PERIYAR UNIVERSITY

(NAAC 'A++' Grade with CGPA 3.61 (Cycle - 3)

State University - NIRF Rank 56 – State Public University Rank 25

SALEM - 636 011, Tamil Nadu, India.

CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

BACHELOR OF COMMERCE – (B.COM)

SEMESTER - III

ELECTIVE COURSE III : E-COMMERCE

(Candidates admitted from 2024 onwards)

PERIYAR UNIVERSITY

CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

2024 admission onwards

ELECTIVE COURSE III : E-COMMERCE

Prepared by:

Centre for Distance and Online Education (CDOE)

Periyar University, Salem - 636 011.

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Course Outcomes	On completion of this course, students will
CO1	Understand the role and features of world wide web
CO2	Understand the Benefits and model of e-tailing
CO3	Use the web enabled services
CO4	Tackle the threats in internet security system
CO5	Know about the Ethical principles Privacy and Information Rights
	Reading List
1	Kenneth C. Laudon, E-Commerce: Business,Technology,Society,4theEdition, Pearson Education Limited, NewDelhi
2	S.J. Joseph, E-Commerce: an Indian perspective, PHI Learning Pvt. Ltd., New Delhi
3	David Whitley, E-Commerce-Strategy, Technologies & Applications, TMI, McGraw-Hill, London
4	Kamlesh K. Bajaj, E-Commerce-The cutting edge of business, TMH, McGraw- Hill,Noida
5	WClarke ,E-Commerce through ASP -BPB, Wrox Publisher, Mumbai
Reference Books	
1	Agarwala, K.N. and D. Agarwala, Business on the Net : What‘s and How‘ s of E-Commerce ,Mc Millan Publisher India Pvt .Ltd., Chennai
2	Ravi Kalkota, Frontiers of E-Commerce, TM,Pearson Education Limited, New Delhi
3	EliasMAwad,ElectronicCommerce:FromVisiontoFulfillment.PHILearning Pvt. Ltd.,New Delhi
4	Mathew Reynolds, Beginning E-Commerce with Visual Basic, ASP, SQL Server 7.0&MTS,Wrox Publishers, Mumbai
5	J.Christopher West Iand Theodore H. K Clark Global Electronic Commerce-Theory and Case Studies,The MIT Press, Cambridge, London

UNIT 1

OBJECTIVES

In this unit, learners will have a Definition of E-Commerce, Main Activities of Electronic Commerce, and Benefits of E-Commerce. Broad Goals of Electronic Commerce, Main Components of E-Commerce, Functions of Electronic Commerce, Process of E-Commerce, Types of E-Commerce and have understanding about The World Wide Web, The Internet and the Web, Features, and the Role of Automation & Artificial Intelligence in E-Commerce.

1. INTRODUCTION TO E - COMMERCE

SECTION 1.1: E-COMMERCE - AN INTRODUCTION

Electronic commerce (e-commerce) refers to companies and individuals that buy and sell goods and services over the internet. E-commerce operates in different types of market segments and can be conducted over computers, tablets, smartphones, and other smart devices. Nearly every imaginable product and service is available through e-commerce transactions, including books, music, plane tickets, and financial services such as stock investing and online banking. As such, it is considered a very disruptive technology.

As noted above, e-commerce is the process of buying and selling tangible products and services online. It involves more than one party along with the exchange of data or currency to process a transaction. It is part of the greater industry that is known as electronic business (e-business), which involves all of the processes required to run a company online. E-commerce has helped businesses (especially those with a narrow reach like small businesses) gain access to and establish a wider market presence by providing cheaper and more efficient distribution channels for their products or services. Target (TGT) supplemented its brick-and-mortar presence with an online store that allows customers to purchase everything from clothes and coffeemakers to toothpaste and action figures right from their homes.

Providing goods and services isn't as easy as it may seem. It requires a lot of research about the products and services you wish to sell, the market, audience, competition, as well as expected business costs. Once that's determined, you need to come up with a name and set up a legal structure, such as a corporation. Next, set up an e-commerce site with a payment gateway. For instance, a small business owner who runs a dress shop can set up a website promoting their clothing and other related products online and allow customers to make payments with a credit card or through a payment processing service, such as PayPal.

1.2 Main Activities of Electronic Commerce

Major activities are like:

- Personalized customer services
- Shipping of the products
- Producing financial statements
- Transfer of funds
- Procurement of materials required by business
- Corporate development
- Required research work for the business
- Buying and selling of products and goods

Buying and selling of different types of products.

E-commerce refers to the process of buying or selling products or services over the Internet. Online shopping is becoming increasingly popular because of speed and ease of use for customers. Selling online can help reach new markets and increase sales and revenue gains. People can use the Internet to find sales leads, announce calls for tender, and to offer products for sale (either through your own website or through an e-market place site Searching for products and services online can save time and money by allowing to find the best prices in the market. Internet can be used to find new suppliers, post buying requests or search for products and services. The benefits of e-commerce include lower costs associated with selecting suppliers, establishing prices, ordering, and finalizing transactions. Online trading networks can also be used to support efficient information exchange between buyers and sellers.

- **Fast Order Processing:** With e Fulfillment Service, the orders go out the door quickly, and accurately.

- **Ship Confirmations:** Once an order leaves the fulfillment center a confirmation for the order is sent through email or a mobile phone to the customer.

- **Information:** In addition to email ship confirmations it is also made easy for the customers to check tracking information on the website.

- **Delivery:** Once the order is confirmed the product is delivered to the customer.

1.3 Benefits of e - Commerce

Accelerated Time-to-Market

E-commerce platforms are now proficient in handling web hosting, PCI compliance, platform upkeep, and other things. As a seller, you only need to create an account before you can start selling on ecommerce marketplaces. This will make your online store presence more advanced. It will definitely be better than brick and mortar stores. These SaaS-based E-commerce platforms have made it feasible and easy for business owners to build appealing and dependable sites with little work during the past few years. In just one afternoon, you can launch a professional ecommerce website without having much technical or E-commerce skills. Before you need to think about internal resources or hiring a digital firm to advance your website, you may even see significant growth. E-commerce solutions allow you to launch rapidly, and especially if you have a good social media presence, this would get even bigger by spreading word-of-mouth.

There are some of the major benefits of e-commerce are,Top Potential Customers and Overcome Geographical Limitations

There is no longer a geographic boundary. As long as they have an internet connection, people can connect from anywhere in the world. Today, there is a technology that allows everyone to communicate with a business partner in China from a coffee shop in New Jersey, do clothing shopping online while laying in bed, and even attend a

leadership course while on vacation. There is a fact that physical stores limit your options and operations. The globe is your oyster when you have an e-commerce website. Every last geographical restriction has been removed by the introduction of e-commerce.

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Lower Costs

It is quite certain that online shopping saves a lot of dollars than physical stores. The decreased cost of online selling is one of its most obvious advantages for businesses to quickly move the physical store to online business. Retailers and sellers of online businesses definitely benefited but apart from even the consumers largely benefitted from the discounts. Customers can receive a portion of these cost savings in the form of price reductions. Some of the ways that e-commerce can cut expenses are as follows:

So if you are from an advertising and marketing company, you have a larger scope of getting benefitted. There are parts such as Google AdWords for Pay-per-click, social media, and organic search engine traffic are some of the advertising channels that can be economical.

The brick-and-mortar store has now migrated from physical stores to online businesses because of the benefits it offers. The number of personnel needed to run an ecommerce store is reduced by the automation of checkout, billing, payments, inventory management, and other operational activities. A conspicuous physical location is not necessary for an online retailer. This one should be obvious.

Variety, Convenience, and Secure Way of Selling Online

E-commerce businesses are capable of giving a plethora of goods, and products online. Online shoppers can shop from their comfort zones like their homes or offices or any other convenient place with affordable pricing. There are goods that are made in the USA, China, England, Paris, the UAE, or any other country in the global online marketplace, which is the internet. Online retailers offer an unmatched breadth and depth of products.

As seen in this COVID that you can buy anything online. You now inhabit post covid to shop everything online. Whenever you want something and from wherever you want, it is preferred and far safer. Putting the corona virus aside, there's something to be said about buying from your bed, avoiding having to go outside, standing in lines, and all the other hassles associated with consumers.

No Time Restrictions

In contrast to conventional stores, which frequently have set business hours, your e-Commerce website won't be subject to any time restrictions. The sales system can continue to operate seven days a week, around the clock. As a result, since access to your products and services is no longer limited by store hours, you as an e-Commerce business may see an increase in sales and profits.

The growing use of Chabot's in customer support will ensure availability around the clock without paying for staff to be present. The normal consumer will always value that availability around-the-clock.

Customer Data Insights

Your costs may be decreased via data analytics. You won't squander your money on fruitless activities because the analytics help you understand what is profitable and what is not. There are lots of tools available for data analysis such as Crazy Egg, Google Analytics, KISS metrics, etc.

Data analysis opens up new avenues. Numbers conceal the requirements and desires of consumers, giving you concrete evidence of what they truly want. When you are armed with the information, change happens in the form of brand building and the introduction of new products.

Data analytics trends can be useful to improve inventory management. Prior to the invention of technology, it was challenging to forecast how much of each product will be required at a particular time, such as the holiday season. Additionally, measured data shows a precise supply and demand formula.

Streamline and Manage the Inventory Management

It is significantly simpler to scale your online business and manage inventory when you have an e-Commerce website. To establish an E-commerce store, all you theoretically need is one person and one website, and then you can expand. Your profit margins will improve as your sales grow. You can expand your product line and your firm with little additional expense as your revenue grows.

E-commerce websites also make it easy to monitor inventories and modify the product line in response to general business performance. The bottom line is that you can expand your e- Commerce business as and when your sales increase. For any business owner, managing your inventory might seem like something you can put off, but doing so could harm your company. This article will lead you through practical inventory management advice that will enhance your interactions with retailers.

Optimizing your warehouse layout is another technique to simplify inventory management. You might discover that having a consistent method better benefits your

brand when you grow your firm to serve additional customers, particularly retail clients and other business-to-business transactions.

- For better inventory management, rack and organize all stock.
- Product updates and listing throughout all sales channels at once.
- Follow the fulfillment of orders across various sales channels and locations.
- Continually monitor the rate at which particular products are sold online.
- Get alerts when a purchase is made or when it's time to restock critical stock.
- When you reach your reorder milestones, create buy orders to avoid running out of stock and missing out on offers.

Expanding the Reach for New Customers

Up to 87% of your potential clients will begin their search for particular goods or services online, to be exact. The present information suggests that online marketplaces are the area where potential clients are doing the majority of their shopping. Thus your company should make an effort to meet them there. Pushing a cart through the store, attempting to find the appropriate aisle, or finding the item are no longer the main aspects of shopping.

There are many ways to expand your consumer base, but consulting with specialists may help you create effective marketing plans that really resonate with your target demographic. Additionally, it's a smart idea to interact with prospects, brand-new clients, and devoted clients using social media and a number of digital marketing tactics. Furthermore, combining offline and online marketing strategies increases the visibility of your business among a wider demographic. You may reach a larger audience with the aid of a multi-channel strategy, which will also help you boost traffic and sales.

1.4 Broad Goals of Electronic Commerce

E-Commerce Business Can Go Global

Scaling up a business with more floor space and the associated cost, staff, and shelf space is a tough task. In contrast, one of the less obvious benefits of eCommerce is how easy it is to expand an online store. The things you need are digital adjustments, and perhaps more storage space, which is much less expensive than storefront space. Being online also eliminates the need to establish a new location because you are already accessible to a worldwide market.

A specialized, constrained audience is served by physical retail, which is geographically constrained. Your customer base's location and the areas you can serve are determined by where you are. Without switching your office-based firm to the Internet, there is no way to circumvent these geographical limitations and go worldwide. The problem with E-commerce platforms is that they can turn the entire world into a possible market for your company, making where you are irrelevant. You can reach and engage a far wider target audience when you operate on a global basis. It creates extra chances to expand your clientele, manage your company remotely, and generate revenues before your regional rivals.

Business Growth

With the help of ecommerce, it is simpler to advance and carry out your day to day selling. Product management costs are lower, you can easily highlight the goods you want to sell, advertising is more readily available, and there are numerous tips and tricks for generating more sales. Keep transparency in mind throughout the process. If you want to grow your business, you must constantly be sincere with your clients. The reason for this is quite simple.

In order to keep up with the growth of your online store, businesses might have to take a few steps in favor of their consumers. Start with creating a mobile-responsive website, so it automatically adapts to different device sizes. You can also run a quick quality

check to ensure all the buttons are easily clickable, displaying the content correctly, and the scrolling is a breeze. This will improve digital customer experience and ultimately benefit enterprises for business growth. Businesses can try to streamline the browsing experience, search, and checkout processes with autofill suggestions to improve the customer experience. Feedbacks are another essential milestone which contributes successfully to businesses.

1.5 Main Components of E-Commerce

At its invention, e-commerce was a skeptical idea at first. But today it is the big thing taking over our daily lives. As a result, every entrepreneur is looking to have or has an online store to sell their products and services. With the great competition on the internet, marketing and luck aren't just enough for a successful online store. You may want to consider these key e-commerce components to avoid unnecessary losses and expenses.

1. Dynamic Pricing

With dynamic pricing, you automatically satisfy different clients due to various prices based on their specific attributes. Your e-commerce solution can straightforwardly benefit from dynamic pricing by utilizing a promotions engine. Promotions engine in conjunction with machine learning will help you to dynamically determine pricing that varies according to funnel stage, geography, and other considerations.

2. Supply Chain and Management

You can't make sales in this increasingly competitive market if you don't have the correct products, offer the market price, and delivered at the right time. So, a fantastic idea is important for good traffic, and to convert that traffic into sales.

Before online commerce, the importance of suppliers could not be overstated. Now, this holds truer than ever. In e-commerce, suppliers cannot only offer you the appropriate merchandise but also relieve you of the responsibility of stocking your warehouse

3. Customer Engagement

A good first impression is important in turning potential customers into actual customers. It is a representation of your online presence, so you will need originality in your website. Investing in the greatest design for your website can leave a lasting impression, and ensuring that it is easy to navigate may provide customers with a satisfying experience when they are buying on your site. You have the option of going with a design that is less stylish or choosing daring themes and colors to represent your website.

Pages that make up your website are equally important. Your "About Us" page should provide information regarding the target market for your company, its location, and the kind of customers it caters to. Also, include a distinct description of each of your products and high-quality photographs. Your customer satisfaction will increase with the FAQs page on your website that addresses the fundamental inquiries of your clients.

4. Video and other types of rich content

Rich product information makes your listings stand out from the competition by providing customers with more tempting material to evaluate your products, such as thorough descriptions, reviews, and videos. You can improve the quality of your items by adding reviews and descriptions that are tailored to the tastes of individual customers by utilizing software for product information management (PIM).

5. Shipping and returns

You can market and exhibit your products online, but they still need to be packaged and delivered to their final destination in the real world. Because of this, you are going to require a good warehouse management system and an excellent shipping service.

In most cases, the shipping process is handled by a third party. Employing one of the shipping providers and negotiating your way to a marketable shipping rate is the best thing to do unless you are flush with cash and want to start competing with the likes of

DHL and FedEx. If so, you can employ one of the shipping companies. You will likely be responsible for paying such a payment in the future; therefore, you should pay attention to this possibility.

After you have partnered with these shipping providers, integrate their system with yours so that you can streamline the packaging and delivery of your products. There are times when consumers are unhappy with the products they have purchased. You will be responsible for handling customer returns and issuing refunds for the products they originally purchased. In this case, you and the shipping supplier can work together, but your store will be responsible for all of the communication.

6. Product Quality

The caliber of your offerings has the potential to win over customers' allegiance and confidence. This not only saves you time and money but also lowers the possibility that customers may ask you to return things because they are flawed.

This will give customers the idea that the things you sell online are not of high quality, which is a bad perception. When you reassure customers that the things they purchase from you online are of high quality and authentic, you contribute to a positive first impression and a positive reputation for your business. Obtaining ISO accreditation is another method for earning the target audience's trust.

7. Loyalty and marketing programs

Of course, loyalty and marketing can't do without each other. But for the sake of the discussion, let's just say that perhaps online loyalty programs are so significant that they ought to be treated as a distinct topic from marketing. These days, winning someone's loyalty is quite a challenge, especially when online business transactions are concerned. The vast majority of consumers will look for the best deal and then make their purchase from whoever is offering it. However, you can fight the trend by implementing loyalty programs like the following:

Purchases with rewards – provide your users with rewards that are eligible for purchases from your online store. It is quite useful in maintaining your clients' loyalty to your brand. It also elevates their feelings towards your product or service.

Social shopping – through the use of social shopping, you can make your consumer feel special by allowing him to distribute freebies and discounts to his colleagues and friends.

Reward social media – the majority of people who use the internet have some level of power in the micro-community that consists of their relatives and friends. You should persuade people to take part in your tale, get them to share your items, and reward them with freebies, and discounts, and sometimes just saying "thank you" matters as much.

Regarding marketing in general, there are an expanding number of marketing solutions that you may use to sell both your products and your shop; however, not all of these marketing solutions are the same. Not all of them are as effective as others. Keep in mind:

- Paid search results and search engine optimization go hand in hand.
- Email marketing
- Branding
- Social media platforms

They may not seem like much on their own, but when combined, they have the potential to make the difference between a failing startup and the next big online store.

1.6 Functions of Electronic Commerce

Marketing Activities, Supply Chain Management, and Financial Management are the 3 main functions of E-commerce. In E-commerce, the store website plays an important

role, as it is the most visible part of digital selling. The sale occurs at the store's website, but you need to coordinate other functions to run a business in the online world.

Marketing Activities

It's important to do marketing of your online store and the products you sell to promote business and increase sales. Before performing any marketing activity, you need to do market research and develop a brand strategy. During the research, you will get to know what your customers want and how you can build your store's unique brand identity. While carrying out different marketing activities, digital marketing skills and communication skills play a significant role in enhancing your sales conversions.

Financial Management

Proper finance in the business works as a strong pillar for your company's growth. For managing payments of your online store, you need financial management systems, as they will assist you in tracking your store's sales performance. FMS will also help track your costs and how you can cut down the cost to remain profitable. Of course, it would help if you had financial guidance.

Supply Chain

Each order that you get must physically move from where it is stored to the buyer's location. So, if you want your product to reach the warehouse successfully and to the buyer's place, you must have a sound supply chain system.

1.7 Process of E-Commerce

Along with the explosion of information technology in recent years, e-commerce business is increasingly popular. E-commerce process is applied in almost every company working in this field. While the process of setting up an e-commerce business involves many steps, including deciding on your business model, choosing your product niche, and setting up your online store with the help of a dedicated development team, it's equally important to consider the legal structure of your venture. If you're planning to

start your e-commerce business in the Golden State, understanding how to start an llc in California might benefit your business. This structure can provide personal asset protection, tax flexibility, and potential credibility with customers and partners. Process of E-Commerce Business includes the following elements:

The purpose of marketing is target to potential buyers, engage them to enter your website by using internet advertising, email or creating fairs. In addition, businesses should also establish communities (user groups), forums, chats or customer surveys through surveys to create the return of customers. Customers are indispensable for e-commerce businesses. However, we also need to distinguish two types of purchases:

https://www.magetop.com/blog/process-of-e-commerce-business/

– Purchasing between businesses: A buyer is another business that needs to buy.

– Buying goods between customers and businesses: The buyer is usually an individual who pays by credit card and sends home goods.

Visit website

As soon as a customer enters the website, a business site is downloaded. Now you can start tracking and creating profiles for this customer. Based on that information, you can target the products that this customer is most interested in. This is the first and important step of e-commerce web.

View product

Customers see the product on the website if the item is arranged by stall, category for easy search. Once customers are attracted to the items on sale or promotions, this is really a potential customer. Add to Cart On the e-commerce website, there is always a shopping cart for customers to shop most conveniently and easily. The shopping cart is simply a list of items selected by the buyer, quantity, price, attributes (colors, sizes, etc.) and any other information related to the order. The shopping cart often provides options to clean the basket, delete items, and update quantities.

Check out

As soon as the customer has all the items to buy, they will begin the billing process.

– For the buying model between customers and businesses, customers will usually enter information about shipping addresses and billing.

– Customers can also add information on greetings, gift packs and other information for dependent services.

