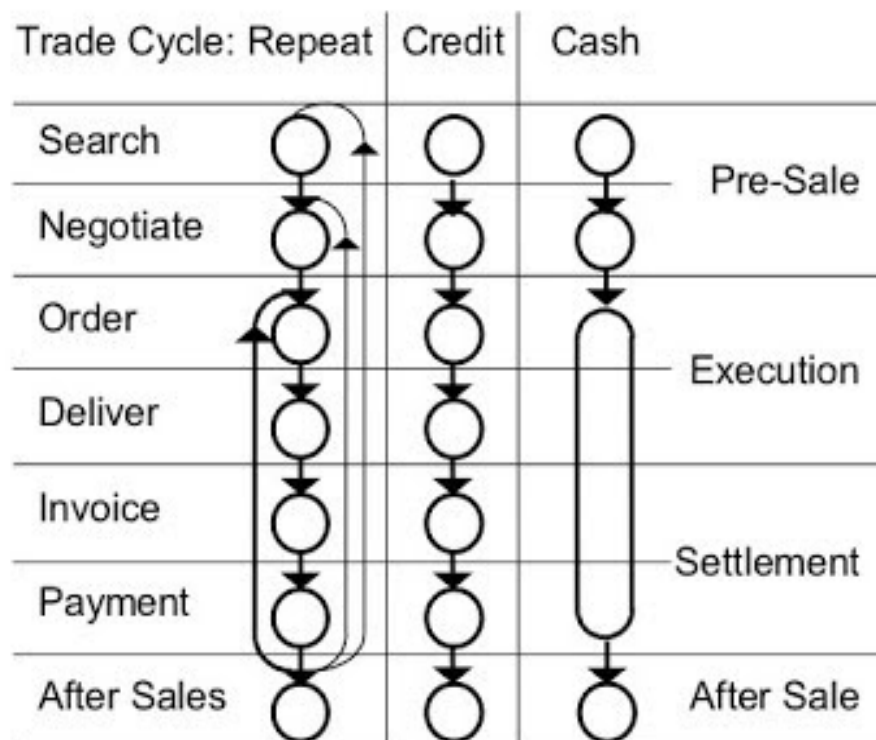
that they will not be a returning customer. Having the wrong description also does not mitigate having customers' expectations that cannot be fulfilled. Most often if you describe exactly what your product is then your customer will not be confused on what they are receiving in the mail

- Effective Search :-
- This is a no brainer, but not having an effective search is a common problem that eCommerce websites have. The site is either so poorly organized that the customer cannot find the products they want or the products do not accurately get recalled when the customer searches with key words. The website should intuitively recall products that customers want even when the customer is being vague about what they want.
- - Quality Photos and Videos :-
- There is nothing worse than having a website with unclear photographs and videos. The customer is unable to really accurately evaluate whether the product is what they want to buy. Also it makes the customer have unrealistic expectations about the product. In this day and age where even our cellphones are creating high resolution photographs there is no reason to not be up to snuff on your photograph that is being featured on your eCommerce website.

Trade cycle of ecommerce:-

- A **trade cycle** is the series of exchanges, between a customer and supplier, that take place when a commercial exchange is executed. A general **trade cycle** consists of
- Pre-Sales: Finding a supplier and agreeing the terms.
- Execution: Selecting goods and taking delivery.
- Settlement: Invoice (if any) and payment.
- After-Sales: Following up complaints or providing maintenance.