Shipping charges can be understood simply as charging the whole or as complicated as charging a fee for each item purchased and correlating with the segment the goods must be shipped to. However, it may be more difficult to process international orders.It can then be linked to a provider, tracking goods during transit.

– After calculating the total value of items (including tax and shipping) the buyer will present the payment method.

– The options will vary for transactions:

- + Between customers and businesses usually pay by credit card or pay after delivery
- + Between business and business needs to have available all options, including orders, quotes, guarantees.

– For credit cards, there are options to process credit cards offline or online. The online processing on the internet through services is provided by reputable companies.

After the order is completed, it may be necessary to send the customer a receipt. For a business-to-business e-commerce model, the receipt can be a list attached to the order. For customers, the receipt can be a reprint of the order on the screen or a list sent to the buyer by Email.

In both cases, this process can be easily automated. If you do not automatically process your credit card, you must first process your financial transactions. Standard business rules govern this step, such as ordering by phone or mail. By utilizing professional order processing services, you can efficiently handle and manage these transactions, ensuring accurate and timely processing. Additionally, options can be provided to let customers know about order status, inventory or item supply status, improving transparency and customer satisfaction. As soon as there is a valid order, it needs to be done. This may be the most challenging business stage. If shopping online, there may be difficulties in making an inventory. If procured through the service system there may be problems with the order fulfilment service system.

The final step in the e-commerce process is shipping the goods to customers. Can provide order status to customers. In this case, it may include a number of carriers such as UPS or FedEx for customers to track their shipments.

1.8 TYPES OF E-COMMERCE

E-commerce, also known as Electronic Commerce, refers to the purchase and sale of goods and services through the Internet. The first online transaction occurred in 1994 when a guy sold a Sting CD to a friend via his website Net Market, an American retail platform. This is the first case of a consumer purchasing a product from a business over the World Wide Web, sometimes known as e-commerce. After that, e-commerce evolved to make it easier to locate and purchase products through online merchants and marketplaces.

There are six major models for conducting ecommerce today:

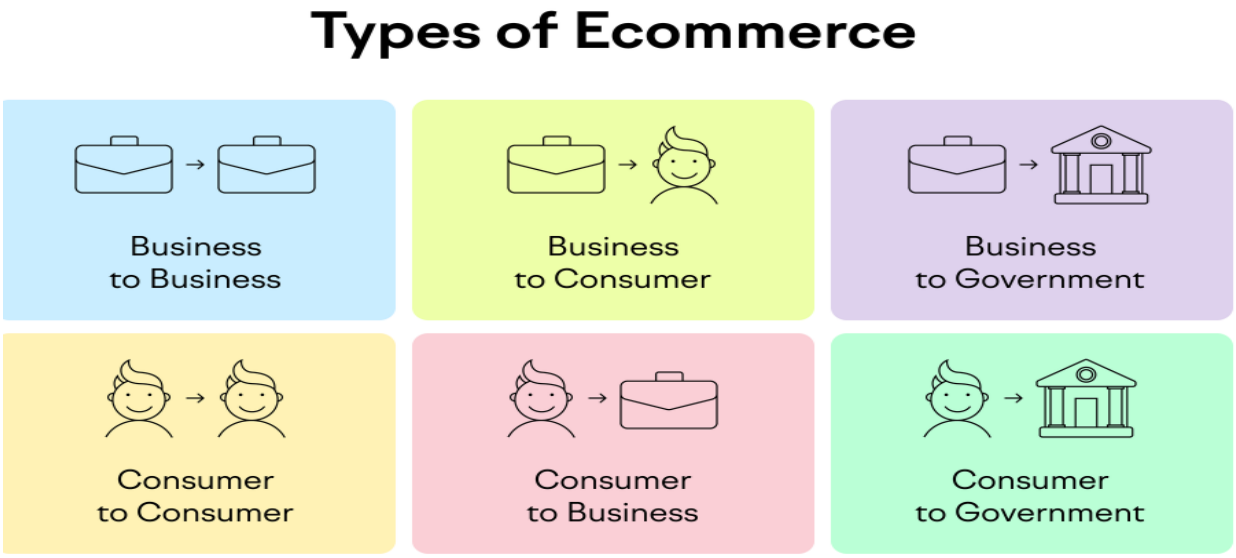
- Business-to-consumer (B2C)
- Business-to-business (B2B)
- Business-to-government (B2G)
- Consumer-to-consumer (C2C)
- Consumer-to-business (C2B)
- Consumer-to-government (C2G)

Use this guide you can learn about each model's unique features, opportunities, and challenges. Plus, discover the best digital marketing tactics for all types of ecommerce businesses.

B2C (Business-to-consumer).

B2C businesses sell directly to their end-users. Anything you buy in an online store as a consumer — from wardrobe and household supplies to entertainment — is done as part of a B2C transaction. The decision-making process for a B2C purchase is much shorter than a business-to-business (B2B) purchase, especially for lower-value items. Because of this shorter sales cycle, B2C businesses typically spend less marketing dollars to make a sale while having a lower average order value and fewer recurring orders than their B2B

counterparts.



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B2C includes both products and services as well. B2C innovators have leveraged technology like mobile apps, native advertising and remarketing to market directly to their customers and make their lives easier.

B2B (Business-to-business).

In a B2B business model, a business sells its product or service to another business. Sometimes the buyer is the end-user, but often the buyer resells to the consumer. B2B transactions generally have a longer sales cycle, but higher-order value and more recurring purchases. Recent B2B innovators have made a place for themselves by replacing catalogs and order sheets with ecommerce storefronts and improved targeting in niche markets.

In 2021, 60% of B2B buyers were millennials — nearly double the amount from 2012. As younger generations enter the age of making business transactions, B2B selling in the online space is becoming more important.

B2B2C (Business-to-business-to-consumer).

B2B2C stands for Business-to-Business-to-Consumer. It is a business model where a company sells its product or service in partnership with another organization to an end customer.

Unlike when you white label a product — where a company rebrands an item to present it as its own — the end customer understands that they are buying a product or using a service from the original company

B2G (Business-to-government).

Business-to-government (B2G) is an ecommerce model where a business sells and markets its products to government entities or public administrations — whether local, county, state or federal. This model relies on the successful bidding of government contracts. A government agency will typically put up a request for proposal (RFP) and ecommerce businesses will have to bid on these projects. While a more secure business model, B2G differs from other businesses or consumers. The bureaucratic nature of government agencies often leads to a much more glacial pace, which can limit potential revenue streams.

C2B (Consumer-to-business).

C2B businesses allow individuals to sell goods and services to companies. In this ecommerce model, a site might enable customers to post the work they want to be completed and have businesses bid for the opportunity. Affiliate marketing services would also be considered C2B. The C2B ecommerce model's competitive edge is in pricing for goods and services. This approach gives consumers the power to name their prices or have businesses directly compete to meet their needs. Recent innovators have used this model creatively to connect companies to social media influencers to market their products.

D2C (Direct-to-consumer).

A direct-to-consumer business sells its own product directly to its end customers, without the help of third-party wholesalers or online retailers.

As opposed to other business models such as B2B2C, there is no middle man between the consumer and a business.

C2C (Consumer-to-consumer).

C2C ecommerce businesses — sometimes referred to as online marketplaces — connect consumers to exchange goods and services and typically make their money by charging transaction or listing fees.

C2C businesses benefit from self-propelled growth by motivated buyers and sellers, but face a key challenge in quality control and technology maintenance. Online businesses like Craigslist, Walmart, Alibaba and eBay pioneered this model in the early days of the internet.

1.9 The World Wide Web

All public websites or web pages that people may access on their local computers and other devices through the internet are collectively known as the World Wide Web or W3. Users can get further information by navigating to links interconnecting these pages and documents. This data may be presented in text, picture, audio, or video formats on the internet. WWW stands for World Wide Web and is commonly known as the Web. The WWW was started by CERN in 1989. WWW is defined as the collection of different websites around the world, containing different information shared via local servers (or computers).

Web pages are linked together using hyperlinks which are HTML-formatted and, also referred to as hypertext, these are the fundamental units of the Internet and are accessed through Hyper Text Transfer Protocol (HTTP). Such digital connections, or links, allow users to easily access desired information by connecting relevant pieces of

information. The benefit of hypertext is it allows you to pick a word or phrase from the text and click on other sites that have more information about it.

Working of WWW

A Web browser is used to access web pages. Web browsers can be defined as programs which display text, data, pictures, animation and video on the Internet. Hyperlinked resources on the World Wide Web can be accessed using software interfaces provided by Web browsers. Initially, Web browsers were used only for surfing the Web but now they have become more universal.

The below diagram indicates how the Web operates just like client-server architecture of the internet. When users request web pages or other information, then the web browser of your system request to the server for the information and then the web server provide requested services to web browser back and finally the requested service is utilized by the user who made the request.

Web browsers can be used for several tasks including conducting searches, mailing, transferring files, and much more. Some of the commonly used browsers are Internet Explorer, Opera Mini, and Google Chrome.

https://media.geeksforgeeks.org/wp-content/uploads/20240229113623/WWW-660.jpg

Features of WWW

- WWW is open source.
- It is a distributed system spread across various websites.
- It is a Hypertext Information System.
- It is Cross-Platform.
- Uses Web Browsers to provide a single interface for many services.
- Dynamic, Interactive and Evolving.

Components of the Web

There are 3 components of the web:

- Uniform Resource Locator (URL): serves as a system for resources on the web.
- Hyper Text Transfer Protocol (HTTP): specifies communication of browser and server.
- Hyper Text Markup Language (HTML): defines the structure, organization and content of a web page.

WWW	Internet
It is originated in 1989.	It is originated in 1960.
WWW is an interconnected network of websites and documents that can be accessed via the Internet.	Internet is used to connect a computer with other computer.

WWW	Internet
WWW used protocols such as HTTP	Internet used protocols such as TCP/IP
It is based on software.	It is based on hardware.
It is a service contained inside an infrastructure.	There is a entire infrastructure in internet.

1.10 The Internet and the Web: Features

Internet Features:

1. Global Network: The Internet is a worldwide system of interconnected computer networks that use standardized communication protocols (TCP/IP) to connect devices.
2. Decentralized Structure: The Internet is not controlled by any single organization or government, providing users with access to information from various sources globally.
3. Data Transmission: It enables the transfer of data (text, audio, video) between connected devices in real-time or near real-time, facilitating communication and collaboration.
4. Multiple Services: The Internet provides a range of services like email, file sharing, online gaming, and cloud storage, beyond just web browsing.
5. Security and Privacy: Though the Internet offers immense accessibility, it requires protective measures (encryption, firewalls, VPNs) for secure communication and data protection.

Web Features (World Wide Web):

1. Hypertext and Hyperlinks: The Web is based on the concept of hypertext, allowing users to click on hyperlinks and navigate between web pages seamlessly.
2. Multimedia Content: It supports a rich variety of multimedia content, including text, images, audio, video, and interactive elements like animations or games.
3. Web Browsers: The Web is accessed through browsers (e.g., Chrome, Firefox, Safari), which interpret and display HTML (HyperText Markup Language) content from web servers.

4. Search Engines: The Web features search engines (like Google and Bing) that index web pages and help users find information easily.
5. Dynamic and Interactive: Modern websites often use technologies like JavaScript, CSS, and APIs to create dynamic, interactive user experiences, allowing personalized content and real-time updates.

1.11 Role of Automation & Artificial Intelligence in E- Commerce

ChatGPT's rise has sparked worldwide interest in AI, particularly among online retailers. As of now, approximately 50% of retailers claim to use AI in some form. The AI market in retail is valued at 7.34 billion USD in 2023, highlighting its growing importance in the industry. As expected this surge has led to a greater focus on AI-driven business solutions. However, it's crucial to distinguish between AI and automation. Although they seem similar, key differences exist, especially in their application in retail. Automation platforms include a broad range of technologies and methods, streamlining various aspects of online retail operations. IPaaS being the category name for such platforms.

IPaaS (Integration Platform as a Service)

In online retail, iPaaS (Integrated platform as a service) is well known for providing automation solutions. Consider Mike, an inventory manager at an online retail business. Every week or so, he must update stock levels across various platforms such as Shopify, Amazon and others, a task that involves checking and reconciling thousands of items. A small human error in this manual process can lead to significant inventory problems.

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To overcome this challenge, all he needs is an iPaaS (Integration Platform as a Service) that syncs inventory across multiple sales channels simultaneously in a real time manner. This leaves no room for manual errors. IPaaS in fact offers an end to end solution where you can automate the retail processes right through product listings, catalogue, inventory, order, accounting and more. All of these automated capabilities free up an online retailer to focus on critical aspects such as supplier relationships and marketing which are essential for scale and growth.

RPA: Robotic Process Automation

To be clear, these do not involve physical robots like the ones used by large retailers in their warehouses; they are software bots. Their role is to automate small, repetitive, rule-based tasks such as updating customer records or processing orders. They can work independently or under human supervision. The process of RPA begins with data collection from multiple sources. For instance, extracting product IDs, quantities, customer shipping details, and payment information. Next, the data is transformed and categorized, prioritizing products based on delivery deadlines and inventory levels.

Finally, the bots deliver the output, updating the inventory system and completing the order processing cycle. However, it's important to note that these bots are pre-programmed for specific tasks and this means they operate well within a defined framework but can't adapt to changes or new scenarios independently. For example, if an online retail store introduces a new product line or changes its order processing software, RPA bots would require reprogramming to handle these changes

Artificial Intelligence

AI serves as the decision engine in Intelligent Automation because it can operate independently or with minimal human input. According to retail leaders, AI's significant impact lies in customer intelligence (53%), inventory management (50%), and chatbots for customer service (49%). However, AI's most prominent role in the retail industry is in driving sales and marketing.

Personalized Product Recommendation:

Retailers now easily gather data on customer preferences, shopping history, and behaviours. By utilizing machine learning algorithms, this data is analyzed to tailor product suggestions more effectively.

This approach not only enhances the customer experience but also drives targeted marketing campaigns, leading to higher sales and customer satisfaction.

Demand Forecast:

AI helps retailers accurately forecast demand by analyzing historical sales data, particularly for high-traffic events such as BFCM (Black Friday Cyber Monday).

By integrating currently important metrics like real-time customer analytics, retailers can precisely adjust their inventory, aligning supply with projected demand to maximize efficiency and minimize excess stock.

Customer Support: AI chatbots offer round-the-clock customer support, addressing issues like product replacements, returns, and specific order related problems instantly.

While they efficiently handle basic to medium-level queries, human intervention remains crucial for financial issues like initiating refunds.

Let us Summary

Unit one describes the Activities of Electronic Commerce, Benefits of E-Commerce and Goals of Electronic Commerce It also elaborately, discusses about Components of E-Commerce, Functions of Electronic Commerce and types of E-Commerce. This unit helps to understands how the recent technologies like World Wide Web, Automation & Artificial Intelligence are took part in E-Commerce

Test your Skills

1. ____ is not a major type of electronic commerce.

. (a). Consumer to Business

(b) Business to Consumer

(c) Business to Business

(d) Consumer to Consumer

2. . Which of the following describes the definition of electronic commerce?

(a) Doing business

(b) Sale and purchase of goods

(c) Doing business electronically

(d) All of the above mentioned

3. Which e-commerce model involves the sale of goods or services from businesses to the general public?

(a) Business to Government

(b) Business to Consumer

(c) Business to Business

(d) Consumer to Business

4. _____mainly deals with buying and selling, especially on a large scale.

(a) Shopping

(b) Commerce

(c)Retailing

(d)Distribution

5. E-Commerce stands for _____.

(a) Electrical Commerce

(b) Electronic Commerce

(c) Entertainment Commerce

(d)ElectroChemical Commerce

Check the Answers:

1. d
2. c
3. b
4. b
5. b

Glossary of Terms

1. Shopping Cart

A software or feature that allows customers to select products, review their selections, and proceed to checkout.

2. Payment Gateway

A service that processes and authorizes credit card payments or direct payments for online retailers.

3. SSL (Secure Sockets Layer)

A standard security technology used to establish an encrypted link between a web server and a browser, ensuring secure data transmission.

4. Conversion Rate

The percentage of website visitors who complete a desired action, such as making a purchase or filling out a form.

5. Dropshipping

A fulfillment model where an online store sells products without holding inventory, relying on third-party suppliers to ship directly to customers.

6. A/B Testing

A method used to compare two versions of a webpage or product listing to see which performs better based on specific metrics (e.g., conversion rate).

7. Affiliate Marketing

A performance-based marketing strategy where an individual or business earns a commission for promoting another company's products or services.

8. Search Engine Optimization (SEO)

The practice of optimizing a website to improve its visibility and ranking in search engine results.

9. Fulfillment

The process of receiving, processing, and delivering customer orders.

10. Customer Relationship Management (CRM)

Software and strategies used to manage a company's interactions with current and potential customers.

11. User Experience (UX)

The overall experience a customer has when interacting with a website or app, including ease of use, design, and satisfaction.

12. Payment Processor

A company that handles transactions between a merchant and a customer's bank to facilitate payments.

13. Inventory Management

The process of ordering, storing, and controlling products or materials that a business sells.

14. Marketplace

A platform where multiple third-party sellers offer their products for sale (e.g., Amazon, eBay).

15. Omnichannel

A multi-channel approach to sales that seeks to provide customers with a seamless shopping experience across all platforms (online, mobile, in-store).

16. PPC (Pay-Per-Click)

An online advertising model where advertisers pay each time a user clicks on their ad.

17. Merchant Account

A type of bank account that allows businesses to accept payments via credit or debit cards.

18. Chargeback

A reversal of a payment made when a customer disputes a charge on their card.

19. B2C (Business-to-Consumer)

A business model in which a company sells products or services directly to individual customers.

20. B2B (Business-to-Business)

A business model where transactions occur between businesses rather than between a business and individual consumers.

These terms are fundamental to understanding the operations and strategies in the e-commerce world

Unit II

Objectives:

The student can understands the Ecommerce Business Models, Major Business to Consumer (B2C) Models, Major Business to Business(B2B) Models, Business Models in Emerging E-Commerce and the benefits of Traditional Retailing and E-retailing.

2. E-Commerce Business Models & Consumer Oriented Ecommerce

E-Commerce Business Models & Consumer Oriented Ecommerce

Ecommerce is a business model that allows businesses and consumers to make purchases or sell things online. There are many different types of ecommerce business models to choose from, and today it's easier than ever for creative founders to use them to make their ideas a reality. If you want to innovate and defy expectations — if you're going to separate your business from all of the others online — you'll need to know what business model works best for you and how you can leverage that into greater success.

2.1 E-commerce Business Models

BUSINESS-TO-CONSUMER (B2C)

B2C (business-to-customers) transactions involve business firms on one end and their customers on the other. Although online shopping is the first thing that comes to mind, it is important to remember that selling is the outcome of the marketing process. Marketing begins before a product is offered for sale and continues after the product is sold. As a result, B2C commerce entails a wide range of marketing activities such as identifying activities, promoting, and sometimes even delivering products that are carried out online. E-business enables these activities to be carried out at a much lower cost but at a much faster pace. For example, an ATM helps to withdraw money 24×7 in a convenient and fast manner.

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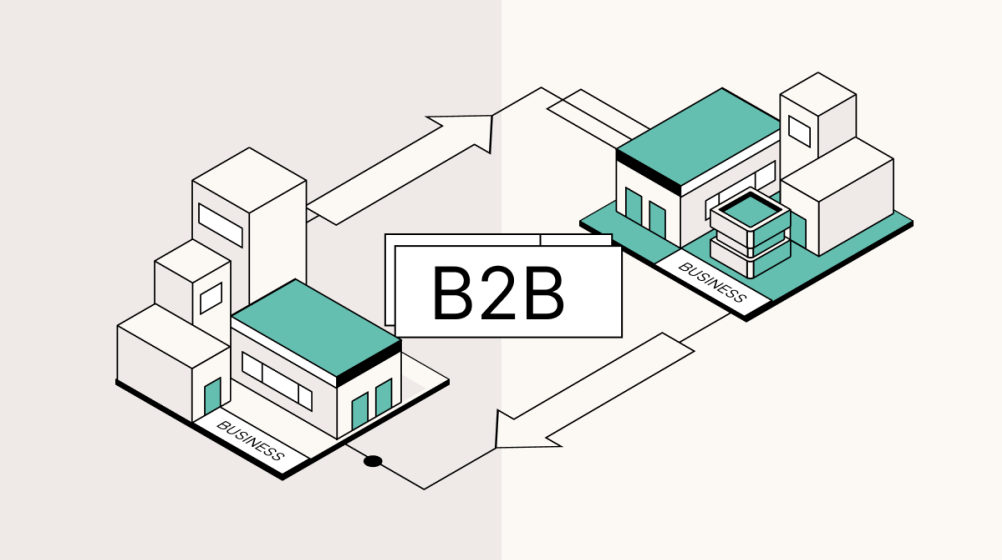
Furthermore, the B2C variant of e-commerce allows a company to communicate with its customers around the clock. Companies can use online surveys to find out who is buying what and how satisfied their customers are. C2B commerce is a reality that allows consumers to shop whenever and wherever they want. Customers can also use call centres set up by companies to make toll-free calls to make inquiries and lodge complaints 24 hours a day, seven days a week. Selling and Distribution of goods, conducting surveys, after-sale services, promotional activities, etc., are B2C transactions.