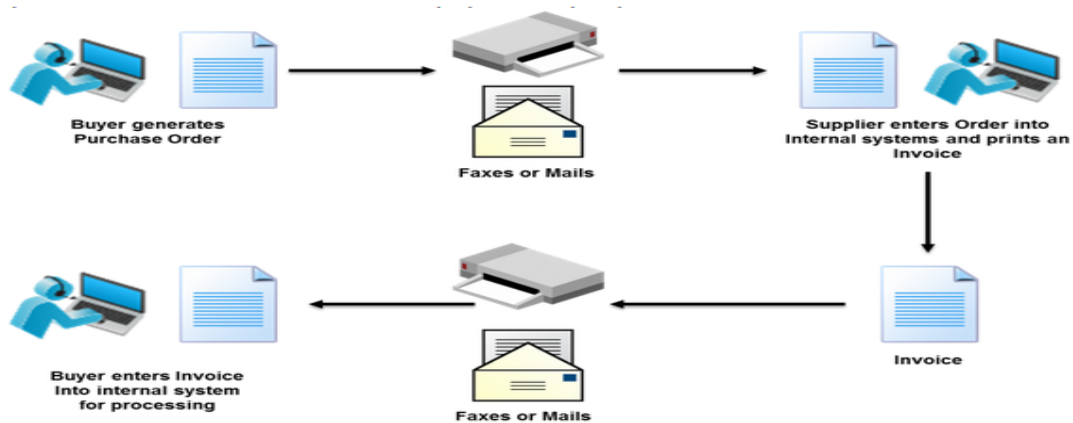
Generic trade cycles



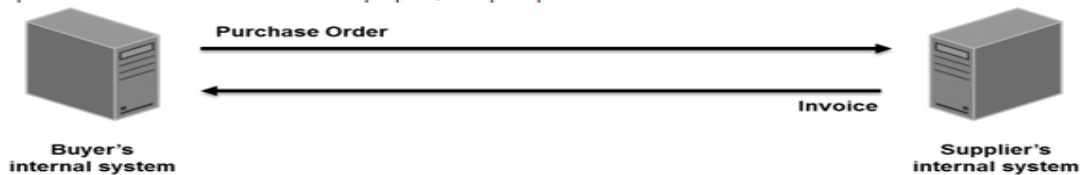
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- Electronic Data Interchange (EDI):-
- Electronic Data Interchange (EDI) is the electronic interchange of business information using a standardized format; a process which allows one company to send information to another company electronically rather than with paper. (Supplier can use EDI to send invoice and customer can finish the cycle with electronic fund transfer.)
- - Benefits of EDI :-
- - Shorten ordering time
- - Cost cutting /Paper stationary postage
- - Elimination of errors
- - Fast response

- - Accurate invoice billing
- - Electronic payment
- - No cash flow
- - Customer locking



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



- Benefits of ecommerce:-
 - - Faster buying process :-
 - Customers can spend less time shopping for what they want. They can easily browse through many items at a time and buy what they like. When online, customers can find items that are available in physical stores far away from them or not found in their locality.
 - - Store and product listing creation:-
 - A product listing is what the customer sees when they search for an item. This is one advantage in ecommerce meant for the seller. This online

- business plus point is that you can personalise your product listing after creating them. Creating a listing takes very little time, all you require is your product name or codes .

Sellers can add many images, a description, product category, price, shipping fee and delivery date. So, in just one step you can tell the customer many things about the item. Creating your listing shows the buyers what you have.

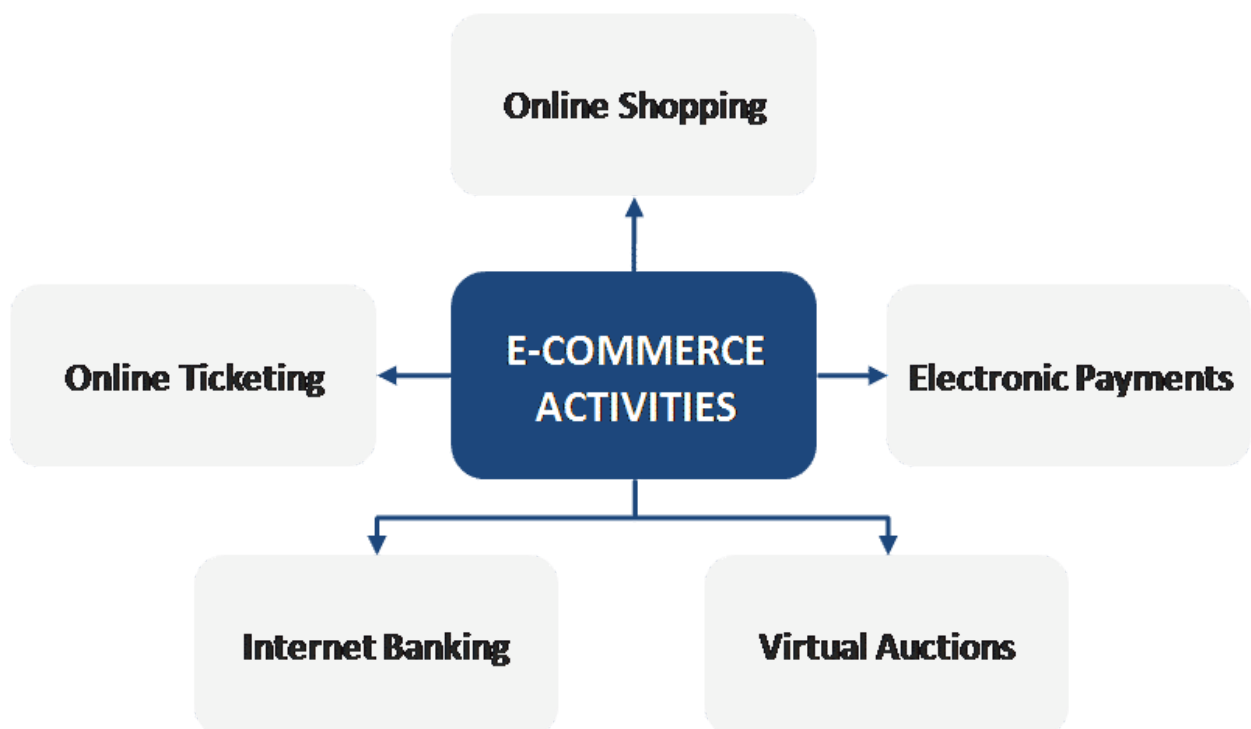
- -Cost reduction :-
- One of the biggest advantages of ecommerce to business that keep sellers interested in online selling is cost reduction. Many sellers have to pay lots to maintain their physical store. They may need to pay extra up front costs like rent, repairs, store design, inventory etc. In many cases, even after investing in services, stock, maintenance and workforce, sellers don't receive desired profits.
- - Affordable advertising and marketing :-
- Sellers don't have to spend a lot of money to promote their items. The world of ecommerce has several affordable, quick ways to market online. Ecommerce marketplaces are visual channels – and sellers can really show off their product. For example, Amazon sellers can use advertising tools to add videos, infographics, good quality resolution images.
- Flexibility for customers :-
- An important advantage of ecommerce to business is that sellers can provide flexibility to customers. One highlight is that the product and services are ready 24x7. The result is that seller can offer his item any place, any time.
- - Product and price comparison :-
- Comparison is faster online and covers many products - It helps to save time when making this comparison, as all details are available on the shopping site. In a physical store, sellers may not be able get access to so many details –they only have better knowledge about their own inventory.
- No reach limitations :-