Business-to-Business (B2B)

Both parties involved in e-commerce transactions are business firms, hence the name B2B, which stands for business-to-business. The creation of utilities or the delivery of value requires the interaction of a business with a number of other business firms, which may be suppliers or vendors of various inputs, or they may be a part of the channel through which a firm distributes its products to consumers. For example, the production of an automobile requires the assembly of a large number of components, which are manufactured elsewhere, either locally or overseas.



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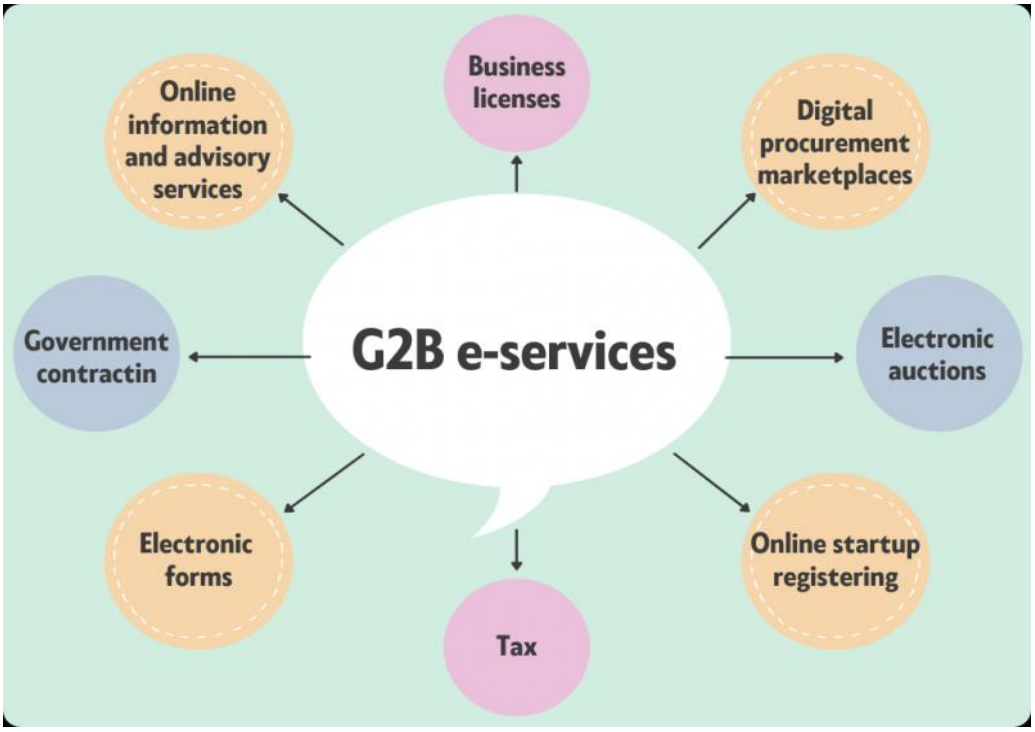
A computer network is used to place orders, monitor the production and delivery of components, and make payments. Similarly, a company can strengthen and improve its distribution system by exercising real-time (as-it-happens) control over its stock-in-transit as well as that with various middlemen in various locations. For example, each shipment of goods from a warehouse and stock on hand can be tracked, and replenishments and reinforcements can be initiated as needed. Around 80 per cent of the total share of transactions is comprised of B2B transactions. Sharing of information, Commercial negotiations and Distribution of goods are some of the B2B transactions.

BUSINESS-TO-GOVERNMENT (B2G)

Business-to-government, also known as B2G, is a business model where a business sells products, services, or information to federal, state, or local government. There are two other commonly known models. A majority of businesses are focused on selling goods and services to consumers - or individual buyers. This business-to-consumer model is known as B2C. Then there are business that sell to other businesses. This is a business-to-business or B2B model.



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B2G is often paired with "marketing" to form B2G marketing. This is another term you will likely see used in the business-to-government model. B2G marketing or "public sector marketing" includes the use of print, digital, event, and other types of marketing to communicate the products and services a business has available for the government.

It is important to note that not all government contracts are publicized. The federal government has different rules for publication of contracting opportunities than states and local government jurisdictions. Some opportunities can be highly classified and not part of a wide-open public bid. At the local level, governments often reach out directly to a select number of companies they know of to collect bids on projects, while in other instances, smaller governments may piggyback off contracts from other governments that are larger, and can secure better bulk pricing for items.

CONSUMER-TO-CONSUMER (C2C)

Consumer-to-consumer (C2C) ecommerce is a commerce model in which one consumer sells his goods or services to other consumers online. It is one of the four pivotal ecommerce business models, the other three being B2B (business-to-business), C2B (consumer-to-business), and B2C (business-to-consumer). C2C represents a market environment where one customer purchases goods from another customer using a third-party business or platform to facilitate the transaction. C2C companies are a type of business model that emerged with ecommerce technology and the sharing economy. Transaction that is made between two customers is led by a third party, basically by online actuation, social media platform, or ecommerce website that looks after transaction status, payments, and other aspects. It helps sellers as well as buyers to find each other by charging a small fee or commission.

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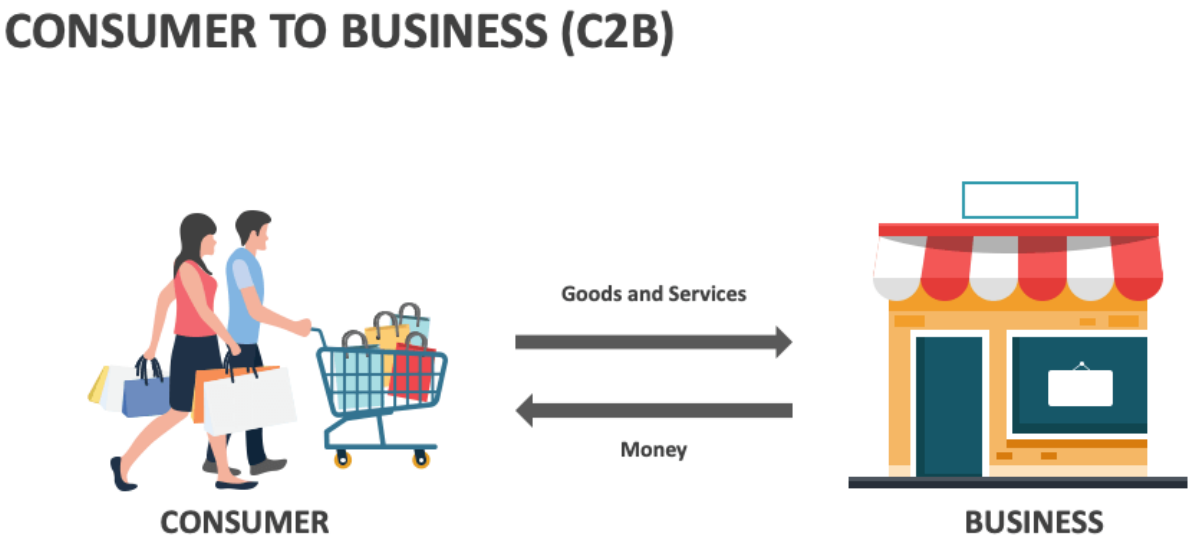
The digital shift in the consumer buying and selling process is very real and businesses who are not already online will need to act fast and enter the C2C ecommerce scene soon. If your motive is to provide consumers a platform to buy and sell goods in all segments or a specific segment, generate max sales and give a boost to your market share, you need to understand the value of C2C ecommerce.

CONSUMER TO BUSINESS (C2B)

The consumer-to-business (C2B) e-commerce model allows businesses and consumers to have a mutually beneficial relationship. It is the opposite of the

traditional business setup: In this relationship, the consumers create value that an organization uses to engage in a business process or gain a competitive advantage. Consumer to business, or C2B, differs from other e-commerce models because it's the consumers who create value for a product or business. In the traditional business-to-consumer e-commerce model, businesses sell products or services directly to consumers. With C2B, consumers offer products or services to businesses in exchange for payment or other benefits.

The C2B model sometimes caters to independent workers and freelancers who accomplish paid tasks for a business. Independent workers are people who offer their services or products on a website specifically created for the purpose of C2B e-commerce.



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They interact with the businesses and negotiate their own deals on their own terms. Freelancers are people who sell products or provide services, mostly on C2B e-commerce websites specifically designed for freelancers. They make up the majority of C2B workers. Businesses go to C2B online platforms to look for skilled service providers or unique product sellers, then hire independent workers or freelancers who

meet their needs. The platform is sometimes a third party that charges a commission for connecting the sellers with the businesses.

CONSUMER-TO-GOVERNMENT (C2G)

C2G eCommerce, also known as **consumer-to-government e-commerce**, is the game-changer that allows consumers to connect with government agencies directly and access government services through an online platform.

Unlike the traditional B2G (business-to-government) model, where businesses sell goods and services to government entities, C2G e-commerce gives power to the people. The beauty of hosting a C2G platform is that it allows you to act as a **link** between consumers and the government. You give the citizens a direct channel to share their thoughts, feedback, or information with the public sector. You also make it a breeze for them to access and utilize government-sponsored services

The consumer-to-government e-commerce model connects citizens to their government agencies. Your goal will be to create a platform or host one where people can access government services. Here are the different stages you'd go through to achieve this.

- Research and Planning
- Design and development
- Testing and launch
- Marketing and promotion
- Operations and maintenance

Research and planning

When getting started, you want to identify all government services the consumers need while researching the competition. You should also research the government agencies in charge and get proper approval and documentation. There are other important things

to factor into your C2G planning process like product, financial, and market analysis, at this stage, you also determine the features and functionality the site will need.

Design and development

The next step is to build an e-commerce site with one of the best website builders, such as Host Papa, and find a good hosting service. Make a wireframe, design the layout and user interface, and build the site's functions to make it easy for people to access government services and complete the necessary transactions.

Testing and launch

After designing and developing the site, test and launch it. Before launching the site, you need to conduct user testing, fix any bugs, and make any other necessary changes. This will allow you to test its user-friendliness and navigation ease. You also want to ensure the smoothness of delivering service payments to the appropriate government agencies' bank accounts.

Marketing and promotion

After launching the site, it's time to attract users and increase traffic. You should have a marketing plan, a solid social media presence, and reach out to potential users who will benefit from easy access to these government services. Some of the time-tested marketing plans for C2G e-commerce and several other business models are: influencer marketing, affiliate marketing, running succinct email campaigns, and following best SEO practices.

Operations and maintenance

Once the site is up and running, it is essential to keep it updated and maintained to ensure it runs smoothly. Monitoring site performance and speed, maintaining site security, checking for broken links, answering customer queries promptly, testing your checkouts, and updating the site frequently are essential site operational and maintenance tasks you must never take for granted. This is because once your users

have consistent bad experiences using your e-commerce site, they'll bail for a better one.

Reporting and analytics

For a consumer to government e-commerce site to succeed, it's essential to keep track of site traffic, conversion rates, and customer satisfaction. Maintaining a high level of customer service will also reveal areas where you can improve. C2G e-commerce is a revolutionary concept that offers a wide range of advantages for both consumers and government entities. Here are some of the key benefits of C2G e-commerce:

- Increased transparency in government services and revenue, leading to a reduction in fraud and corruption.
- Consumers can access government services and information more conveniently, saving time and effort.
- Potential for cost savings for both consumers and government entities through improved efficiency and competition
- Better communication between consumers and the government, enabling citizens to share feedback or information with public sectors.
- It aids in increased citizen participation in government activities, such as voting and expressing their opinions on different issues.
- C2G e-commerce can improve government accountability and transparency.
- C2G e-commerce can lead to better management of public services because it lets government agencies collect data and analyze it to improve how services are delivered.

e-commerce Business Model	Business Examples

e-commerce Business Model	Business Examples
Business-to-business (B2B)	Amazon, Aliexpress, and more
Business-to-customer (B2C)	Amazon, Aliexpress, Walmart, Netflix, Spotify, YouTube, eBay, and more
Consumer-to-consumer (C2C)	eBay, Etsy, Airbnb, Letgo, and more
Business-to-administration (B2A)	Accela, OpenGov, SeamlessDocs, and more
Consumer-to-business (C2B)	Fiverr, Airbnb, Upwork, Kashkick, and more
Consumer-to-administration (C2A)	Tax payment systems, feedback systems, and more

2.2 Major Business to Consumer(B2C) Business Models

B2C (Business-to-Consumer) models refer to the various approaches that businesses use to sell products or services directly to individual consumers. These models can be categorized into five main types:

1. Direct Sellers

The direct seller model is the most common form of B2C, where businesses sell their products or services directly to consumers. This often involves online retailers like Amazon, where consumers browse a digital storefront, make a purchase, and have the product delivered directly to them. This model can be either purely online or a combination of online and physical retail operations (click-and-mortar).

2. Online Intermediaries

Online intermediaries act as a bridge between buyers and sellers. These platforms do not own the products they sell but provide a marketplace for third-party vendors. Examples include eBay, Etsy, and Alibaba. Consumers use these platforms to compare products, read reviews, and make purchases from various sellers, often benefiting from competitive pricing and selection.

3. Advertising-Based B2C

This model involves businesses that provide free content or services to consumers while generating revenue through advertisements. Media outlets, blogs, social networks, and search engines often use this model. For instance, Facebook, YouTube, and Google offer free services to users while displaying targeted ads paid for by other businesses.

4. Community-Based

Community-based models rely on building a strong community of users who share common interests. Social networks or forums like Facebook, Reddit, or Pinterest use this approach to create engagement and drive consumer behavior. Revenue is typically generated through ads or by leveraging the community for targeted marketing.

5. Fee-Based

In the fee-based model, businesses charge consumers a subscription or one-time fee for access to a product or service. Streaming services like Netflix or Spotify and premium news sites like The New York Times operate on this model. Consumers pay for continuous access to content, often in the form of a subscription, rather than individual purchases.

Each model caters to different consumer needs and offers varying methods for generating revenue and driving customer engagement. Now that you know the differences between the different types of e-business models and strategies, selecting

the best option for your business should be easy. The next step is deciding which type of revenue model for ecommerce best suits your brand. Although this seems like a straightforward decision, it can also be quite challenging. Here are the top six revenue models for ecommerce:

- Selling your products to customers
- Selling "White label" products
- Wholesaling
- Dropshipping
- Selling by subscriptions
- Using a freemium model

The most successful ecommerce type is the Business-to-consumer. This is due to its popularity, and it follows a standard retail model. However, we can see great growth in the B2B sector lately, as many companies aim to optimize their processes, including procurement, so they aim to buy in bulk from the bigger resellers.

2.3 Major Business to Business(B2B) Business Models.

B2B (Business-to-Business) models refer to the different ways businesses provide products or services to other businesses. These models vary depending on the nature of the transactions, the industries involved, and the needs of the clients. The major B2B business models include:

1. Supplier Model

In the supplier model, businesses provide raw materials, components, or finished goods to other companies for use in manufacturing or production. For example, a company

supplying steel to an automobile manufacturer falls under this model. The focus is on delivering quality materials that another business needs to create its final product.

2. Distributor Model

Distributors act as intermediaries between manufacturers and retailers. They purchase products from manufacturers and sell them to other businesses like retailers, wholesalers, or even other distributors. This model is common in industries such as electronics, food and beverages, and consumer goods. Distributors manage the logistics of transporting and storing goods, easing the burden on manufacturers.

3. Wholesale Model

Wholesalers buy large quantities of products from manufacturers or distributors and sell them in smaller quantities to retailers or other businesses. This model benefits companies that need to buy in bulk at discounted prices. Wholesale markets often deal with commodities like clothing, food, and hardware, where volume transactions are critical.

4. Service-Based Model

In the service-based model, businesses offer services rather than physical products to other companies. Examples include consulting firms, marketing agencies, IT services, and legal advisors. These service providers help businesses improve operations, scale their activities, or resolve specific issues, typically on a contract or retainer basis.

5. Software as a Service (SaaS)

SaaS is a model where companies offer cloud-based software to other businesses on a subscription basis. Companies use SaaS solutions for a variety of purposes, such as customer relationship management (CRM), project management, or enterprise resource planning (ERP). Examples include Salesforce, Microsoft Office 365, and Slack, where the software is hosted in the cloud and delivered online.

6. Managed Services Model

Managed services involve a business outsourcing certain operations or processes to another company, which then manages those activities on an ongoing basis. IT services, network security, and cloud management are common examples of this model. Managed services are especially valuable for businesses that want to focus on core operations without dealing with the complexities of certain technical or operational areas.

7. Procurement Model

The procurement model is built around businesses acting as purchasing agents for other companies. Procurement firms or platforms help businesses source and acquire products or services at optimal prices. They often handle supplier negotiations, quality control, and contract management on behalf of their clients. This is commonly used in sectors like construction, government contracts, and large-scale manufacturing.

8. Subscription-Based Model

This model involves businesses paying a regular fee to access a product or service over a defined period. It is commonly used in areas such as software, data analytics, or specialized information services. Many SaaS businesses also operate under a subscription-based structure. In this model, businesses benefit from a steady revenue stream, while clients gain continuous access to needed tools or information.

9. Broker Model

Brokers connect buyers and sellers of products or services, typically earning a commission or fee for facilitating transactions. In the B2B context, brokers might operate in sectors such as real estate, financial services, or logistics. Platforms like Alibaba also function as brokers by connecting businesses to global suppliers.

10. E-commerce Model

Similar to B2C e-commerce, B2B e-commerce involves businesses selling products to other businesses via online platforms. Companies like Alibaba or Amazon Business allow other businesses to make bulk purchases, compare suppliers, and manage transactions through online marketplaces. This model enhances efficiency and scale, especially in industries reliant on global trade and supply chains.

Each B2B model is designed to meet the needs of businesses at different stages of production, supply chain management, or service delivery. Depending on the type of industry, companies might combine several models to optimize operations and customer relationships.

2.4 Business Models in Emerging E-Commerce Areas

Emerging e-commerce areas introduce new business models or variations of existing ones as digital platforms evolve and consumer behavior shifts. These business models are shaping the future of e-commerce by leveraging technology, convenience, and personalization. Here are the prominent business models in emerging e-commerce areas:

1. Direct-to-Consumer (D2C)

In the Direct-to-Consumer model, brands sell their products directly to consumers through their own digital channels, bypassing traditional intermediaries like retailers. This model has gained traction with the rise of online shopping and social media marketing. D2C brands have full control over their product distribution, pricing, customer data, and marketing. Examples include Warby Parker (eyewear) and Glossier (beauty products).

2. Subscription-Based E-commerce

Subscription models provide customers with regular deliveries of products or services for a recurring fee, typically monthly or annually. This model is particularly popular in industries such as food delivery (Blue Apron), beauty (Birchbox), and media streaming

(Netflix). The subscription-based approach allows for predictable revenue streams and builds customer loyalty through personalized, continuous offerings.

3. On-Demand and Gig Economy Platforms

On-demand e-commerce platforms connect customers with services or products that can be delivered or fulfilled instantly. These platforms, like Uber, DoorDash, or Instacart, rely on a flexible workforce to meet consumer demand quickly. The gig economy model allows users to access services such as transportation, food delivery, or even freelance work with just a few clicks, emphasizing speed, convenience, and flexibility.

4. Social Commerce

Social commerce leverages social media platforms as a primary marketplace where customers can discover, engage with, and purchase products directly through social networks. Platforms like Instagram, Facebook, and TikTok enable businesses to sell directly via posts, stories, and videos, reducing the friction between product discovery and purchase. Social commerce allows brands to create more personalized, engaging shopping experiences through social interactions and influencer partnerships.

5. Marketplace Model

In the marketplace model, businesses create a digital platform where multiple third-party sellers can list and sell their products to consumers. The platform itself facilitates the transaction without owning the inventory. Examples include Amazon, eBay, and Etsy. This model provides a wide variety of goods and services, giving consumers a one-stop-shop experience. It's also emerging in niche areas like second-hand goods (ThredUp) or peer-to-peer rental services (Airbnb).

6. Dropshipping

Dropshipping allows e-commerce businesses to sell products without owning or handling inventory. When a customer places an order, the retailer passes the order details to a third-party supplier or manufacturer, who ships the product directly to the

customer. This model lowers the barrier to entry for e-commerce entrepreneurs since it removes the need for inventory management and upfront investment. Shopify has become a popular platform for businesses engaging in dropshipping.

7. Renting and Recommerce

The renting and recommerce (resale) model focuses on consumers buying or renting pre-owned or lightly used goods. This model aligns with sustainability trends, offering eco-conscious consumers alternatives to fast fashion and other disposable products. Platforms like Rent the Runway (for clothing rental) and The RealReal (luxury second-hand goods) exemplify this model. Consumers can also sell back products they no longer need, creating a circular economy.

8. Collaborative Commerce (C-Commerce)

Collaborative commerce involves a more interactive and communal shopping experience where consumers can engage in group buying, collaborative decision-making, or co-creating products with brands. Platforms like Groupon have used the group buying model, where consumers come together to access discounts. Other platforms encourage consumers to share, recommend, and collaborate, blurring the lines between shopping and social interaction.

9. Voice Commerce

Voice commerce is an emerging area where consumers use voice-activated devices, such as smart speakers like Amazon Echo or Google Home, to shop online. Voice commerce integrates artificial intelligence (AI) and natural language processing to allow consumers to order products, make inquiries, or manage subscriptions through voice commands. This model offers hands-free convenience and is expected to grow as smart homes and voice-enabled devices become more widespread.

10. Augmented Reality (AR) and Virtual Reality (VR) Commerce

AR and VR technologies are transforming e-commerce by providing immersive shopping experiences. AR allows customers to visualize products in their own space before purchasing, such as virtually placing furniture in a room or trying on clothing or makeup. VR takes this a step further, offering fully virtual shopping environments where customers can browse and interact with products in a 3D digital space. Brands like IKEA and Sephora are already incorporating AR features into their apps.

11. Crypto and Blockchain-Based E-commerce

As cryptocurrencies and blockchain technology grow, some e-commerce businesses are beginning to accept cryptocurrencies (like Bitcoin) as payment. Blockchain technology is also being explored to improve transparency and security in the supply chain, ensuring product authenticity and reducing fraud. This model is particularly appealing to tech-savvy and privacy-conscious consumers, as well as international buyers who benefit from reduced transaction fees and decentralized payment systems.

12. Buy Now, Pay Later (BNPL)

Buy Now, Pay Later is an emerging payment model that allows consumers to purchase items and pay for them in installments, often without interest. This model appeals to younger consumers and those looking for flexibility in managing their budgets. Services like Afterpay, Klarna, and Affirm are at the forefront of this trend, offering seamless integration into e-commerce checkouts, helping businesses boost sales by offering alternative payment options.

13. Mobile Commerce (M-Commerce)

Mobile commerce refers to shopping done primarily via mobile devices, such as smartphones and tablets. This model emphasizes optimizing the mobile shopping experience through apps, mobile-friendly websites, and mobile payment solutions (e.g., Apple Pay or Google Pay). The increasing penetration of smartphones worldwide has made mobile commerce one of the fastest-growing areas in e-commerce.

These emerging business models reflect the constant evolution of e-commerce, driven by changing consumer behavior, technological advancements, and new market demands. Each model addresses specific pain points or opportunities, offering innovative ways to engage consumers and generate revenue.

2.5 E-tailing

Electronic retailing (E-tailing) is the sale of goods and services through the internet. E-tailing can include business-to-business (B2B) and business-to-consumer (B2C) sales of products and services.

E-tailing requires companies to tailor their business models to capture internet sales, which can include building out distribution channels such as warehouses, internet webpages, and product shipping centers.

Notably, strong distribution channels are critical to electronic retailing as these are the avenues that move the product to the customer.

How Electronic Retailing (E-tailing) Works

Electronic retailing includes a broad range of companies and industries. However, there are similarities between most e-tailing companies that include an engaging website, online marketing strategy, efficient distribution of products or services, and customer data analytics.

Successful e-tailing requires strong branding. Websites must be engaging, easily navigable, and regularly updated to meet consumers' changing demands. Products and services need to stand out from competitors' offerings and add value to consumers' lives. Also, a company's offerings must be competitively priced so that consumers do not favor one business over another just for price reasons.

E-tailers need distribution networks that are prompt and efficient. Consumers cannot wait for long periods for the delivery of products or services. Transparency in business practices is also important, so consumers trust and stay loyal to a company.

There are many ways companies can earn revenue online. Of course, the first income source is through the sales of their product to consumers or businesses. Both B2C and B2B companies can earn revenue by selling their services through a subscription-based model such as Netflix (NFLX), which charges a monthly fee for access to media content.

Venue can also be earned through online advertising. For example, Meta (META), formerly Facebook Inc., earns money mainly from ads placed on its Facebook website by companies looking to sell to the millions who are "on Facebook," regularly checking their pages.

Types of Electronic Retailing (E-tailing)

Business-to-Consumer (B2C) E-Tailing

Business-to-consumer retailing is the most common of all e-commerce companies and the most familiar to most Internet users. This group of retailers includes companies selling finished goods or products to consumers online directly through their websites. The products could be shipped and delivered from the company's warehouse or directly from the manufacturer. One of the primary requirements of a successful B2C retailer is maintaining good customer relations.

Business-to-Business (B2B) E-tailing

Business-to-business retailing involves companies that sell to other companies. Such retailers include consultants, software developers, freelancers, and wholesalers. Wholesalers sell their products in bulk from their manufacturing plants to businesses. These businesses, in turn, sell those products to consumers. In other words, a B2B company, such as a wholesaler might sell products to a B2C company.

Advantages and Disadvantages of Electronic Retailing (E-tailing)

E-tailing includes more than just e-commerce-only companies. More and more traditional brick-and-mortar stores are investing in e-tailing. Infrastructure costs are lower with electronic retailing versus operating brick-and-mortar stores.

Companies can move products faster and reach a larger customer base online than with traditional physical locations. E-tailing also allows companies to close unprofitable stores and maintain the profitable ones. Automated sales and checkout cut down on the need for staff and sales personnel. Also, websites cost less than physical stores to open, staff, and maintain. E-tailing reduces advertising and marketing expenses as customers can find the stores through search engines or social media. Data analytics is like gold for e-tailers.

Consumer shopping behavior can be tracked to determine spending habits, page views, and length of engagement with a product, service, or website page. Effective data analytics can decrease lost sales and boost client engagement, which can lead to increased revenue.

There are disadvantages to running an e-tailing operation, though. Creating and maintaining an e-tailing website, while less expensive than a traditional retail location, can be expensive. Infrastructure costs can be substantial if warehouses and distribution centers need to be built to store and ship the products. Also, adequate resources are necessary to handle online returns and customer disputes.

Also, e-tailing does not provide the immersive, emotional experience that physical stores can offer. E-tailing does not give the consumer a chance to smell, feel, or try on products before purchasing them—sensory experiences that often result in a decision to buy; browsing is also more pleasurable in person, and lends to increased spending. Personalized customer service and interaction can also be an advantage to brick-and-mortar stores.

Real World Examples of E-Tailing

Amazon.com (AMZN) is the world's largest online retailer, providing consumer products and subscriptions through its website. Amazon's website shows the company generated more than $280 billion in revenue in 2019 while posting more than $11.6 billion in profit or net income.1 Other e-tailers that operate exclusively online and compete with Amazon include Overstock.com and JD.com.

Alibaba Group (BABA) is China's largest e-tailer, which operates an online commerce business throughout China and internationally. Alibaba has adopted a business model that not only includes both B2C and B2B commerce, but it also connects Chinese exporters to companies around the world looking to buy their products. The company's rural Taobao program helps rural consumers and companies in China sell agricultural products to those living in urban areas. For the fiscal year 2020, Alibaba generated nearly $72 billion in annual revenue while posting just under $19.8 billion in profit.2

2.6 Traditional Retailing and E-retailing

Traditional Retailing and E-retailing (electronic retailing or online retailing) represent two distinct approaches to selling goods and services. Both models have their own advantages and limitations, reflecting the evolution of the retail industry as it adapts to technological advances and changing consumer behaviors.

Traditional Retailing

Traditional retailing involves selling goods and services to consumers through physical stores or brick-and-mortar locations. In this model, customers visit a physical store, interact with products directly, and make their purchases in person. The experience includes face-to-face interactions with staff, tactile product experiences, and immediate fulfillment of the purchase (carrying the product out of the store)

Key Characteristics:

Physical Presence: Retailers operate physical stores where consumers can walk in, browse products, and make purchases. Examples include department stores, supermarkets, specialty stores, and malls.

In-Store Experience: Traditional retail emphasizes the in-store experience. Consumers can touch, try, and test products, engage with sales staff, and seek advice.

Geographical Limitation: The location of a store limits its customer base, as consumers need to be within a certain distance to visit the store.

Inventory on Site: Products are displayed and stocked on-site, with limited warehouse facilities at the back of the store.

Immediate Fulfillment: Once a purchase is made, the customer typically takes the product home right away, providing instant satisfaction.

Personal Interaction: Consumers interact with sales representatives and customer service staff, creating a personalized experience.

Advantages:

- Tangible Shopping: Consumers can see, touch, and try products before purchasing.
- Instant Gratification: Purchases can be taken home immediately, without waiting for delivery.

- Personalized Service: Sales staff can offer advice, recommendations, and customized solutions.
- Brand Experience: Physical stores create immersive environments that reflect a brand's image.

Limitations:

- Limited Reach: A store's customer base is restricted to its geographical location.
- High Overhead Costs: Operating a physical store involves rent, utilities, staff salaries, and maintenance costs.
- Limited Operating Hours: Physical stores typically operate during fixed hours, limiting shopping convenience.
- Inventory Constraints: Stores can only stock a limited range of products based on shelf and storage space.

E-Retailing (Online Retailing)

E-retailing involves selling goods and services through digital platforms, such as websites, mobile apps, or online marketplaces. In this model, consumers browse, select, and purchase products online, with the goods delivered to their homes or available for pickup. This model eliminates the need for a physical store and leverages digital technology to streamline the shopping process.

Key Characteristics:

- Digital Presence: E-retailers operate through online stores, often without any physical locations. Examples include Amazon, eBay, and online-only brands like ASOS.
- 24/7 Availability: Online stores are accessible 24/7, allowing consumers to shop at their convenience, regardless of time or location.

- Wider Reach: E-retailing can reach a global audience, allowing businesses to sell to consumers regardless of geographical limitations.
- Product Information: Consumers can access detailed product descriptions, reviews, and ratings, helping them make informed decisions.
- Delivery and Shipping: Purchases are delivered to the consumer's address, and shipping time can vary based on location and product availability.
- Lower Overhead Costs: E-retailers avoid many of the costs associated with running physical stores, such as rent and utilities, focusing more on warehousing and logistics.

Advantages:

- ✓ Convenience: Consumers can shop from anywhere, at any time, without visiting a physical store.
- ✓ Wider Selection: Online stores often offer a broader range of products, since they are not limited by shelf space.
- ✓ Lower Costs: E-retailers typically pass on savings from reduced overhead costs to consumers through lower prices or special discounts.
- ✓ Global Reach: E-retailers can attract customers from all over the world, significantly expanding their market.
- ✓ Personalization and Recommendations: E-retail platforms can use data analytics to offer personalized recommendations, creating a tailored shopping experience.

Limitations:

- Delayed Fulfillment: Unlike traditional retail, where products can be taken home immediately, e-retailing requires delivery time, which can be delayed.

- Lack of Physical Interaction: Consumers cannot touch or try products before purchasing, which can be a challenge for certain items like clothing or electronics.
- Return Complexities: Returning products can be more complex and time-consuming than in traditional retail, as it often involves shipping and handling.
- Security Concerns: Consumers may have concerns about data privacy, online payment security, and potential fraud.

Comparison of Traditional Retailing and E-Retailing:

Feature	Traditional Retailing	E-Retailing
Shopping Experience	In-store, physical interaction with products	Online, digital browsing
Customer Reach	Limited to geographical location	Global reach, unlimited by location
Operating Hours	Fixed store hours	24/7 availability
Fulfillment	Immediate (take product home)	Delayed (delivery required)
Product Interaction	Consumers can touch, try, and test products	No physical interaction; relies on descriptions, images, and reviews
Costs	High overhead (rent, staff, utilities)	Lower overhead (warehousing, logistics)
Customer Service	In-person interaction with staff	Virtual customer service (chat, email, or phone)

Feature	Traditional Retailing	E-Retailing
Shopping Convenience	Requires visiting a physical location	Accessible from any device, anywhere
Personalization	Face-to-face interaction, personalized in-store service	Data-driven recommendations based on browsing and purchase history
Return Process	Easier in-store returns	More complex, requires shipping

In recent years, many retailers have adopted an omnichannel strategy, blending traditional and e-retailing to offer a seamless experience. This includes services like "buy online, pick up in-store" (BOPIS), integrating physical and digital storefronts, and using technology like augmented reality (AR) to enhance in-store experiences. Retailers aim to provide flexibility and convenience to meet evolving consumer expectations.

Both traditional and e-retailing continue to play vital roles, with each offering distinct advantages that appeal to different consumer preferences and shopping scenarios.

2.7 Benefits Of E-retailing

E-retailing (online retailing) offers a wide range of benefits for both businesses and consumers. As digital technology advances and consumer preferences evolve, e-retailing has become an integral part of the modern shopping experience. Below are the key benefits of e-retailing:

1. Convenience and Accessibility

24/7 Availability: E-retailing allows consumers to shop at any time, without being constrained by store hours. This accessibility is particularly advantageous for those with busy schedules or who live in different time zones.

Shop from Anywhere: Customers can shop from the comfort of their homes or on the go, using smartphones, tablets, or computers. There's no need to visit a physical store, which saves time and effort.

2. Wider Product Selection

Broader Inventory: Online retailers are not limited by shelf space like physical stores, enabling them to offer a wider range of products. Customers can browse extensive catalogs, often across multiple categories or brands, in one place.

Global Reach: E-retailers can offer products from around the world, giving customers access to items that may not be available locally. This global reach expands choices for consumers.

3. Lower Costs

Reduced Overhead for Businesses: E-retailers often have lower operational costs compared to brick-and-mortar stores (e.g., rent, utilities, in-store staff), which can translate into lower prices or more frequent discounts for consumers.

Cost Savings for Consumers: Customers can save on travel costs, parking fees, and other expenses associated with visiting physical stores.

4. Personalized Shopping Experience

Tailored Recommendations: E-retail platforms use data analytics to track customer behavior and preferences, allowing them to offer personalized product recommendations, targeted promotions, and customized shopping experiences. This enhances customer satisfaction and increases conversion rates.

Targeted Marketing: By analyzing purchase history and browsing behavior, e-retailers can send relevant offers, product suggestions, and reminders, improving the likelihood of repeat purchases.

5. Easy Comparison Shopping

Price and Product Comparisons: E-retailing makes it easy for customers to compare products, prices, and reviews across different brands or retailers. This empowers customers to make more informed purchasing decisions and find the best deals without having to visit multiple physical stores.

Access to Reviews and Ratings: Consumers can read reviews and ratings from other buyers, gaining insights into product quality, performance, and user satisfaction before making a purchase.

6. Time-Saving

Quick Browsing: Customers can search for specific products or categories instantly using search engines or filtering tools. This streamlines the shopping process and reduces the time spent searching for items compared to browsing physical store shelves.

Automated Processes: E-retailing platforms often offer options like one-click checkout, saved payment information, and subscription services (e.g., for regularly purchased items), further reducing time spent on repetitive tasks.

7. Flexible Payment Options

Multiple Payment Methods: E-retailers offer various payment options such as credit/debit cards, PayPal, digital wallets (Apple Pay, Google Pay), and even cryptocurrencies. This flexibility accommodates different consumer preferences.

Buy Now, Pay Later (BNPL): Many e-retailers also offer BNPL services, where customers can pay for purchases in installments, enhancing affordability and making larger purchases more manageable.

8. Access to Exclusive Deals and Promotions

Online-Only Discounts: E-retailers frequently offer exclusive deals, discounts, and flash sales that are not available in physical stores. Customers can also subscribe to newsletters or join loyalty programs to access special promotions.

Coupons and Vouchers: Online stores often provide digital coupons or promo codes that can be easily applied during checkout for additional savings.

9. Seamless Returns and Refunds

Flexible Return Policies: Many e-retailers offer hassle-free return policies, allowing customers to return or exchange products with ease. This flexibility enhances consumer confidence in purchasing items online.

Trackable Returns: With the ability to track return shipments, consumers can monitor the status of their returns and refunds in real-time, ensuring transparency throughout the process.

10. Contactless Shopping

Safety and Health Considerations: E-retailing provides a contactless shopping experience, which gained significant importance during the COVID-19 pandemic. Customers can avoid crowded stores and reduce physical interactions, making online shopping a safer option in times of health concerns.

11. Enhanced Customer Engagement

Interactive Features: Many e-retailers use interactive tools such as virtual try-ons (for clothing or makeup), product customization options, or augmented reality (AR) for furniture placement, making online shopping more engaging and immersive.

Customer Support: E-retail platforms often provide 24/7 customer support via chatbots, email, or phone, allowing customers to resolve issues quickly and efficiently.

12. Green and Sustainable Options

Reduced Carbon Footprint: By cutting out the need for customers to travel to physical stores, e-retailing can contribute to lower carbon emissions. Additionally, many e-retailers now focus on eco-friendly packaging and carbon-neutral shipping options.

Sustainable Products: Online platforms often feature dedicated sections for sustainable, eco-friendly products, helping environmentally conscious consumers make more responsible purchasing decisions.

13. Scalability for Businesses

Global Expansion: E-retailing allows businesses to reach a wider, global audience without the need for opening physical stores in multiple locations. This scalability enables rapid growth and expansion at a lower cost.

Low Barriers to Entry: Small businesses or startups can easily enter the market by setting up online stores, using platforms like Shopify or Amazon, without the need for substantial investment in physical infrastructure.

14. Real-Time Data and Insights for Businesses

Data-Driven Decisions: E-retailing provides businesses with real-time data on customer behavior, preferences, and sales trends. This allows businesses to make data-driven decisions, optimize marketing efforts, and improve inventory management.

Personalized Marketing: With insights into consumer data, businesses can offer personalized marketing messages, promotions, and product recommendations, increasing customer retention and satisfaction.

15. Integration with Other Channels (Omnichannel)

Seamless Experience: E-retailing platforms often integrate with physical retail (brick-and-click) to provide a seamless omnichannel experience. Customers can shop online and pick up in-store (BOPIS), return online purchases in-store, or enjoy consistent customer service across both channels.

E-retailing brings numerous benefits to both consumers and businesses, offering greater convenience, access, flexibility, and personalization. The model reduces operational costs for businesses while providing consumers with a broader selection of products and the ability to shop from anywhere at any time. As digital technology

continues to evolve, the benefits of e-retailing will further enhance the shopping experience and drive its growth.

2.8 Models of E-retailing

E-retailing (electronic retailing) operates through various business models that cater to different market needs, customer preferences, and industry demands. These models differ based on how products are sold, the nature of transactions, and the role of technology in facilitating the buying process. Here are the key models of e-retailing:

1. Business-to-Consumer (B2C) Model

- Description: The B2C model is the most common form of e-retailing, where businesses sell products or services directly to individual consumers through online platforms. In this model, consumers browse an online catalog, make purchases, and have the items delivered to their doorstep.
- Examples: Amazon, Walmart, and Zara's online stores.
- Features:
    - Large product catalogs, offering a wide variety of items.
    - Simplified purchasing process with secure payment gateways.
    - Personalization and targeted marketing based on consumer preferences and behavior.