- A seller with a physical store may only be able to reach a certain number of buyers. They can deliver to the customers' homes but there can be distance limitations. Several e-commerce marketplaces have their own logistics and delivery system.

Reaching out to more customers - Sellers that need to expand their reach to find new customers can benefit from this. This applies to online-only sellers and those with a physical store.

- Faster response to buyer/market demands :-
- Every interaction is faster when you begin selling online. Ecommerce marketplaces offer you a streamlined logistics or delivery system. What this means is that the buyers order gets delivered efficiently. Product returns management is one more plus point that can be handled quickly – you either refund the payments or give a replacement.
- - Several payment modes:-
- Buyers like personalisation – the same goes for paying for their orders. Ecommerce marketplaces permit multiple payment modes that include UPI, cash on delivery, card on delivery, net banking, EMI on credit or debit card and pay-later credit facility.
- 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.
- **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.
- Lack of touch or feel of products during online shopping is a drawback.



- **Types of E-commerce Activities:**
- **Online Shopping:** A prevalent example of e-commerce is shopping via the internet. Virtual stores are created online, often boasting more variety of choices that are available at physical stores. There are also stores that exist

only online and benefit from the lack of investment into physical infrastructure.

- **Electronic Payments:** Payment systems for utility bills, phone, cable and internet bills, as well as online shopping, are an important aspect of e-commerce. Here, security needs to be ensured regarding credit card and personal information.
- **Virtual Auctions:** One version of e-commerce is the online auction popularized by eBay. These websites offer customers the benefit of selling to others at the best possible price.
- **Internet Banking:** E-commerce has allowed many people to forego frequent visits to the bank and instead perform their regular banking activities online via secure banking service.
- **Online Ticketing:** Ticketing for almost all types of activities is now done online. This includes travel ticketings such as air travel, bus and trains, as well as tickets for entertainment and sports events. This allows people to avoid queues and just go on the day of the event.
- The core activities that are carried out on Electronic Commerce are:
 - a) Buying and selling of products
 - b) Shipping of products
 - c) Producing financial statements All the above functions are carried out without any human intervention, and that is the reason of coining “E” in E-commerce. This however does not imply that the humans completely vanish from the scene, their contribution to the organization’s growth can be seen in the form of:
 - i) Personalized customer service
 - ii) Sales
 - iii) Corporate development and
 - iv) New product research etc.

- **Broad goals of ecommerce :-**

- - Reduced costs.
- - Catch more customers.
- - Increase the traffic.
- - increasing sales.
- - Best customer service.
- - Minimum shipping time.
- - Making responsive ecommerce website.
- - Get positive feed back.