2. Consumer-to-Consumer (C2C) Model

- Description: In the C2C e-retailing model, individual consumers sell products or services to other consumers, typically through a third-party online platform that facilitates these transactions. These platforms act as intermediaries, providing a marketplace where buyers and sellers can interact.

- Examples: eBay, Craigslist, and Poshmark.
- Features:
    - Peer-to-peer transactions.
    - Sellers can be individuals or small businesses, offering second-hand or unique products.
    - The platform earns revenue through listing fees, commissions, or advertisements.

3. Business-to-Business (B2B) Model

- Description: The B2B e-retailing model involves businesses selling products or services to other businesses through an online platform. These platforms may serve manufacturers, wholesalers, and distributors looking to purchase supplies or bulk products.
- Examples: Alibaba, ThomasNet, and Amazon Business.
- Features:
    - Large volume transactions with negotiated pricing.
    - Often involves more complex buying processes, such as bulk ordering and invoicing.
    - Products may include raw materials, equipment, or services essential for business operations.

4. Consumer-to-Business (C2B) Model

- Description: In the C2B model, individual consumers offer products or services to businesses. This often takes the form of freelance work or consumer-generated content being sold or licensed to companies. The C2B model is common in the

gig economy, where consumers (freelancers) provide services like writing, design, or photography.

- Examples: Freelancer, Upwork, and 99designs.
- Features:
    - Individuals control the pricing and offerings, with businesses purchasing directly.
    - Flexible service offerings based on consumer skills.
    - Platforms facilitate payments and contracts between businesses and freelancers.

5. Subscription-Based Model

- Description: This model involves selling products or services through recurring subscription plans. Consumers pay a periodic fee (monthly, quarterly, or annually) to access the product or service regularly. Subscription models can apply to physical goods, digital services, or media content.
- Examples: Netflix, Birchbox, and Dollar Shave Club.
- Features:
    - Predictable and recurring revenue streams for businesses.
    - Personalized or curated products delivered on a regular schedule.
    - Often used for digital content (media streaming, software) or consumables (cosmetics, food).

6. Dropshipping Model

- Description: Dropshipping is an e-retailing model where the retailer does not hold any inventory. Instead, when a customer places an order, the retailer forwards

the order to a third-party supplier, who ships the product directly to the customer. The retailer earns a profit by charging a higher price than the supplier.

- Examples: Shopify-based stores, AliExpress dropshipping.
- Features:
    - Low initial investment since there's no need to purchase or store inventory.
    - Flexible and scalable business model, especially for small businesses and entrepreneurs.
    - The retailer is responsible for customer service, while the supplier handles fulfillment.

7. Marketplace Model

- Description: In the marketplace model, an e-retailing platform connects multiple sellers with buyers, facilitating the transactions but not owning the inventory. The platform acts as an intermediary, managing payments, customer service, and sometimes logistics (shipping and returns).
- Examples: Amazon Marketplace, Etsy, and eBay.
- Features:
    - Offers a broad variety of products from different sellers, often with varying prices and quality.
    - The platform charges sellers a commission or listing fees for using the marketplace.
    - Provides a centralized platform for consumers to browse and purchase products from numerous independent sellers.

8. White Label and Private Label Model

- Description: In this model, e-retailers sell products manufactured by another company but branded with their own label. White label refers to products that are generically manufactured and sold under various brands, while private label products are exclusive to one retailer.
- Examples: Amazon's private label brands, like AmazonBasics.
- Features:
    - E-retailers can control branding and pricing without needing to handle manufacturing.
    - Typically offers higher profit margins for e-retailers compared to selling third-party brands.
    - Common in industries such as clothing, electronics, and household goods.

9. Flash Sales Model

- Description: Flash sales involve offering products at heavily discounted prices for a limited time. E-retailers using this model create urgency, driving consumers to make quick purchase decisions to avoid missing out on deals.
- Examples: Gilt, Zulily, and Woot.
- Features:
    - Short-term promotions with significant price reductions.
    - Products are often limited in quantity, adding to the urgency of the sale.
    - Drives immediate sales and can help businesses clear excess inventory.

10. Rent/Leasing Model

- Description: In this model, consumers pay to rent or lease a product for a specific period rather than purchasing it outright. This model is common in industries where products are expensive or only needed temporarily (e.g., fashion, electronics).
- Examples: Rent the Runway, Fat Llama, and Grover.
- Features:
    - Allows consumers to access high-value or premium products without a large upfront investment.
    - E-retailers benefit from recurring revenue streams through rental fees.
    - Sustainable model for consumers who prefer not to own products long-term.

11. Freemium Model

- Description: The freemium model offers a basic version of a product or service for free, with the option to upgrade to a premium version for additional features or services. This model is popular in the software and digital services industry.
- Examples: Spotify, Dropbox, and Zoom.
- Features:
    - Encourages wide adoption by offering free access to the product.
    - Monetizes through premium subscriptions, offering enhanced features or content.
    - Works well for digital goods and services where the marginal cost of additional users is low.

12. Aggregator Model

- Description: The aggregator model brings together multiple service providers or product offerings under one brand. The aggregator ensures a standardized customer experience and quality, while the services or products are delivered by independent providers.
- Examples: Uber, Airbnb, and Instacart.
- Features:
    - The aggregator platform acts as the interface between the customer and the provider.
    - Standardizes service levels, pricing, and customer support.
    - Often used in industries like ride-sharing, food delivery, and lodging.

Conclusion:

E-retailing models are diverse and cater to different business goals, market dynamics, and consumer needs. From traditional B2C and C2C models to innovative subscription, dropshipping, and marketplace models, e-retail offers flexibility, scalability, and customization for businesses of all sizes. The selection of an e-retailing model depends on factors such as target audience, product type, market demand, and business resources.

2.9 Features of E-retailing.

E-retailing (electronic retailing) encompasses a broad set of features that enhance the online shopping experience for consumers and provide businesses with efficient ways to sell their products or services. Below are the key features of e-retailing:

1. 24/7 Accessibility

- **Feature**: E-retail platforms are available 24/7, allowing consumers to shop at any time, regardless of traditional store hours.

- **Benefit**: Offers convenience for customers, particularly those with busy schedules or in different time zones.

2. Global Reach

- **Feature**: E-retailers can sell to customers worldwide, bypassing the geographical limitations of physical stores.
- **Benefit**: Expands the customer base for businesses and provides consumers with access to international products.

3. Personalized Shopping Experience

- **Feature**: E-retailers use data analytics and AI to track customer preferences, browsing habits, and past purchases to offer personalized product recommendations.
- **Benefit**: Enhances customer satisfaction by presenting relevant products and creating a more tailored shopping experience.

4. User-Friendly Interface

- **Feature**: E-retail platforms are designed with intuitive navigation, product categories, search bars, and filtering options to help customers easily find what they need.
- **Benefit**: Reduces friction in the shopping process, improving the overall user experience and encouraging purchases.

5. Secure Payment Gateways

- **Feature**: E-retail platforms integrate secure payment gateways, offering multiple payment options such as credit/debit cards, digital wallets (PayPal, Apple Pay), and sometimes cryptocurrencies.

- **Benefit**: Ensures safe and secure transactions, building trust with customers and protecting sensitive financial information.

6. Detailed Product Information

- **Feature**: Online retailers provide comprehensive product details, including descriptions, specifications, images, and often customer reviews and ratings.
- **Benefit**: Helps customers make informed purchasing decisions and reduces uncertainty about the product's quality or features.

7. Wide Product Range

- **Feature**: E-retailers are not restricted by physical space, allowing them to offer a vast and diverse range of products in their online catalogs.
- **Benefit**: Consumers have access to a wider selection of items than what might be available in physical stores, including niche or specialized products.

8. Convenient Order Tracking and Delivery

- **Feature**: After a purchase, customers can track the status of their order in real-time and receive updates on shipping and delivery.
- **Benefit**: Enhances transparency and trust, as customers know when to expect their deliveries, improving satisfaction with the overall process.

9. Customer Reviews and Ratings

- **Feature**: E-retail platforms enable customers to leave reviews and ratings for products based on their experiences, which are visible to other buyers.
- **Benefit**: Builds trust and provides valuable insights for potential buyers, allowing them to gauge product quality and performance before purchasing.

10. Multiple Payment and Checkout Options

- **Feature**: E-retail platforms offer various payment methods, including credit/debit cards, bank transfers, digital wallets, and Buy Now Pay Later (BNPL) options.
- **Benefit**: Flexibility in payment options enhances convenience for consumers and can increase conversion rates.

11. Promotional Offers and Discounts

- **Feature**: E-retailers frequently provide discounts, promo codes, seasonal sales, and membership rewards to incentivize purchases.
- **Benefit**: Attracts customers with cost-saving opportunities, driving higher sales and customer engagement.

12. Efficient Return and Refund Policies

- **Feature**: E-retail platforms offer clear and flexible return policies, enabling customers to easily return or exchange items that do not meet their expectations.
- **Benefit**: Reduces the risk for consumers, encouraging them to make purchases with confidence knowing they can return unsatisfactory products.

13. Multi-Device Compatibility

- **Feature**: E-retailing platforms are optimized for desktop, mobile, and tablet devices, ensuring a seamless shopping experience across different screens.
- **Benefit**: Increases accessibility for customers, enabling them to shop on the go or from any device.

14. Search and Filter Tools

- **Feature**: Advanced search functions and filtering options allow users to find products based on specific criteria such as price, brand, color, size, or customer ratings.

- **Benefit**: Saves time for consumers by helping them quickly find the products that meet their preferences.

15. Customizable Delivery Options

- **Feature**: E-retailers often provide multiple delivery options, including standard shipping, express shipping, same-day delivery, and in-store pickup.
- **Benefit**: Increases convenience by allowing customers to choose the delivery method that best suits their needs.

16. Customer Service and Support

- **Feature**: E-retail platforms offer multiple channels for customer support, including chatbots, live chat, email, and phone support, often available 24/7.
- **Benefit**: Improves customer satisfaction by resolving issues quickly and efficiently, enhancing the overall shopping experience.

17. Data Analytics for Businesses

- **Feature**: E-retailing platforms collect and analyze customer data to understand shopping behavior, product preferences, and sales trends.
- **Benefit**: Enables businesses to optimize marketing strategies, inventory management, and product offerings based on consumer insights.

18. Loyalty Programs and Rewards

- **Feature**: Many e-retailers implement loyalty programs where customers can earn points or rewards for repeat purchases, referrals, or engaging with the platform.
- **Benefit**: Encourages customer retention and builds brand loyalty by offering incentives for repeat business.

19. Omnichannel Integration

- **Feature**: Many e-retailers provide an omnichannel experience, allowing customers to interact seamlessly across online platforms and physical stores, such as buy-online-pickup-in-store (BOPIS).
- **Benefit**: Enhances convenience and provides a cohesive shopping experience, blending the advantages of both digital and physical retail environments.

20. Social Media Integration

- **Feature**: E-retail platforms often integrate with social media for direct shopping through social media channels, as well as using social media for marketing and customer engagement.
- **Benefit**: Expands reach and attracts younger audiences, creating opportunities for social commerce and viral marketing.

Conclusion:

E-retailing features provide flexibility, convenience, and personalization, catering to the modern consumer's desire for an easy, fast, and informed shopping experience. By offering secure transactions, wide product selections, and effective customer support, e-retail platforms enhance both the customer journey and business operations, making it a powerful model in today's digital economy.

Summary :

The unit describes various business models like B2C,B2B,C2B and C2C very clearly with appropriate examples. It also present the benefits of Traditional retailing and E retrailing.

Test Your Skills:

1. **What are the functions of E-commerce?**

(a) Marketing of goods and services.

(b) Warehousing of goods and services

(c) Financing for goods and services.

(d) All of the above

2. What are the types of E-commerce?

   (a) Business to Business, also known as B2B.

   (b) Business to Consumers, also known as B2C.

   (c) Consumer to Business, also known as C2B.

   (d) All of the above.

3. What are the most preferred products which get old in B2C business?

   (a) Digital products.

   (b) Fruits and vegetables.

   (c) Clothes.

   (d) All of the above.

4. Which is a function of E-commerce

   (a) marketing

   (b) advertising

   (c) warehousing

   (d) all of the above

5. The dimension of e-commerce that enables commerce across national boundaries is called _____.

   (a) Interactivity

   (b) global reach

   (c) richness

   (d) ubiquity

Answers:

1. d
2. d
3. a
4. d
5. b

Glossary of Terms

1. Shopping Cart

A software or feature that allows customers to select products, review their selections, and proceed to checkout.

2. Payment Gateway

A service that processes and authorizes credit card payments or direct payments for online retailers.

3. SSL (Secure Sockets Layer)

A standard security technology used to establish an encrypted link between a web server and a browser, ensuring secure data transmission.

4. Conversion Rate

The percentage of website visitors who complete a desired action, such as making a purchase or filling out a form.

5. Dropshipping

A fulfillment model where an online store sells products without holding inventory, relying on third-party suppliers to ship directly to customers.

6. A/B Testing

A method used to compare two versions of a webpage or product listing to see which performs better based on specific metrics (e.g., conversion rate).

7. Affiliate Marketing

A performance-based marketing strategy where an individual or business earns a commission for promoting another company's products or services.

8. Search Engine Optimization (SEO)

The practice of optimizing a website to improve its visibility and ranking in search engine results.

9. Fulfillment

The process of receiving, processing, and delivering customer orders.

10. Customer Relationship Management (CRM)

Software and strategies used to manage a company's interactions with current and potential customers.

11. User Experience (UX)

The overall experience a customer has when interacting with a website or app, including ease of use, design, and satisfaction.

12. Payment Processor

A company that handles transactions between a merchant and a customer's bank to facilitate payments.

13. Inventory Management

The process of ordering, storing, and controlling products or materials that a business sells.

14. Marketplace

A platform where multiple third-party sellers offer their products for sale (e.g., Amazon, eBay).

15. Omnichannel

A multi-channel approach to sales that seeks to provide customers with a seamless shopping experience across all platforms (online, mobile, in-store).

16. PPC (Pay-Per-Click)

An online advertising model where advertisers pay each time a user clicks on their ad.

17. Merchant Account

A type of bank account that allows businesses to accept payments via credit or debit cards.

18. Chargeback

A reversal of a payment made when a customer disputes a charge on their card.

19. B2C (Business-to-Consumer)

A business model in which a company sells products or services directly to individual customers.

20. B2B (Business-to-Business)

A business model where transactions occur between businesses rather than between a business and individual consumers.

UNIT 3

OBJECTIVE:

This unit helps to understands the Internet Audience and Consumer Behaviour, Basic Marketing Concepts, Internet Marketing Technologies, Marketing Strategy. It briefly explains the Categories of E-services. Web- Enabled Services, Information and also about Selling on the Web.

3. E-Commerce Marketing Concepts

3.1 The Internet Audience and Consumer Behaviour:

With the evolution of online communication through internet, customers now see online advertisements of various brands. It is fast catching up with the buying behaviour of consumers and is a major source of publicity for niche segments and also for established brands. This is the new way of digital revolution and businesses worldwide have realized their worth.

Examples − Online catalogues, Websites, or Search engines. When customers have sufficient information, they will need to compare.

Online Customer Behavior Process

According to the above figure, in the search stage, they might look for the product reviews or customer comments. They will find out which brand or company offers them the best fit to their expectation. During this stage, well-organized web site structure and attractive design are important things to persuade consumers to be interested in buying product or service.

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Stage 1 :The most useful characteristic of internet is that it supports the pre-purchase stage as it helps customers compare different options.

Stage 2 :During the purchasing stage, product assortment, sale services and information quality seem to be the most important point to help consumers decide what product they should select, or what seller they should buy from.

Stage 3 : Post-purchase behaviour will become more important after their online purchase. Consumers sometimes have a difficulty or concern about the product, or they might want to change or return the product that they have bought. Thus, return and exchange services become more important at this stage.

Factors of Online Customer Behavior

The first elements to identify are factors that motivate customers to buy products or services online. They are divided into two categories − external factors and internal factors.

- **The External Factors** are the ones beyond the control of the customers. They can divide into five sectors namely demographic, socio-economic, technology and public policy; culture; sub- culture; reference groups; and marketing.
- **Internal Factors** are the personal traits or behaviors which include attitudes, learning, perception, motivation, self image.
- **The Functional Motives** is related to the consumer needs and include things like time, convenience of shopping online, price, the environment of shopping place, selection of products etc.
- **The Non-Functional Motives** related to the culture or social values like the brand of the store or product.

Filtering Elements

Customers use these three factors to filter their buying choices and decide on the final selection of stores they are willing to purchase from. They use the knowledge to filter their purchase options by three factors −

- Security
- Privacy
- Trust and Trustworthiness

Before a company or a marketer can delight the customer, it must have an in-depth knowledge of the customer's expectations so that not only are they able to meet but exceed the expectation, to delight the customer.

For this, knowledge of the core elements of the products and services are essential. The core elements of a product are its shape, quality, price, packaging, brand name differentiation etc. while the core elements of services are reliability, fulfillers and responsiveness to specific needs assurance and acceptability etc. from the service provided.

In the case of a product (tangible), the customer should be provided with what he expects and the core elements which remain almost the same. However, services being intangible and their characteristics which are intangible, inseparability, perishability etc. must be kept in mind.

The core elements given above can be manipulated to exceed the expectations of the customer as the human touch is also involved and this can give unexpected positive elements to delight the customer and have a competitive edge as well.

- A customer expects essential benefits.
- A customer expects performance and not blank promises.

- A customer expects competency.

Services and Products

A customer normally looks for the following services −

- A customer wants consistency, which is the capacity to perform the promised services, reliably and accurately.
- A customer wants tangibility or the form of physical facilities, equipment, workforce and other materials.
- A customer wants reaction – the reaction to an inquiry or to a call.

Working towards Enhancing Customer Satisfaction

To generate delight is not an easy job. Companies are varying with each other for competitive advantage.

A customer gets more satisfaction when he least expects it. In predicting the effects on product evaluation and customer satisfaction of disparity between expectations and actual or objective product performance; at least four psychological theories the company also delivers at the doorstep of the consumer which generates unparalleled value and satisfaction. For this, one must −

- Attempt continuously to provide additional customer value in every transaction.
- Try to provide surprise benefits.
- Constantly express the expectations that the customer has around your product.
- Treat the customer exclusively.
- Look for expectations and performance gaps in order to identify opportunities to delight.

Customer Expectation and Satisfaction

Customer satisfaction may be defined as the product's performance according to buyer's expectations.

Consumers form expectations about the value of marketing offers and make buying decisions based on three expectations.

Customer satisfaction depends on the products actual performance relative to a buyer's expectations. But, how do buyers form their expectations and expectations are based on the customer's past buying experience.

Marketers must be careful to set the right level of expectations. If they set expectations too low they may satisfy those who buy, but fail to attract enough buyers.

Consumer satisfaction, a business term, is a measure of how products and services supplied by a company meet or surpass consumer expectation.

Basic Marketing Concepts

Today, there's a strategy for everything, but for building a strategy, it becomes important to understand the basics of it first. For example, if you want to build a strong marketing strategy, then it becomes imperative to understand marketing concepts. By following the five core **marketing concepts**, you can figure out the right strategy for you. To put it simply, execution is a crucial step in marketing, and it only happens after doing a lot of research and strategizing.

What is marketing?

Marketing is the art and process of developing, executing, and maintaining an exchange relationship. You begin with attracting the customers, building a relationship with them, and finally keeping it by satisfying their needs.

That customer can be either other businesses or the customers; therefore, marketing can be B2B or B2C depending upon the situation. However, the ultimate function of

marketing remains the same: to build a relationship with customers and satisfy their needs by meeting their requirements. Corporate marketing training plays a crucial role in honing the skills required to navigate this complex landscape. It equips professionals with the knowledge and strategies necessary to attract, engage, and retain customers effectively.

For example, telecommunication builds a marketing strategy that first intrigues and persuades people to use their calls, messaging, and internet packages. Once people begin using, then they urge them to rate their service by giving them stars.

What are the Marketing Concepts?

The marketing concept means whenever a company plans and implements to maximize profit by boosting sales, meeting customers' needs, and surpassing competitors. The goal is to devise a situation that serves both parties; the customer and the company.

The idea behind the marketing concept is to predict and satisfy the needs and wants of customers better than the competitors. The marketing concepts were first derived from the book of Adam Smith, Wealth of Nations. However, it remained unexplored to the world till the 21st century.

To fully appreciate the marketing concept, first, we to understand needs, wants, and demands;

- **Needs** – it is something inevitable for the existence of life; many adverse things can occur without it. The worst-case situation would be death. Needs cover many things, like food, shelter, self-development, security, social belonging, self-esteem, and respect.
- **Wants** – wants are our desires and wishes in life; our social setup and culture mould our wants.
- **Demands** – when our desires, needs, and wants are backed by our ability to pay, they become demands.

Since we have learned the basics of marketing, it's time to understand five marketing concepts.

5 Basic Marketing Concepts

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There is an end number of marketing concepts as every type of business has its concept. While some concepts still work today, others have become out-of-date. However, we will be looking at five core marketing concepts, also recognized as marketing management philosophies.

1. Product Concept

The core purpose of the product concept is to manufacture cheaper products because the consumers won't pay much price for the products or services. So the businesses that accompany the product concept manufacture the goods on a mass scale and profit out of the economies of scale. When manufacturers produce low-cost products, then they follow a broad distribution strategy to reach more audiences. By targeting more people, they can boost their productivity by expanding their market.

In the product concept, marketers do not give any importance to the requirements and wants of the customers. Their central focus is to produce more and more goods, quantity matters, not quality. As a result, consumers are usually unsatisfied with the bad

quality of the products. The product concept was popular when there were no competitors in the market; whatever you bring in the market, people would take it. It is one of the earliest marketing concepts where the organization concentrates on the ability of its production processes. It is to manufacture the products cheaper to make them ready for the mass population. The center of the production concept is on the quantity, not the quality of the products.

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Production concept began in the mid 1950s, and it accompanies the Say's Law. It says that supply generates demand in the market. Therefore, according to this law, when a company manufactures a product, it doesn't need to promote its products; it would sell itself. The law became widespread because, at that time, there was no technology and communications, and people used to travel less. The salesman in the store used to be the only retailer, and there were few manufacturers. So there used to be a confined variety of products, whatever comes in the market, and then it would have been marketed. For example McDonald's and fast food chains in general also aim to ace their operations.

S As the name suggests, the idea of selling is to sell the company's product through large-scale marketing and promotional activities. It doesn't matter whether they satisfy customers' needs or not. The center of the management in this method is to finish the transaction of sale; they believe that their job is done once they market their product.

Therefore, rather than establishing and maintaining a long-term connection with the customer, the customer would come back again.

1. Selling Concept

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The sale concept is a very precarious strategy because it's based on a very weak notion that the company should sell whatever they're manufacturing instead of meeting customer's demands. In this approach, marketers believe that if consumers don't like the company's product, they'll buy something else and forget about their past shopping experience. So the whole notion of the sale concept is based on the false presumption that the customers don't remember their past buying experience. For example, blood donations and insurance policies come under the category of sale concept, where the marketer believes that their job is done after making the transaction.

4. Marketing Concept

When it comes to the marketing concept, it is customer-oriented. It places customers in the middle of the marketing process, discovering customers' demands and wants, then meeting those needs better than the competitors. In this method, the marketer assumes that the customer is always right, and his requirements and wants should be their priority.

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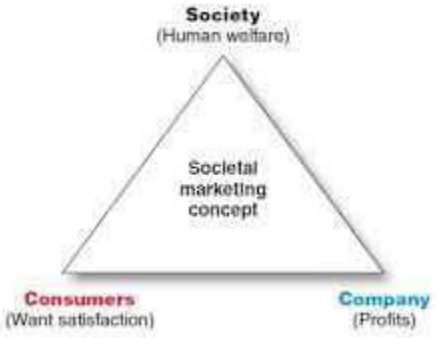
Here the marketing strategy concentrates on producing a profit by satisfying the needs and wants of customers.

It supports a very simple strategy: marketers do not search for the right customers for their product; instead, they build the right product. Thus, marketers seek to bridge the gap between the consumers and the company's products by creating engaging content marketing materials like interactive product catalogs. When you analyze the *marketing concept* with the sale concept, you may find a huge distinction between both strategies. It won't be wrong if you state that these two strategies are at two opposite extreme poles. The best example of this concept is the Coke vs. Pepsi war, In this case (Pepsi V. Coca Cola war), it's not just about doing another Facebook ad, but much more about the product & marketing positioning in the customer's eye.

5. **Societal Marketing The idea behind the societal marketing concept is based on the welfare of the entire society because it examines the strategy of the marketing concept. What consumers need doesn't mean that it would be useful for them in the long term. What you need and what is suitable for you and society as a whole are two entirely different things. For example, we all like sweet, spicy, and fast foods. We all desire the same things**

whenever we go out, but it doesn't imply that it's good for our health and the well-being of the whole society. Concept



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The goal and aim of the societal marketing concept is to make companies understand that they have a friendly and environmental responsibility, much more important than their short-term sales and profit goals. Businesses should design and operate towards a sustainable future for society; organizations are a part of society and should behave like one. One of the best examples of societal marketing concepts is the Coca Cola Super Bowl Commercial 2014 "America The Beautiful." Campaign.

3.2 Internet Marketing Technologies

With rapid advancements in technology and the internet, marketing techniques have undergone significant changes. A majority of businesses now include online marketing as a vital element of their primary marketing plans. Knowing how to use online marketing to assist a business in reaching its target audience might be useful if you work in the marketing sector. It's important to keep your audience and brand in mind when developing your Internet marketing plan because it helps you to share your brand's message with your audience.

Internet marketing, often known as online marketing, uses digital platforms and methods to promote brands by focusing on their target markets. Internet marketing is not the only

strategy for generating interest in and knowledge about a product. The goal of internet marketing is to increase traffic to the advertiser's website through a number of methods.

Internet marketing reaches individuals from various online locations by utilizing their online activity to establish a connection with a business. The kinds of internet marketing a company employs will vary depending on its business model, items it sells, target market, available resources, and other factors.

1. Website Content and Design

The method of creating and spreading content in order to bring in and keep customers is known as content marketing. Instead of focusing on selling, it concentrates on client communication, which is usually more well-liked.

2. Email Marketing

Email marketing is the process of sending direct marketing communications to consumers via email in an effort to attract new clients and keep hold of current ones. It's one of the most economical forms of marketing and may be used to target both a large customer base and a highly specific one. When customers provide a brand with their email address, the company can contact them for future marketing initiatives.

3. Social Media

Social media marketing refers to the use of social media websites to promote a business and its goods and services. It attempts to increase brand recognition, enhance consumer interaction, build loyalty, and produce leads for sales. Paid advertising and organic marketing are both components of social media marketing strategy. Organic social media marketing places a strong emphasis on building a community and establishing relations with customers in order to pique interest and encourage client

loyalty. A paid social media campaign is a collection of advertisements that can work together to help you use social media to accomplish a goal or purpose.

4. SEO

SEO is the process of upgrading a website and digital content to increase its organic or "natural" placement in search rankings. A website is more likely to be viewed by a potential consumer if it ranks higher in search results. Effective SEO efforts need thorough keyword research as well as the ability to develop high-quality, useful content utilizing the selected keywords. Using relevant keywords, link-building, making your website mobile-friendly to improve user experience, and voice search optimization are some best practices for SEO that increase conversion rate.

5. Blogging

By adding posts and blogs based around specific targeted keywords, blogging enables you to improve the SEO of your website. Customers are more likely to find and visit your website as a result of an online search if you do this. They keep the website up to date and offer chances for audience engagement. You can link to reliable websites, which increases client loyalty and increases your audience. The most important benefit of blogging is that it can strengthen your relationship with your audience. All of this contributes to the generation of more leads and the expansion of sales.

6. Video and Podcasting

Videos and podcasts are other methods to give your marketing strategy some personality. They enable businesses to convey informative content and engage audiences by using storytelling techniques. As your brand's voice, you become more visible to listeners, which promotes deeper connections with your customers. You can also invite guest speakers, who will provide a different level of credibility while helping you in growing your audience.

7. Online Advertising

There are several ways to advertise yourself online.

PPC targets specific search phrases that potential customers might use. The banner advertising is available on numerous websites, including blogs, magazines, and news websites.

You can effectively buy your way to the top of search results by using search engine advertising. This strategy can be useful when your website is brand new, or there is fierce competition for market share because these circumstances make it difficult to achieve a high position naturally.

You can target potential customers through paid social media postings based on their demographics, interests, and behaviors to reach people who will be interested in your goods or services.

8. Influencer Marketing

Influencer marketing is the process of working with influencers to advertise your brand's messages, products, or services. Influencer marketing is a mixture of both old ways and new ways of marketing strategies. It takes the idea of a celebrity endorsement into a content marketing campaign for today's time. The main difference in the case of influencer marketing is that the campaign results in collaborations between brands and influencers.

9. Infographics

Infographics are a creative method to present complicated information in an approachable manner. Infographics provide readers with a lively, colorful visual to help them understand (and share) important knowledge, breaking up the monotony of text through charts, photos, graphs, and illustrations. They convey some extremely

important information in an understandable manner and are appealing and easy to follow.

10. Sponsorships and Paid Promotions

Through sponsored sponsorships and promotions, you may also use the online audience of another person to advertise your goods or services. You may reach your target audience online in a wide range of ways by using paid promotions and sponsorships. The most crucial thing is to identify the marketing techniques that fit your business the best.

3.3 Marketing Strategy -E services

A marketing plan describes the concrete actions and marketing tactics undertaken to complete a marketing campaign. A marketing strategy, on the other hand, outlines the big picture of a marketing effort, such as the business's target audience and its products' value proposition for customers.

As a result, it is common to refer to an existing marketing strategy when developing a marketing plan. While the strategy describes *what* the marketing objectives are, the plan describes *how* those objectives are going to be achieved. Without a well-thought-out marketing strategy, marketing plans are in danger of missing the mark.

Types of marketing strategy

You can take many different approaches to marketing—such as social media marketing or content marketing—but the most elementary strategies for market growth are found in Ansoff's matrix. These four strategies are:

- Market penetration
- Product development
- Market development

- Diversification

H. Igor Ansoff created his matrix to help businesses understand the different strategies required for market growth. Ansoff made two basic assumptions about how growth could be achieved: firstly, by varying what product is being sold and, secondly, by varying who the product is being sold to. As a result, each of the quadrants in his matrix features a mix of these two factors.

In outlining these four growth strategies, Ansoff's matrix also emphasises the different marketing tactics businesses and marketers must consider when undertaking them. Each strategy requires a different consideration of the four Ps, also known as the "marketing mix," which marketers should consider together to ensure an effective marketing strategy. The four Ps are:

- **Product:** What is being sold
- **Place:** Where it is being sold
- **Price:** What the product costs
- **Promotion:** How the product is marketed to the target audience

The exact way that a marketer defines the four Ps for their marketing efforts will depend on the growth strategy they are using and the political and economic outlook of their market.

Let's take a closer look at each strategy from Ansoff's matrix.

Market penetration strategy

Market penetration is a growth strategy involving selling existing products to existing markets. It is considered the least risky of all the strategies in Ansoff's matrix. The

strategy is typically considered most beneficial if the market is either growing, or the marketer alters its promotional efforts through existing marketing channels.

An example of a market penetration strategy can be found in Ariel's #ShareTheLoad.

Ariel challenged stereotypes of women's work with an ad that featured a dad recognising his daughter's skills and promise, and her lack of time due to her lists of tasks and home life responsibilities. As a result, he takes on her laundry duties to 'lighten the load'.

Product development strategy

A product development strategy involves the development of a new product for an already existing market. Typically, it is considered riskier than a market penetration strategy because it requires the creation of a totally new product. In order to be successful, product development strategies typically require innovation and further research into the existing market, including the profiles and needs of the target audience.

An example of a successful (and surprisingly interesting) product development strategy can be seen in the Uni Kuru Toga mechanical pencil.

As odd as it may seem, in the mechanical pencil world, the Uni Kuru Toga is something of a star. "Writing with the Kuru Toga for the first time was an illuminating experience," said Steven Poole in his article published in *The Guardian* Books blog section [4]. *Wired*, meanwhile, called it "the ultimate geek tool"

What makes the pencil so unique? A specially designed internal gear mechanism that rotates the lead so it stays sharp as you write and diamond-infused lead that doesn't easily break under pressure. In effect, as a 2009 commercial for the pencil demonstrated, it was meant for people concerned with even handwriting and durable lead

While the market for mechanical pencils was already well-established, the Uni Kuru Toga was able to find success through a product development strategy that offered consumers something new and useful.

Market development strategy

A market development strategy takes an existing product into new markets. Much like a product development strategy, a market development strategy is considered riskier than a market penetration strategy because it involves introducing a familiar product into an unfamiliar marketplace. While the product remains the same, the new place it is sold possibly requires new pricing and promotional efforts.

An example of a market development strategy is when Microsoft introduced its Hololens technology to an additional 29 markets in Europe in November of The augmented reality headset provides a unique user experience that allows professionals to work in a “mixed reality” environment. To promote their efforts, Microsoft released a YouTube video showcasing the unique use cases of the product in the workplace, such as through interactive employee training programmes in industrial environments

Diversification strategy

A diversification strategy involves the development of a new product for a new market. The novelty required in a diversification strategy means that it is also the riskiest of the Ansoff matrix’s four strategies. Diversification strategies require full attention on all of the four Ps—product, price, place, and promotion—but the biggest risks can also lead to the biggest rewards.

An example of a diversification strategy is when Apple introduced the first iPhone in June 2007 at the MacWorld Expo, with an Indian release in August 2008. At the time, Apple was new to the mobile phone market, but they innovated in the space by adding a music player and web browser to their new touchscreen phone

"Today Apple is going to reinvent the phone," CEO Steve Jobs declared before an audience of reporters. Through much of the presentation, Jobs outlined the phone's unique value proposition to customers.

E services

E-service is the delivery of service using new media such as the Web. The spectrum of e-commerce ranges from selling goods with little or no service content to providing (pure) services on the Web. In between there are value-added services (e.g., on-line travel agents) and products sold with a high service content. E-services are important in B2C e-commerce for managing customer relations and enhancing sales. Rapidly advancement of technology such as wireless, broadband, smart cards, data warehousing, data mining and agent technologies, are contribute toward the effective accessibility and servicing of the correctly targeted customers for business while providing more choices, options and ultimately power to customers in their transactions with business. Further e-service provides a new business paradigm for the organizations operating in the electronic environment.

There are three primary reasons for firms to develop e-services. Firstly, margin, consumer acquisition and service costs are generally much lower in an online medium versus that in an offline medium. Secondly, e-service inexpensively and effectively delivers high-quality, timely and in-depth product information desired by consumers. E-services also provide consumers with benefits such as better price quality comparisons and customized search processes based on criteria of importance. Finally, the use of e-services enables firms to develop a deep understanding of consumer behavior.

3.4 Categories of E-services

There are many types of E-services. Some of them are:

- E- Banking services
- E- Governance

- E- Bill payment services
- E- Food services
- E- Shopping
- E- Portal

E-BANKING SERVICES

E-banking is an active area. In the ancient days, the people had to walk to a long distance to use the banks. They also had to stand in a long line topay or withdraw money. In that case, E-banking acts as a rescue. It saves the people's time and energy. They can use the E-banking services such as the Automated Teller Machines (ATMs) or the debit or credit cards to pay and withdraw the money. E-lockers are also introduced to provide safety to the customers wealth.

E-GOVERNANCE

A key component of the Digital India initiative is providing e-governance which is aimed at promoting through e-Kranti or electronic delivery of services. Under this, the central and state governments will pull Information and communication technologies to grant an integrated services on an end-to-end basis. In fact, the rural e-governance applications implemented in the recent past have demonstrated the significance of Informations and communication Technologies in the alarmed domains of rural development. Some of the recent initiatives that have gone live and are expected to significantly affect rural areas are:

E-lockers, E-health care services, agriculture, education etc. Moreover, the cyclone announcing systems allows to get to know the weather and they help in taking necessary precautions during the times of cyclone. Similarly, the web cameras allow the governments to prevent robbery or any other offensive acts.

E-BILL PAYMENT SERVICES

E-bill payment services act as an important element in the digital world. In the older days, our ancestors had to walk to a long distance to pay Electric or water bill. It took a considerable amount of time. Now the condition has been changed due to the advent of the E-services. The bills can be payed with the help of E-bill payment services. They can use their internet to pay their bills from home. Credit and debit cards are used to pay the bills. Similarly, tickets for buses, trains or flights can be booked through online services. It simplifies the act of travelling. Over all, the E-bill services reduce the time and energy of human beings.

E-FOOD SERVICES

It is the latest development in the digital era. It is an app developed by two men while travelling. The E-food app is available in the playstore. If we have this app in our mobile phones, we can order the food that we want while we travel through this app. The food from the nearby branch will be delivered in the railway stations or bus stands. We need not search for a guaranteed food while travelling. Moreover, the food can also be ordered through the system of door delivery. All we have to do is that calling up them and ordering the food we want. They will be. Delivered from the nearby branch at a minimum time. The Dominos is very popular for its e-food services

E-SHOPPING

E-shopping has become a trend in the twenty first century. It is the easiest way of purchase. It is true that the world is moving at an air's speed. Now-a-days, nobody spends much time for shopping except a few. It is because, they have many works to do and have many obligations to fulfil. In this case, they prefer E-shopping. It is very easy and simple. They can order the things or materials by looking their pictures online. The rate for each material will also be put near the picture. If they like to buy them, they can place the order and can pay the money through E-banking. They can also pay the amount as cash on delivery. The mostly used E-shopping sites include: Amazon, Flipkart, shopcluse etc. This E-shopping provides much options within a very lesser time and with a click of a button.

E-PORTALS

E-portals are used extensively to connect to various sites. They take us to various options for the subject we search for. It saves the time of searching.

It simplifies the human work. It provides the informations about all the fields include: science, ethics, philosophy, economy, mathematics, literature, arts, social works, etc. therefore, it consumes much time.

HEALTH CARE

There is currently a huge demand-supply gap in the Medicare section and a dearth of 1.5 million-2 million doctors. In addition, as per estimates, around 65 per cent of people in rural India do not have access to necessary medicines. But then, technology can play a crucial role in bridging this gap. The e-health initiatives envisaged under Digital India involve providing online medical consultation, integrating patients' electronic health records in a digital locker, online medicine supply and pan-Indian exchange of patient information. This provides the people from the rural areas to access to the health services. The government aims to provide e-healthcare coverage throughout the country by 2018. Digital locker is the prime important component which will store a database of person's information for easy access by the government and private establishments. This broad database will not be restricted to an individual's health records. It will act as a dedicated cloud- based personal storage space linked to each resident's Aadhaar card number. It will store the e-documents as well as the Uniform Resource Locators (URLs) of the e-documents issued by various departments and will have an e-signature option. Moreover, the E-services play a crucial role in saving blood in the blood banks. This can be much of help both to the rural as well as urban population.

E-EDUCATION

Digital India intiative is the vital important in information and communication system. Both the central and state government idea is to connect broadband connections in all

school and important places. In addition, free Wi-Fi will be granted in all secondary and higher secondary schools. Moreover, a programme on digital literacy will be implemented at the national level. Massive open online courses (MOOCs) will be developed and leveraged for education. These initiatives are likely to boost education facilities in rural areas, which otherwise lack proper infrastructure for imparting quality education. Further, many state governments have launched e-education programmes that use mobile and broadband technology to deliver primary as well as higher education in rural areas. The private sector has also taken several initiatives in e-education. Some of the successful initiatives in this regard are Microsoft India's project Shiksha and e-Shiksha. All these are aimed at providing education both to the rural as well as urban population.

E-Libraries

Libraries play a significant role to collect information. They are the important providers of knowledge. In the ancient days, the people especially the students and the teachers had to walk to libraries and search for the books. Now-a-days, the condition has been changed to a great extent. There are many E-libraries. Some of them include: bookshouldbefree.com, booksfi.org, projectguttenberg.com etc. these libraries provide many books online. The students can access the online books. In the same way, newspapers are also available online. Therefore, people need not search for the print newspapers.