- **Main Components of ecommerce :-**

- - **Suppliers and supply chain management :-** you have enough and the right merchandise suppliers
- they are financially and operational safe
- they are able to provide real-time stock inventory
- they are able to deliver purchased products fast
- - **Warehouse operations :-** Warehouse, the place where online retailers pick products from the shelf, pack them neatly and prepare those products to be delivered. All 3PL (third party logistics) service providers use technology (**warehouse management systems**) to know at all times where the products are, what's the most efficient way to pick those products, who should be the person in charge for each package and others
- - **Shipping and returns :-** If we marketed online but **it has to be packed and reach its destination in the real world.** That's why you need a good warehouse management and you need a **great shipping service.** Shipping is usually an outsourced service.

- Once in a while customers do not like what they've bought. You will need to **handle the returns and reimburse customers** for their purchase. Here you can team up with the shipping provider but your store has to handle all the communication.
- **hire a shipping provider** – It's probably not worth it to have a shipping service of your own
- **handle your returns as gracefully as possible** – it may mean the difference between an unsatisfied customer.
- - **Client Relationship Management (CRM)** :- CRM is not just software – it's a company policy on how to treat clients
- Profiling is a must – understand as much as possible about your customer so you can serve better
- "Customer-centric" is not a buzz-word – it's common sense
- There is no "client service department" – everybody working in an ecommerce store needs to know who the client is, record interactions and treat customers accordingly
- - **Ecommerce catalogue and product display** :- The categorization of the product and product display should be proper.
- - **Marketing and loyalty programs** :- **Loyalty is really hard to acquire these days.** Especially when it comes to ecommerce. Most users will be searching for the lowest price and buy from whomever the seller is. But you can fight the trend with loyalty programs such as **rewarding purchases** reward your users with points they can spend on your store. It's really effective in keeping your customers tied to your brand, as well as making them feel great about it
- **social shopping** – make your customer feel like a king when he can give out discounts and freebies to its peers and friends
- As for marketing at large – there is an increasing number of marketing solutions you can use to market your products and store but not all are alike. Not all are as efficient. Focus on:

- Search engine optimization and paid search results
- Email marketing
- Social media
- Branding
- **Features OF AN E-COMMERCE :-**
 - These are the typical features of an e-commerce system available both on back office and front office.
 - - **Registration** :- In order to make a purchase, users must register with the site, providing all the information needed for shipping and billing. The data will be stored on a database and will be available from the back office.
 - - **Basket / shopping cart** :- The basket is a tool that, like a shopping basket, allows users to select the products they want and then go to the checkout for payment.
Managing the basket means:
 - summarising user requests within the possibilities offered by the catalogue
 - checking the basket and possibly cancel/modify the items placed in it
 - starting the payment process for the selected products
 - - **Payment** :- The payment system is a mechanism that facilitates dialogue between the parties involved in financial transactions: the bank, the store and you with your credit card. After filling in the order, the customer enters his/her credit card number that travels along a channel solely accessible to the bank. The bank checks the customer's account and decides whether or not to authorise the payment. The operation takes a few moments. If approved, the bank performs the transaction and transfers the payment to the account. If denied the user is notified that the transaction cannot be completed and his order is cancelled.
 - **Product management** :- This is the main part of the e-commerce system and provides all the features required for product placement, order fulfilment, etc., key to the management of online sales. Product

management this makes it possible to define a product via a set of standard fields:

- product code
 - category
 - subcategory
 - product name
 - description
 - image, zoom
- - **Order management** :- The order is the card that summarizes all the delivery and order information to enable correct delivery. It includes:
 - list of products purchased
 - user information
 - details of place of delivery
 - delivery time information
 - payment information
 - Managing the order means crossing the information on the registration database, the data in the basket, the delivery information and verification data relating to the payment credit rating. All this information is summarised in a form identified by a number or reference code (order number).
 - **GST and shipping costs** :- In addition to the cost of products purchased, the system manages the GST and the shipping charges.
The e-commerce module is able to manage GST rates in countries
Shipping costs both fixed and variable based on the weight and volume of the shipment.
 - **Discounts**
Discounts and promotions are managed for a single product or product category.

- This second phase of the site requires a detailed analysis of your current storage and order management systems with which it will be necessary to integrate.
- Functions of ecommerce :-
 - - **Selecting New Products** :- Sell what the customer wants to buy, not what you want to sell! This is a common mistake, especially when merchandisers are given a great price to sell a particular product. If nobody wants to buy that product, it doesn't matter what price you set it at.
 - Find out what customers want. What is your value proposition on products you sell? Capitalize on your niche!
 - - **Merchandising New Productions** :- Pictures, pictures, pictures! It is very important to have high-quality images of the products . Promote the latest releases in your newsletters and feature them in categories or on your homepage.
- Market to customers who have purchased related items in the past.
- Customer Service :-Be proactive, and engage customers on the site constantly. if a customer stays on a page for some time, chances are they need help. Prompt the customers, and see if he/she would like to chat with one of the representatives. Business and technical teams should look into what the "friction" is, and address accordingly.
- Provide delivery estimation. If customers subscribe to the notification, ensure that you push any shipment updates information to customers via different channels (e.g., email / SMS). Customers should not need to login and research the status of their orders.
- Deliver orders on time.
- Reship promptly if a package failed to be delivered to the customer, if it was damaged, or if it had missing parts. If an order was not delivered to customers within the estimated timeframe due to package loss, the system should determine if an order should be re-shipped. At the same time, a

notification should be sent to customers and let them know of the delay or that the order has been re-shipped.

- In order to retain customers' loyalty, we need to make sure customers feel comfortable with the purchase experience. We must earn their trust. With trust, customers will come back again.
- **Ecommerce Communication** :- Communication between seller and purchaser on a ecommerce platform. Generally it is done in electronic way.
- There are two types of ecommerce communication:-
 - - Presales communication:- Everything about your website constitutes your communication. You have to make sure that your communication is effective, consistent, and builds confidence in the mind of the customer.
 - - Post sales communication :- The customer has already paid you money. post-sales the customer is only interested in the service she gets. This service could be in the form of:
 - When will my product be delivered?
 - How do I use my product?
 - How do I get my product repaired?

How do I buy accessories or consumables for my product

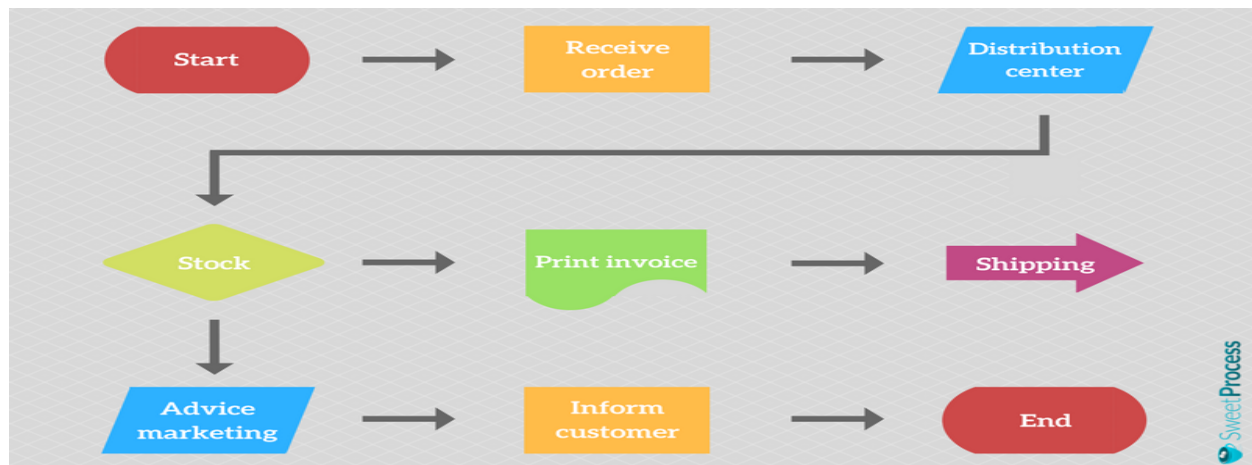
- Tools for communication :-
 - - **Live Chat** - It has the benefits of getting the problem solved right now .
 - - **Email** - email support is an absolute must-have for any e-commerce player.
 - - **Phone Support**- phone support is also considered to be resource-intensive. But the demand for phone support is so high that most e-commerce players end up providing it.

- - **Product Descriptions**- Though product descriptions are not personalized they influence the customer to a great extent. In addition to adding value to the customer, original content also assists in SEO(search engine optimization)
- - **Advertisements** - Your advertisements are one of the most expensive modes of communication.
- - **User Generated** - This user-generated content could be in the form of buyer reviews, comments, queries, discussion boards, shared images, and videos.

Transaction Capabilities:- provide facility to buyer or seller to perform online transactions using internet.