Similarly, in the ancient days, people had to search for the books from different shelves. It takes much time. The E-service provides an Online Catalogue by which one can check the availability and the location of the books. Moreover, most of the libraries provide an online access. By which, any member can access to the books within the codes of the library. For example, any member can access the American library. All one has to do is that they should fill in the application form. After sending the application form, one may receive books either through postal or online. These E-libraries play a crucial role in easy access of books.

3.5 Web enabled services

Web-enabled services refer to online services that enable customers to complete tasks or access information remotely. .Execution of marketing strategies which includes search engine operation, search engine submission, online promotions, website design strategies, copywriting and so on can be clubbed under Web-enabled services.

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Services offered

This service mainly focuses on Order Taking, Billing Queries, E-Mail Support and Chat Support. People have been highly influenced by the idea of teleshopping, which is a blessing in disguise.

Order Taking: Teleshopping service has introduced the new fundamental i.e. Order taking service. They assure that the customer never waits. They run call centers with highly skilled and trained workers. This keeps the customers informed about the latest offers on go

Billing Queries: An ideal way to manage your billing system is to outsource it. Companies have introduced a different department for all billing related issues. The infrastructure is completely based on the latest technology offering them better customer satisfaction and technical support.

Email Support: A tracker of all the E-Mails of the company is kept and it is ensured that they cater to all the mails without any delay. Email Support will provide a full on solution related to your email account updating, login issues, recovering lost passwords, assistance for hacked accounts, back up for emails and so on.

Chat Support: In chat support service highly skilled customer care executives attend all the problems raised by customers. This helps in building a better relationship between the customer and the organization.

In the end would conclude by saying that internet has become the best choice for buying, selling, reviewing or marketing. Over the past few years, business world has seen a significant rise using web-enabled services

Information-Selling on the Web.

Information – it makes the world go around. In fact, many economies around the world are propped up by the information that the businesses and professionals within those economies hold. After all, you don't necessarily need a warehouse full of products or massive factories to sell online. Simply 'being in the know' can be a powerful and profitable position to be in.

There are countless professions that rely on information and knowledge and the skills to apply it – lawyers, business consultants, marketers, therapists…the list goes on.

So, it is clear that information can be valuable. This is why there's already a growing market for those with information to sell it to those who can benefit from it. In this article, we walk you through everything you need to know about selling information products online.

Step-by-Step Instructions

1. Pick Which Information Product You Want to Sell

For the majority of history, information has been distributed in one of two ways – via written word, such as books, or via spoken word, such as lectures. These methods made the distribution of information limited and often only available to the 'elite'. More recent technology has offered the world significantly easier ways to record, digest, and distribute information.

There are now countless ways to sell information online. Some of these include:

- Podcasts
- Webinars
- eBooks
- Audiobooks
- Online Courses
- Coaching Sessions
- Membership Sites
- Templates
- Checklists
- Reports

Which of these methods you choose will depend on several factors, such as the type of information you are selling, your preferred communication style, and the audience you're targeting with your information products.

2. Create Your Information Product

So, how do you pick the information product you're going to create and sell?

Your own experience and expertise are by far the best place to start when considering this question. This is especially true if you hold information in a niche that others are keen to learn and expand their knowledge about. **A few popular information niches include:**

- **Fitness**
- **Relationships**
- **Lifestyle**
- **Finance**
- **Self-Improvement**
- **Travel**
- **Food**
- **Languages**

Once you have picked your niche, you then need to decide exactly *how* you're going to deliver the information.

Different types of communication methods will be better for different niches.

For example, videos can be a good way to communicate workout routines in the fitness niche, whereas audio files may be a better communication method for those looking to teach languages.

3. Determine Your Price Point

Pricing information products can be a little trickier than pricing physical products. There are several factors that you need to consider, such as how much time it will take to create the product, how much your time and expertise is worth, how many copies of the information product you expect to sell, and what your target audience would be willing to pay.

For example, if you decided to make a video course about making a website you may calculate your price in the following way:

Hours to create video content: 20

How much you want to earn per hour: $100

How many people you expect to sell the course to: 100

So, to make the course worth your while you will need to generate $2,000 in profit (20 hours x $100 an hour = $2,000). If you expect to sell 100 copies of the course, then you will need to charge $20 for each copy of the course you sell.

This calculation offers a good starting point, but you will also need to assess whether your final figure is something your target audience will be willing to pay.

To do this you can take a look at some of the top-selling information products online – especially those in your niche, because it will show you how much others are charging for similar products. You may also reach out to potential customers to get their thoughts and ideas on what they would be willing to pay for your product.

4. Find a Name for Your Business

Picking the perfect name for your business can be tricky.

When picking your name ask yourself a few questions such as:

What name is relevant to my niche?

What name is different from my competitors?

Am I personally recognized for my expertise? If so, should I use my own name to sell my products?

Once you have decided on a name you will want to register it to ensure that others can't use it. You will also need to check if your specific niche requires you to follow any special regulations or obtain any special licenses or permits before you can start selling.

5. Get Online

You have your product, you have a great business name, and you are ready to sell. **Now it's time to get yourself online.** There are several options when it comes to selling information products online including marketplaces, social media, and via your own online store.

Marketplaces like Amazon and eBay offer a great way to **reach a wide audience** with your information products.

You may also use **more specialist marketplaces** that offer a more tailored audience – these platforms include the likes of Udemy, Skillshare, and Teachable.

Although marketplaces are a great way to reach your target audience, you will need to pay a commission on sales or a fee. You also have little control over the platform itself and are vulnerable to unfavourable changes the platform owners may make.

Social media is another good place to start selling your information products.

Using platforms such as LinkedIn, Facebook, and Instagram allow you to sell to your target audience where they are already spending a considerable amount of time. This is especially beneficial to those who already have a **large and loyal social media following**.

However, it's important to note that depending on the platform you use, you may need to host your information product on a separate platform and drive traffic to where customers can buy.

We recommend creating your own website if you want to sell information products long-term. Although creating your own site does take a little more time than selling on marketplaces or social media platforms, ultimately it will benefit you by offering a greater level of control and limiting the need to pay commissions on each sale.

Some leading website builder platforms which are worth considering include Wix, Shopify, and BigCommerce. Each of these platforms offers specialist tools for hosting and selling information products – for example, you can sell online courses on Shopify, and all three platforms provide subscription areas and checkout capabilities.

6. Promote Your Website

There are countless ways that you can promote your information product website – here are a few tried and tested methods to get you started:

- **Social media** – post regular, insightful content that helps position you as a thought leader
- **Email newsletter** – regularly send out emails to your list with relevant content and even special deals
- **Paid ads** – target your audience with paid ads on platforms such as Facebook, Instagram, LinkedIn, and Google
- **Blogs and webinars** – write helpful blogs and host engaging webinars that show your knowledge in the subject area

7. Grow Your Online Store

Once you successfully sell online products, it's time to consider how to grow your business. Doing this will involve following best practices and learning from your experiences.

For example, it can be beneficial to set up a solid **customer support strategy** to delight your customers whenever they need help. You can also **collect customer feedback** in order to find the best way to improve, and **monitor key metrics** to assess how well the actions you are taking are working.

3.6 Information- Selling on the Web.

Information-Selling on the Web refers to the practice of selling digital content or information-based products online. It includes offering access to a wide variety of content, such as reports, e-books, courses, research papers, and subscriptions to specialized data or news. Information-selling has become increasingly popular with the growth of digital platforms and the internet's ability to distribute content globally.

Here's a detailed description of information-selling on the web:

1. Types of Information Products

- **E-books**: Digital books on topics ranging from fiction to self-help, business, and education. These are often sold via platforms like Amazon Kindle or independent websites.
- **Online Courses**: Educational platforms like Udemy or Coursera allow creators to sell instructional videos, lessons, and interactive courses.
- **Subscription Services**: Ongoing access to premium content such as industry reports, financial data, exclusive articles, or niche magazines is sold through a subscription model. Examples include The Wall Street Journal, Bloomberg, or Substack newsletters.

- **Research Papers and White Papers**: Academic or industry-specific research that can be sold to businesses or individuals needing specialized knowledge.
- **Stock Photos, Videos, and Audio**: Websites like Shutterstock or Getty Images sell access to digital content like photographs, video clips, and audio for use in marketing, film, or design.
- **Webinars and Live Events**: Online seminars or workshops where participants pay to attend and access real-time or recorded expert presentations.

2. Business Models for Information-Selling

- **One-Time Purchase**: Customers pay a single fee to access the digital product, such as an e-book or research paper.
- **Subscription Model**: Regularly recurring payments for continuous access to fresh content, such as newsletters, industry insights, or updates on specific topics.
- **Freemium Model**: Basic content is offered for free, but users pay for premium or in-depth information. This model is often used for news websites, apps, or online tools.
- **Membership Sites**: Access to a members-only portal where exclusive information and content are shared for a subscription fee. Examples include expert forums, online communities, or resource libraries.

3. Advantages of Information-Selling

- **Low Overhead Costs**: Since digital products require no physical inventory or shipping, the costs associated with producing and selling are relatively low. Once the content is created, it can be sold repeatedly without additional production expenses.

- **Scalability**: Information products can be sold to a global audience with little to no additional cost. The same content can reach thousands of customers at the same time.
- **Instant Delivery**: Consumers can access digital products immediately after purchase, enhancing customer satisfaction.
- **Automation**: Many aspects of information-selling, such as payment processing and product delivery, can be automated, reducing the need for constant management.

4. Platforms for Information-Selling

- **Personal Websites and Blogs**: Many entrepreneurs and experts sell information directly through their own websites. Tools like WordPress, Squarespace, or Shopify can help set up a digital store with integrated payment processing.
- **Marketplaces**: Platforms such as Amazon, Udemy, or Teachable allow sellers to reach a broad audience, offering them an established infrastructure for selling digital content.
- **Social Media**: Creators can use social media channels like Instagram, Facebook, and YouTube to promote and sell digital content, often using built-in monetization features or directing traffic to their website.
- **Affiliate Networks**: Information sellers can also partner with affiliates who promote their products for a commission on sales, expanding the reach of their content.

5. Key Strategies for Success

- **High-Quality Content**: Customers expect value from digital products. Information must be accurate, detailed, and useful to meet buyer expectations and encourage repeat sales.
- **Effective Marketing**: Promoting the digital product through email marketing, social media campaigns, content marketing (blogs, videos), and paid ads is crucial for driving sales.
- **SEO Optimization**: Ensuring that content is discoverable through search engines is critical, as buyers often look for specific information via Google or Bing.
- **Customer Trust**: Providing secure payment gateways, clear refund policies, and visible customer reviews helps build credibility and trust, essential in selling information products.
- **Regular Updates**: For information that changes frequently, like news or financial data, regular updates and new content are important to keep subscribers engaged.

6. Challenges of Information-Selling

- **Piracy**: Digital products can be easily copied and shared illegally, making it challenging to protect intellectual property.
- **Saturated Market**: With so much content available for free online, convincing consumers to pay for information can be difficult. Sellers must differentiate their products by offering exclusive insights or premium-quality content.
- **Maintaining Engagement**: Particularly for subscription models, keeping subscribers engaged with fresh, relevant, and high-quality content is critical to reducing churn rates.

7. Examples of Successful Information-Selling Businesses

- **The New York Times**: With a successful subscription model, The New York Times provides premium content for its readers, generating significant revenue through digital subscriptions.
- **MasterClass**: An educational platform where experts like filmmakers, chefs, and writers offer online courses, charging users a subscription fee for unlimited access to all lessons.
- **Shutterstock**: An example of stock content selling, Shutterstock allows users to purchase or subscribe for access to millions of high-quality images, videos, and music.

Information-selling on the web is a lucrative business model that leverages the power of digital distribution to reach global audiences. With a range of products like e-books, courses, and subscriptions, businesses can offer valuable content to consumers and professionals seeking specific knowledge. However, it requires careful attention to content quality, marketing, and customer engagement to be successful in a competitive and evolving digital landscape

Summary :

The student can understands the Various kinds of Internet audiences and their behaviours, How we can design the marketing strategies for e services and web enabled services. This unit give better understanding about selling on the web.

Test Your Skills:

1) Which of the following is the correct depiction of Digital Marketing?

a) E-mail Marketing
b) Social Media Marketing
c) Web Marketing
d) All of the above

2) What is the name of the process in which marketing is achieved by incorporating tools, techniques, electronic devices, technologies, or systems?

a) Internet Marketing
b) Direct Marketing
c) Electronic Marketing
d) Interactive Marketing

3) Which of the following is incorrect about digital marketing?

a) Digital marketing can only be done offline
b) Digital marketing cannot be done offline.
c) Digital marketing requires electronic devices for promoting goods and services.
d) In general, digital marketing can be understood as online marketing, web marketing, and e-mail marketing.

4) Which of the following is involved in the digital marketing process?

a) RSA
b) Voice Broadcasting
c) Podcasting
d) All of the above

5) What is considered while creating a front page of the website or homepage?

a) References of other websites
b) A brief elaboration about the company
c) Logos portraying the number of awards won by the web designer
d) None of the above

Check the Answers:

1. **d**

2. **a**
3. **a**
4. **d**
5. **b**

Glossary of Terms

1. Internet Audience

Refers to the group of users who visit websites, engage with content, or make purchases online, often categorized by demographics, behavior, and interests.

2. Consumer Behavior

The study of how individuals make decisions to purchase, use, and dispose of goods and services, especially in the context of online shopping.

3. Market Segmentation

The process of dividing a broad consumer or business market into sub-groups of consumers based on shared characteristics, such as demographics, behaviors, or needs.

4. Target Audience

A specific group of consumers that a business aims to reach with its products, services, or marketing efforts, often identified through segmentation.

5. Customer Journey

The complete experience a consumer goes through when interacting with a company, from initial awareness to post-purchase engagement.

6. Search Engine Marketing (SEM)

A form of online marketing that involves promoting websites by increasing their visibility in search engine results through paid advertising (e.g., Google Ads).

7. Pay-Per-Click (PPC) Advertising

An online advertising model in which advertisers pay a fee each time one of their ads is clicked, commonly used in search engine advertising.

8. Social Media Marketing

The use of social media platforms to promote products or services, engage with customers, and drive traffic to a business's website.

9. Content Marketing

A marketing strategy focused on creating, publishing, and distributing valuable and relevant content to attract and engage a target audience (e.g., blogs, videos, infographics).

10. Email Marketing

The practice of sending promotional messages or updates to a list of subscribers via email, often used for customer retention, promotions, and updates.

11. Influencer Marketing

A strategy where brands collaborate with individuals who have a significant social media following to promote their products or services to a wider audience.

12. E-Services

Digital services provided over the internet, including communication services (email, chat), entertainment services (streaming media), and transactional services (online banking, e-commerce).

13. Categories of E-Services

E-services can be divided into categories like Business-to-Consumer (B2C), Business-to-Business (B2B), and Consumer-to-Consumer (C2C) services.

14. Web-Enabled Services

Services that are made accessible through the internet, allowing users to perform tasks online that were traditionally done offline (e.g., online banking, e-learning).

15. Information-Selling

A business model where companies sell access to information or data over the internet, often through subscriptions or pay-per-use models (e.g., market research reports, digital news services).

16. Online Consumer Reviews

Reviews or ratings provided by customers who have purchased or used a product or service, influencing the purchasing decisions of other consumers.

17. Conversion Funnel

The path that consumers follow from initial awareness of a product or service to the final action of making a purchase, often visualized as a funnel (awareness, consideration, conversion).

18. Affiliate Marketing

A marketing model where businesses reward affiliates (third-party partners) for bringing in traffic or sales through the affiliate's own marketing efforts, usually through links or banners.

19. Marketing Strategy

A company's overall plan for reaching potential customers and turning them into buyers of its products or services through various marketing tactics.

20. Retargeting

A digital marketing technique where ads are shown to users who have previously visited a website or interacted with a brand but did not complete a desired action, like making a purchase.

UNIT 4

OBJECTIVE : In this unit we understand about Benefits of EDI, EDI Technology, EDI Standards ,EDI Communications, EDI Implementation, EDI Agreements and EDI Security. Moreover the students gather information about Electronic Payment Systems, Need of Electronic Payment System and Digital Economy Threats in Computer Systems: Virus, Cyber Crime Network Security.

6. Electronic Data Interchange & Security

Introduction to EDI

EDI enables the transfer of transactional documents, such as purchase orders, invoices, and shipping notices, between businesses, suppliers, and customers in a secure and reliable manner The adoption of EDI has been driven by the need for businesses to improve supply chain efficiency and reduce costs. EDI automates data exchange, reducing the need for manual intervention and the risk of errors. EDI also improves relationships between trading partners, providing a more efficient and reliable way to exchange information. This leads to increased collaboration, better visibility into the supply chain, and faster response times to changes in demand.

Electronic Data Interchange has changed the way businesses manage and process their information on a grand scale. EDI solutions save immeasurable amounts of time and lost revenue from clerical errors. Simply put, EDI provides a technical basis for commercial “conversations” between two entities, either internal or external.

4.1 Benefits of EDI

Data Exchange Formats

EDI uses standardized data formats that both sending and receiving systems can understand. These formats are often defined by international or industry-specific standards organizations. Two common formats are ANSI X12 and EDIFACT. These formats specify how data should be structured for various types of business documents, such as purchase orders, invoices, and shipping notices.

2. Automation and Efficiency

One of the primary benefits of EDI is automation. Instead of manually entering data from paper documents or emails into computer systems, EDI enables the seamless transfer

of data directly between systems. This automation reduces the risk of errors that can occur during manual data entry, resulting in increased accuracy and efficiency.

3. Reduced Paper Usage

EDI significantly reduces the need for paper-based documentation in business transactions. This not only saves costs associated with paper, printing, and postage but also contributes to environmental sustainability.

4. Faster Transactions

With EDI, transactions can occur in near real-time. This speed is especially valuable in industries where rapid decision-making and response times are critical, such as retail, where quick order fulfilment is essential.

5. Improved Accuracy

Human errors in data entry can be costly and time-consuming to rectify. EDI minimizes these errors by automating data exchange, leading to more reliable and error-free transactions.

6. Enhanced Data Security

EDI systems often incorporate security measures, including encryption and authentication, to protect the confidentiality and integrity of the data being exchanged. This is particularly crucial when dealing with sensitive information like financial data or healthcare records.

7. Compliance and Regulation

In some industries, compliance with specific regulations and standards is mandatory. EDI can help businesses meet these requirements by ensuring that data is exchanged in a standardized and compliant manner.

8. Global Reach

EDI enables businesses to engage in international trade more efficiently. It allows organizations from different countries to exchange data seamlessly, overcoming language barriers and regional differences in business practices.

9. Supply Chain Integration

In supply chain management, EDI plays a pivotal role. It enables suppliers, manufacturers, distributors, and retailers to coordinate their activities seamlessly, ensuring the timely delivery of products and efficient inventory management.

10. Cost Savings

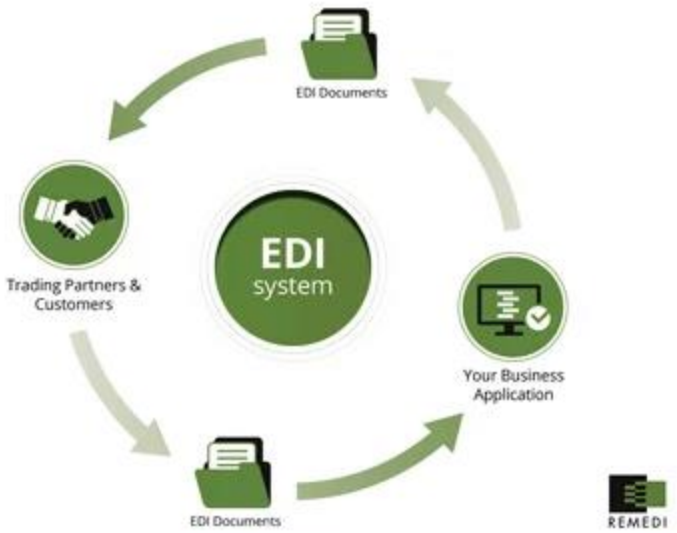
While there is an initial investment in setting up EDI systems, businesses often realize significant long-term cost savings. These savings come from reduced labour costs associated with manual data entry, decreased error correction expenses, and streamlined business processes.

4.2 EDI Technology

Electronic Data Interchange (EDI) is a computer-to-computer exchange of business documents in a standard electronic format between two or more trading partners. It enables companies to exchange information electronically in a structured format, eliminating the need for manual data entry and reducing the cost and time associated with paper-based transactions.