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Ecommerce business process:-

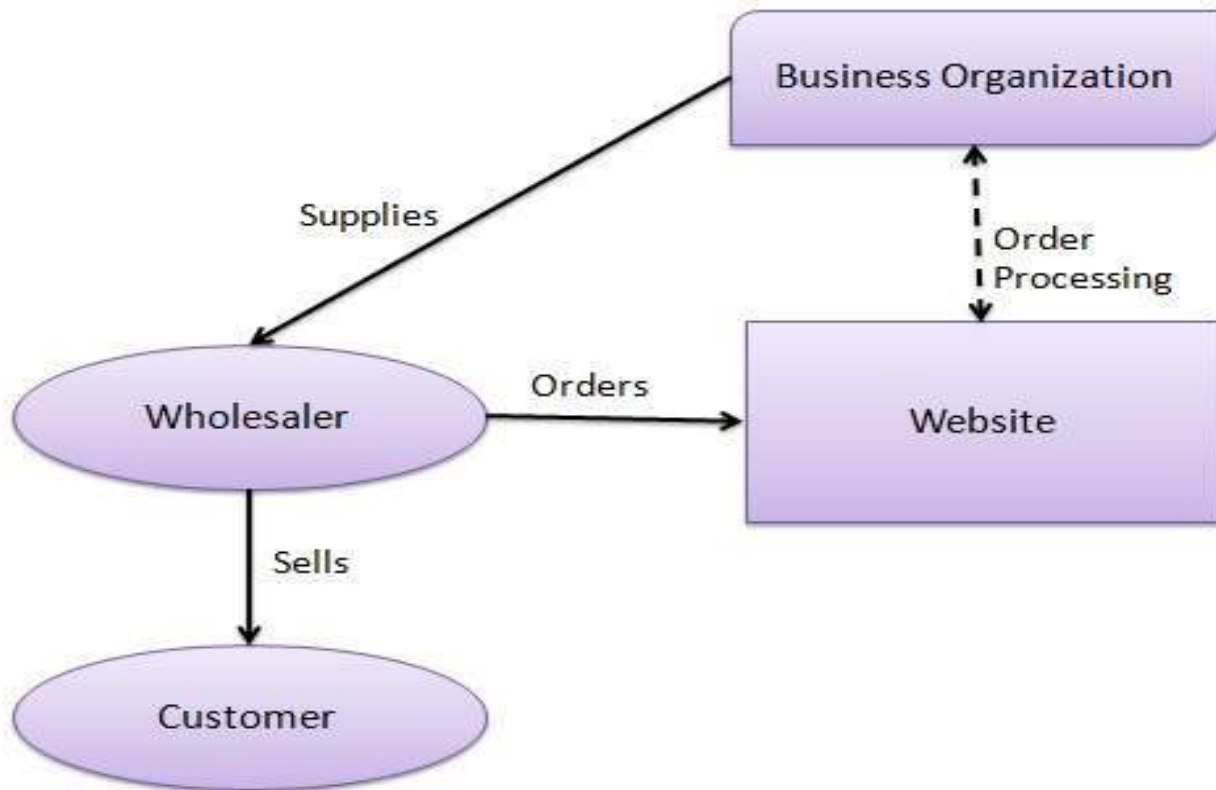


- E commerce services includes :-
- - Inventory management
- - order and shipping management
- - payment and invoice management