EDI was first introduced in the 1960s as a way for companies to exchange business documents electronically. Over time, the standardization of EDI formats and protocols has enabled businesses to integrate their internal systems with those of their trading partners, improving efficiency and reducing errors.

EDI transactions can include purchase orders, invoices, shipping notices, and other business documents. The EDI standard defines the format and content of these documents, ensuring that they are easily interpreted by both the sender and the receiver.



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EDI has become an important part of many businesses, particularly those in the supply chain and logistics industries. It allows for faster and more accurate processing of transactions, leading to improved customer satisfaction and increased profits.

It is the world of the Internet, knowingly or unknowingly, everyone is attached to the internet and is dependent on the internet. Today, almost all the work is done through the Internet. Digital India is one example of how everything is going to be done through the internet in the upcoming years, not only in the upcoming years, even right now, most of the exchange of communication is done with the help of the internet, whether it is chatting on Whatsapp with friends or sending important information through the mail, all the work and communication is mostly done through the net.

4.3 EDI Standards

EDI is the electronic exchange of structured business data between trading partners. EDI standards define the formats, structures, and rules that enable seamless data interchange. By adhering to these standards, organizations can ensure consistent and accurate data transmission, regardless of the systems or software employed.

EDI standards provide a common language for data exchange and establish a framework for data formatting, message structure, and content. EDIFACT (Electronic Data Interchange for Administration, Commerce, and Transport) and ANSI X12 (American National Standards Institute X12) are two commonly used EDI standards. The former is widely used across Europe, while ANSI X12 is prevalent in North America.

EDIFACT is a standard that allows businesses to exchange electronic documents with each other. The EDIFACT standard was developed by the United Nations Economic Commission for Europe (UNECE) in 1987. It was created to provide a universal format for electronic data interchange (EDI) between different companies and industries, regardless of their location or the computer systems they use.

ANSI X12 was created in 1979 by the ANSI subsidiary Accredited Standards Committee (ASC). This standard describes the structure and content of electronic data interchange (EDI) documents that businesses use to exchange transaction information. ANSI X12 is flexible and supports a variety of documents, including purchase orders, invoices, and shipping notices, facilitating seamless communication and collaboration between different organizations while ensuring the security and integrity of sensitive business information.

Four Key Principles of EDI Standards

EDI relies on several components to facilitate efficient and standardized data exchange between trading partners. The following key components are integral to EDI standards:

1. **Syntax:** Syntax encompasses the rules and conventions governing the structure and formatting of EDI data. It establishes a standardized language for representing information. For example, widely used syntaxes like EDIFACT and ANSI X12 define specific guidelines for organizing segments, data elements, and control structures within an EDI message.

2. **Codes:** Codes are standardized values used in EDI to represent specific information. They provide a common language for identifying and describing various attributes. For instance, the UN/EDIFACT Product Code (UNPC) assigns unique values to different products, allowing trading partners to identify and reference items across EDI messages consistently.

3. **Message Designs:** Message designs define the structure and content of specific types of EDI messages. They serve as templates that outline the arrangement and sequence of data elements and segments within an EDI message. For example, a Purchase Order (PO) message design specifies segments for buyer and seller information, item details, quantities, prices, and delivery instructions.

4. **Identification Values:** Identification values are unique identifiers assigned to entities within an EDI message. They enable accurate referencing and identification of relevant information. For instance, Global Location Numbers (GLNs) are used to identify physical locations involved in supply chain processes uniquely.

4.4 EDI Communications

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. Business entities conducting business electronically are called trading partners.

Many business documents can be exchanged using EDI, but the two most common are purchase orders and invoices. At a minimum, EDI replaces the mail preparation and handling associated with traditional business communication. However, the real power of EDI is that it standardizes the information communicated in business documents, which makes possible a "paperless" exchange.

The traditional invoice illustrates what this can mean. Most companies create invoices using a computer system, print a paper copy of the invoice and mail it to the customer.

Upon receipt, the customer frequently marks up the invoice and enters it into its own computer system. The entire process is nothing more than the transfer of information from the seller's computer to the customer's computer. EDI makes it possible to minimize or even eliminate the manual steps involved in this transfer.

The process improvements that EDI offers are significant and can be dramatic. For example, consider the difference between the traditional paper purchase order and its electronic counterpart:

4.5 EDI IMPLEMENTATION

An EDI implementation is a crucial step for any business, as it ensures that the organization is able to exchange electronic data with its trading partners seamlessly. EDI is a standard format for the electronic communication of business documents, such as purchase orders, invoices, and shipping notices. It eliminates the need for manual data entry and reduces errors and costs associated with paper-based transactions. The process of EDI implementation involves several stages, including the installation of EDI infrastructure, the establishment of a technical connection with business partners, and the certification of the EDI system to industry standards.

A Traditional Document Exchange of a Purchase Order	An EDI Document Exchange of a Purchase Order
This process normally takes between three and five days.	This process normally occurs overnight and can take less than an hour.
Buyer makes a buying decision, creates the purchase order and prints it. Buyer mails the purchase order to the supplier.	Buyer makes a buying decision, creates the purchase order but does not print it. EDI software creates an electronic version of the purchase order and

A Traditional Document Exchange of a Purchase Order	An EDI Document Exchange of a Purchase Order
Supplier receives the purchase order and enters it into the order entry system. Buyer calls supplier to determine if purchase order has been received, or supplier mails buyer an acknowledgment of the order.	transmits it automatically to the supplier. Supplier's order entry system receives the purchase order and updates the system immediately on receipt. Supplier's order entry system creates an acknowledgment an transmits it back to confirm receipt.

1. The first stage of EDI implementation involves installing the necessary software and hardware to handle mapping, translation, transmission, and integration with databases. This includes purchasing and setting up EDI software, such as EDI translators, EDI gateways, and EDI mapping tools. This software will be responsible for converting your internal data format into the EDI format that is understood by your trading partners. Additionally, it is important to establish a secure working space, such as a dedicated EDI server or cloud-based EDI system, to ensure the security and reliability of the EDI transactions. Connecting to VANs is also a crucial aspect of this stage, as it allows for the reliable and secure transfer of EDI data between trading partners. It is also important to ensure that the necessary hardware is in place, such as servers, storage, and network equipment, to support the EDI system.

2. The second stage of EDI implementation is the establishment of a technical connection with business partners. This step is essential to ensure that the EDI system is able to communicate effectively with the systems of trading partners. This includes choosing the appropriate EDI standards, protocols, and guidelines to ensure clarity and interpretation of data. For example, EDI standards such as

EDIFACT, X12, and TRADACOMS are widely used in different industries and regions. It is important to ensure that the EDI system is configured to use the same standards as your trading partners; otherwise, the EDI transactions will fail. Additionally, it is also important to establish a technical connection with business partners, such as configuring firewalls, VPNs, or AS2 connections, to ensure secure and reliable data transfer.

3. The final stage of EDI implementation is the certification of the system to industry standards. Standards are the foundation of the entire EDI ecosystem, and it is essential to ensure that the EDI system adheres to them. This includes tracking standard updates and making any necessary adjustments to the system to keep it in compliance. For example, EDI standards such as EDIFACT and X12 are updated regularly to reflect changes in business practices and technology. It is important to ensure that the EDI system is capable of handling these updates and that the trading partners are also compliant with the updated standards.

Overall, the process of EDI implementation may seem daunting, but by following these three steps, any business can successfully implement an EDI system that is ready to interact with the systems of its trading partners. It is important to complete EDI implementation at the beginning of your business as your trading partners will further require the working EDI space. The process requires careful planning, testing, and coordination to avoid any interruption of business operations. Moreover, it is also important to have a dedicated team or a specialized EDI service provider to manage the EDI implementation, maintenance, and support.

4.6 EDI Agreements

An Electronic Data Interchange Agreement, also known as an EDI Agreement, is a contract that outlines the rules and procedures for exchanging electronic data between two or more parties. This data can include things like purchase orders, invoices, and shipping notices.

When data is transmitted under an EDI Agreement, it is usually formatted according to an agreed-upon standard, such as the American National Standards Institute (ANSI) X12 standard or the United Nations Electronic Data Interchange for Administration, Commerce, and Transport (EDIFACT) standard.

Company A and Company B have an EDI Agreement in place for the exchange of purchase orders. Company A sends a purchase order to Company B in an electronic format that follows the agreed-upon standard. Company B receives the purchase order and processes it according to the terms of the agreement.

In this example, the EDI Agreement governs the exchange of purchase orders between Company A and Company B. The agreement ensures that the data is transmitted in a standardized format, making it easier for both companies to process and manage the information

4.7 EDI Security

EDI security refers to the set of features, measures, and practices implemented to protect the electronic exchange of important information between businesses. It encompasses various strategies and technologies to defend against cyber threats and unauthorized access. This includes but is not limited to, encryption protocols, access control mechanisms, and authentication procedures. The goal of EDI security is to ensure the integrity, confidentiality, and availability of the data exchanged through EDI transactions.

Secure EDI transactions are crucial due to the sensitive nature of the data exchanged and the large volume of these transactions.

Types of sensitive data exchanged

EDI transactions often involve the exchange of various types of sensitive business documents. These include:

- **Purchase orders**: These documents detail the type, quantity, and agreed prices for products or services.
- **Invoices and billing data**: These contain detailed information about a transaction, including the goods or services provided, their costs, and payment terms.
- **Shipment notices**: These provide information about the shipment of goods, including details about the shipment's contents and delivery.
- **Payment and remittance details**: These documents detail the payment terms, amounts, and schedules.

Volume of EDI transactions

The volume of EDI transactions is substantial. In 2019, EDI accounted for 78.4% of all B2B electronic transactions. The global electronic data interchange software market size was $1.5 million in 2019 and is projected to reach $3.4 million by 2027. This indicates a significant number of transactions being processed through EDI.

Given the sensitive nature of the data and the large volume of transactions, it's clear why secure EDI transactions are of paramount importance. They not only protect sensitive business information but also ensure the smooth operation of business processes.

Understanding EDI security risks

Understanding EDI security risks is crucial as businesses face increasing EDI transaction volumes, human error, incompatible formats, and the threat of data breaches. These vulnerabilities can lead to significant financial and reputational damage, making it essential to identify and mitigate EDI security risks.

1. **Increasing EDI transaction volumes**: As transaction volume and complexity increase, EDI systems may face strain, potentially causing performance issues and

data errors. High transaction volumes can escalate costs, compromise data quality, and disrupt business operations and partnerships.

2. **Human error in EDI documents**: Manual entry or human participation in EDI processes can lead to errors and delays, potentially causing inaccuracies in data transmission and disrupting business operations and partner relationships.

3. **Non-compatible EDI formats between partners**: EDI format non-compatibility between partners can disrupt data exchange if their computer systems lack the ability to encode and transmit information in a standardized format, potentially resulting in financial penalties called EDI chargebacks for non-compliance with trading partners' requirements.

4. **Data breaches**: EDI transactions pose security risks due to potential data breaches, which can result in financial losses, reputation damage, and compliance fines, disrupting business processes.

How to build a robust EDI security strategy

Building a robust EDI security strategy requires a multi-layered approach to protect your sensitive business data. Here are key components to consider:

- **Encryption methods**: Encrypt all EDI transaction files in transit and at rest using strong encryption algorithms. This protects data from unauthorized access if intercepted. Utilize secure protocols like HTTPS, FTPS, SFTP, AS2, and AS4, and encryption methods such as AES, RSA, and PGP.

- **Authentication protocols**: Implement strong authentication and authorization mechanisms. This ensures that only authorized parties can access the EDI systems and data.

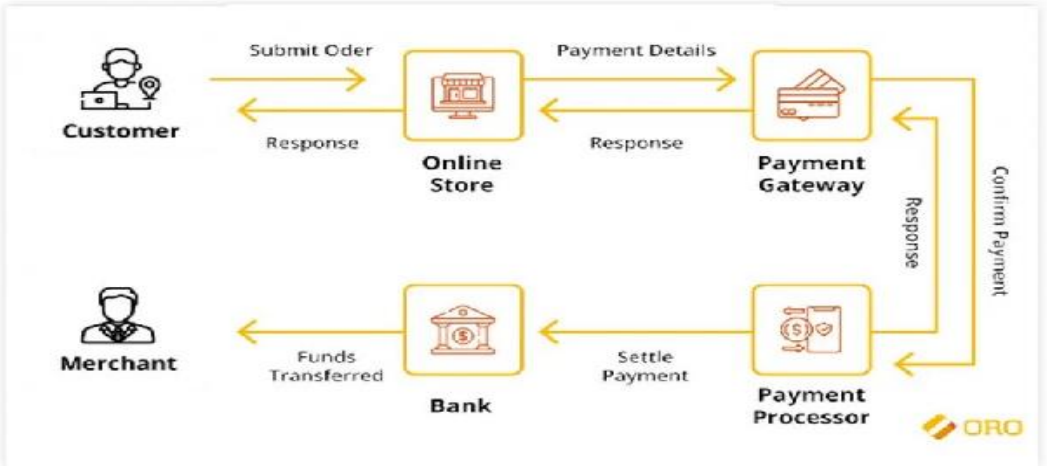
- **Secure communication channels**: Implement secure communication protocols such as AS2, SFTP, or FTPS to protect the confidentiality and integrity of data during transmission.

- **Access controls**: Control access to your EDI systems and data. Use role-based access controls, and multi-factor authentication, and conduct periodic access reviews.
- **Robust documentation practices**: Maintain comprehensive documentation of all EDI transactions. This aids in tracking and auditing processes, ensuring compliance with regulatory standards.
- **Risk management strategies**: Identify potential risks associated with EDI and develop strategies to mitigate them. This includes understanding the sensitive personal and financial data that is transmitted in EDI.
- **Continuous monitoring and testing**: Regularly monitor and test your EDI systems to detect any anomalies or security breaches. This helps in early detection and resolution of potential issues.

4.8 Electronic Payment Systems

An **Electronic Payment System** is defined as a mode of payment over an electronic network, such as the Internet. The Indian economy has developed at a rapid pace since the growth of e-commerce, electronic payments, and digital payments have gone a long way. Electronic payments have been rising since the implementation of demonetization and will continue to do so with the current government ensuring that these types of payments are promoted.

- Electronic Payment System allows customers to pay for goods and services electronically without the use of cheques or cash.
- Businesses need a strong and secure electronic payment system in online dealings.
- Electronic Payment System is regulated in India by the RBI.
- The system is safe, speedy, and cost-effective in comparison with paper-based payment systems



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How Does the Electronic Payment System Work?

Electronic payment systems are sophisticated platforms that facilitate the transfer of funds between parties, often initiated from one bank account to another. Here's a step-by-step explanation of how electronic payments typically operate:

1. Entering Payment Information

When making a purchase or initiating a transfer, users enter their payment information into the system. This could be credit card details, bank account numbers, or digital wallet credentials.

2. Payment Gateway

The payment information is then sent to a payment gateway, which acts as a bridge between the user, the merchant, and the financial institution. The payment gateway plays a crucial role in approving or denying payment requests.

3. Validation and Security

Before processing the transaction, the system validates the payment information to ensure it is accurate and legitimate. Stringent security protocols and encryption techniques are employed to safeguard the data during transmission, making electronic payments highly secure.

4. Transaction Processing

Once the payment is approved, the transaction is processed, and the funds are transferred from the user's account to the merchant's account or the recipient's account.

Further, electronic payments can be broadly categorized into two main types: one-time payments and recurring payments. Each serves a unique purpose in facilitating transactions between customers and service providers or vendors.

Types of Electronic Payment System

1. Card Payments: Credit and Debit Cards

Credit and debit cards have become ubiquitous in our daily lives. They allow us to make purchases by simply swiping our cards at the point of sale. These cards are linked to our bank accounts, enabling us to spend within our financial means or borrow money (in the case of credit cards) for a limited period.

2. Electronic Fund Transfers

Electronic fund transfers, such as National Electronic Funds Transfer (NEFT) and Real Time Gross Settlement (RTGS), provide a quick and secure way to transfer money between bank accounts. NEFT is typically used for smaller transactions, while RTGS is reserved for larger, time-sensitive transfers.

3. Online Bank Transfers

Online bank transfers allow individuals to move money directly from their bank accounts to another party's account. This method is often used for bill payments and peer-to-peer transactions.

One example of online bank transfers is when you pay your monthly utility bills directly from your bank account through the utility company's online payment portal. It's a secure and convenient way to handle regular or recurring payments.

4. Virtual Payment Cards

Virtual payment cards are digital versions of physical credit or debit cards. They can be used for online purchases without exposing your actual card details. Virtual cards enhance security and reduce the risk of fraud.

Imagine using a virtual payment card to make an online purchase from a new, unfamiliar website. By doing so, you're safeguarding your actual card details while enjoying the benefits of secure transactions, minimizing the risk of unauthorized use of your card.

5. Digital Wallets

Digital wallets, such as PayPal, Apple Pay, and Google Pay, have gained popularity for their convenience. Users can link their bank accounts or credit cards to these wallets and make payments with a simple tap or click on their smartphones.

4.9 Need of Electronic Payment System

There are many different needs of electronic payment for business, especially because many consumers and businesses are continuing to embrace electronic shopping habits and participate in e-commerce. In order to keep your business competitive and keep up with the increasing number of electronic payments coming in from suppliers and customers alike, you may want to consider finding an electronic payment system. Some of the most noticeable advantages of payment systems like AvidX change are a reduction in payment processing costs, faster and more accurate payments, safer and more convenient payment methods, better access to data and reporting, and the ability to reach new audiences. These advantages also bring with them a more efficient and

simplified payment processing system that can help your AP team to keep better track of your business's AP process.

As society continues to embrace e-commerce, businesses are finding the need to continue implementing more advanced and streamlined processes for handling online payment methods in order to stay competitive. Additionally, as people move more towards using credit cards and online payment systems rather than cash and paper checks, businesses have been experiencing many more online payments which require processing. With an electronic payment system like AvidXchange, your company can easily process the necessary payments and make sure that you are staying on top of payments to your suppliers.

4.10 Digital Economy

The digital economy refers to the economic activities that emerge from connecting individuals, businesses, devices, data and operations through digital technology. It encompasses the online connections and transactions that take place across multiple sectors and technologies, such as the internet, mobile technology, big data and information and communications technology.

The digital economy differs from a traditional economy because of its reliance on digital technology, online transactions and its transformative effect on traditional industries. Digital innovations such as the internet of things (IoT), artificial intelligence (AI), virtual reality, blockchain and autonomous vehicles all play a part in creating a digital economy.

Businesses that make digital transformation a priority can streamline processes, reduce costs and create new revenue streams. But the digital economy is more than just using a computer to perform tasks traditionally done manually or on analog devices. It's about finding ways for organizations to make their systems and people work more effectively together.

The digital economy highlights the opportunity and need for organizations and individuals to use technologies to execute those tasks better, faster and often differently than before. Such opportunities for existing entities to do better, do more, do things differently and do new things is encompassed in the related concept of digital transformation.

Advantages of the digital economy

The digital economy provides numerous benefits, which have contributed to its rapid expansion and positive effect on a variety of industries:

- **Increased productivity.** Businesses can improve their productivity and efficiency by using digital technology to automate their operations and processes.
- **Reduced costs.** Cloud computing and digital frameworks eliminate the need for substantial physical infrastructure and capital expenditures, enabling organizations to scale up and down as needed.
- **Extended reach.** Businesses can foster a global economy and presence through online platforms and technologies, thus expanding their customer bases and market opportunities.
- **Access to more data.** The digital economy produces large amounts of data that can be analyzed for insights, trends and data-driven decision-making. Businesses can use this data access to better understand customer behavior, customize experiences and increase operational effectiveness.
- **Greater convenience.** Consumers can purchase digital goods and services from the convenience of their homes. E-commerce and mobile commerce let customers purchase products whenever and wherever they want.
- **Improved customer experience.** Businesses can deliver faster and more responsive customer service through digital channels and chatbots.

- **Personalization.** By using data analytics and AI, businesses can customize products, services and marketing campaigns, ultimately improving customer satisfaction.

4.11 Threats in Computer Systems: Virus

Threats in Computer Systems:

- Virus,
- Cybercrime
- NetworkSecurity
- Encryption,
- Protecting