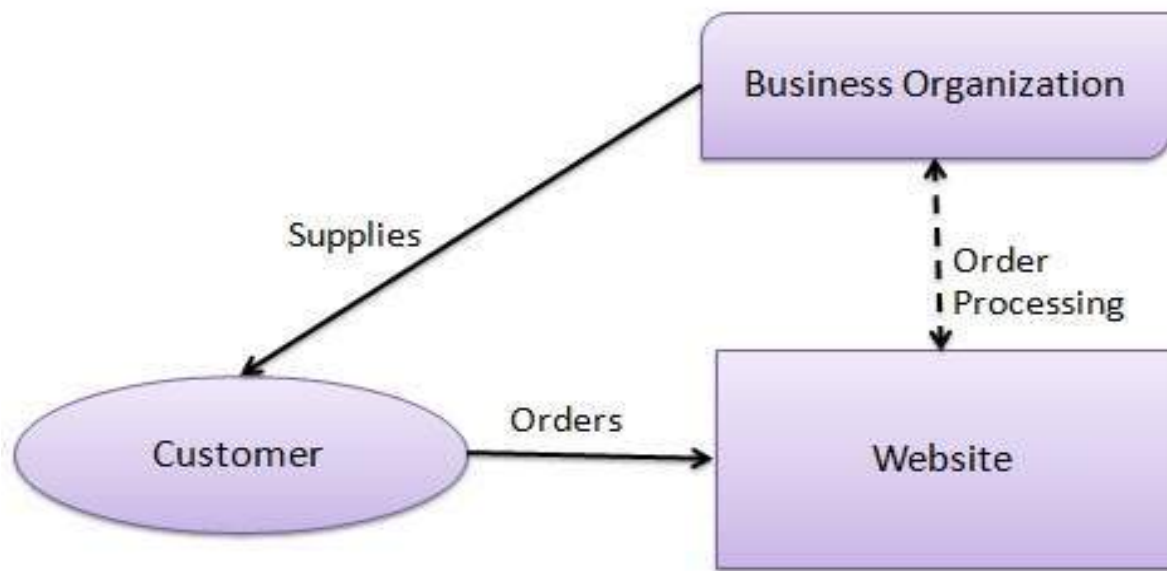
- - Refunds and returns management
- Transaction capabilities: - The customer can perform transaction of any size and through various modes. The transaction size may be from few rs. To even crores of rs.modes of transaction are -
 - Credit/debit cards , Internet banking , Ewallets , COD (cash) , Mobile payment.
- Role of internet and web in ecommerce :-
 - - Customers visiting business sites can make all necessary transactions using the internet without the hassle of going to the actual store.
 - - They can even view and buy anything in the website 24x7.
 - - Updates on order status and delivery schedule can also be known through the internet.
 - - The customer is well informed about his purchase ,from choosing the product to actually getting it.
 - - Customer can view details technical specifications of products even if they are miles away from the supplier.
 - - Customer can have more personal connection with the business through the internet and business can have continues communication with the customer with the internet , making follow ups on pending orders has became easier. Even payment of orders has became simple secured and trouble free through the use of world wide web.
 - **Pre-requisite of ecommerce:-** following are the requirements of building a successful ecommerce store.
 - - Smart navigation
 - - Simple design
 - - Quick checkout
 - - Brand Recognition
 - - Marketing support

- E business models:- E-commerce business models can generally be categorized into the following categories.
- - Business - to - Business (B2B)
- - Business - to - Consumer (B2C)
- - Consumer - to - Consumer (C2C)
- - Consumer - to - Business (C2B)
- - Business - to - Government (B2G)
- - Government - to - Business (G2B)
- - Government - to - Citizen (G2C)

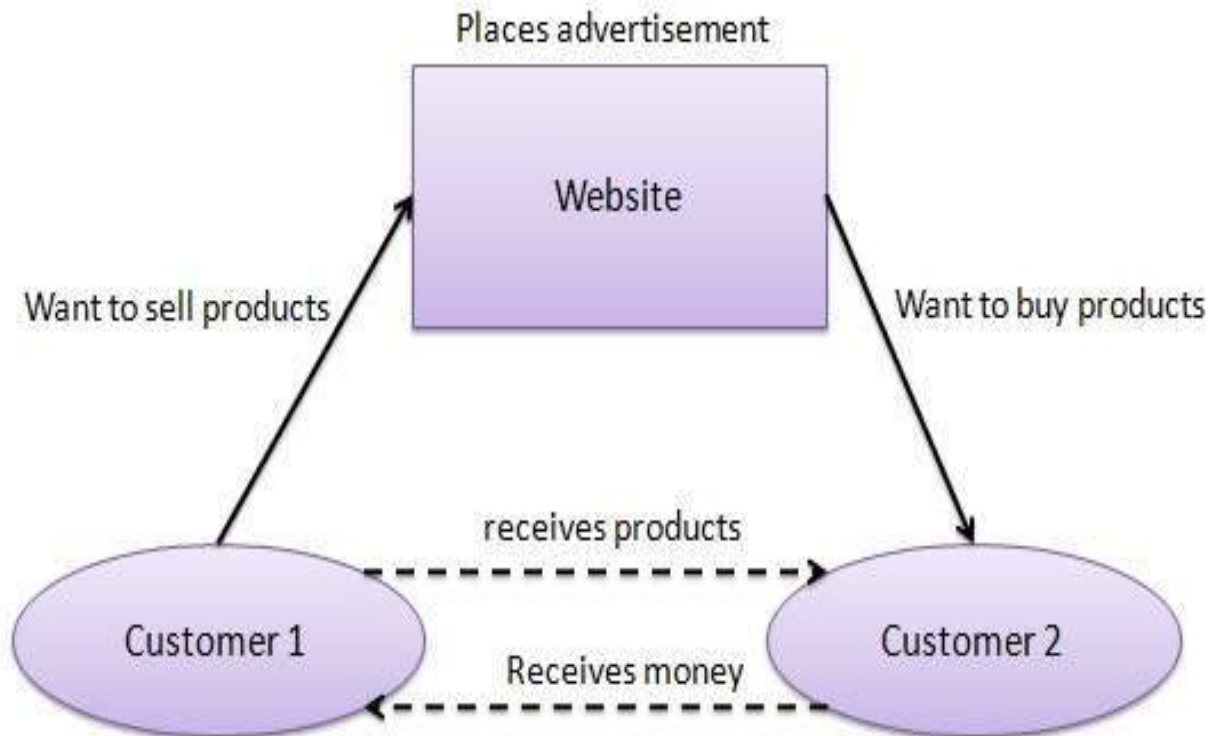
- Business - to – Business (B2B) :-
- A website following the B2B business model sells its products to an intermediate buyer who then sells the product to the final customer. As an example, a wholesaler places an order from a company's website and after receiving the consignment, sells the end product to the final customer who comes to buy the product at one of its retail outlets.



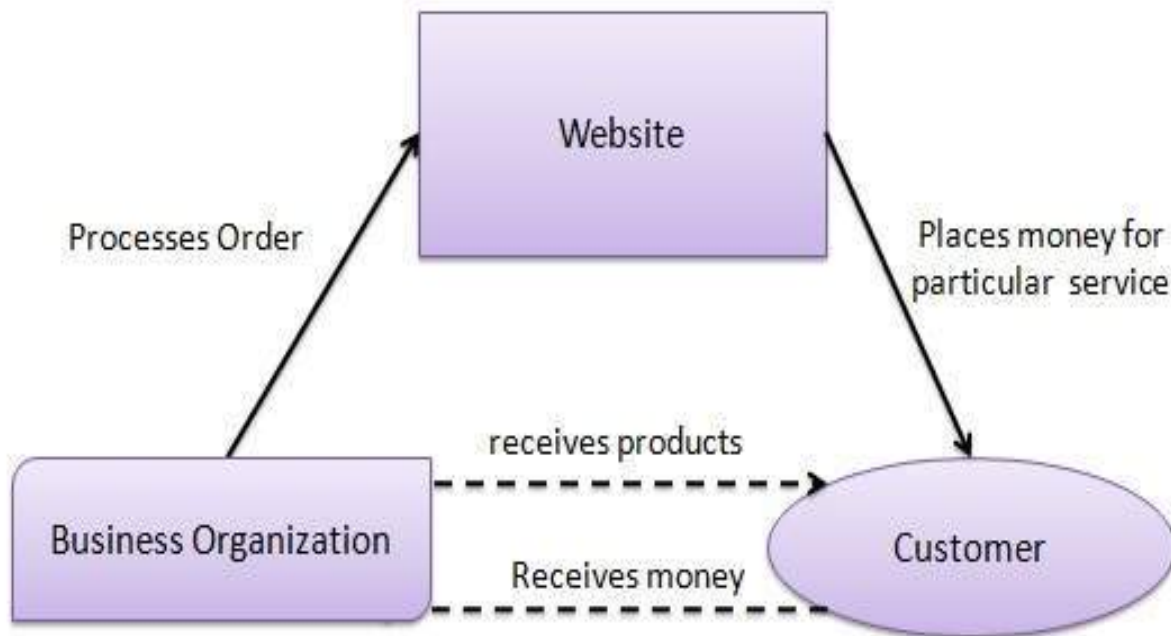
- Business - to – Consumer (B2C):-
- A website following the B2C business model sells its products directly to a customer. A customer can view the products shown on the website. The customer can choose a product and order the same. The website will then send a notification to the business organization via email and the organization will dispatch the product/goods to the customer.



- Consumer - to – Consumer (C2C):-
- A website following the C2C business model helps consumers to sell their assets like residential property, cars, motorcycles, etc., or rent a room by publishing their information on the website. Website may or may not charge the consumer for its services. Another consumer may opt to buy the product of the first customer by viewing the post/advertisement on the website.



- Consumer - to – Business (C2B):-
- In this model, a consumer approaches a website showing multiple business organizations for a particular service. The consumer places an estimate of amount he/she wants to spend for a particular service. For example, the comparison of interest rates of personal loan/car loan provided by various banks via websites. A business organization who fulfills the consumer's requirement within the specified budget, approaches the customer and provides its services.



- Business - to – Government (B2G):-
- B2G model is a variant of B2B model. Such websites are used by governments to trade and exchange information with various business organizations. Such websites are accredited by the government and provide a medium to businesses to submit application forms to the government.

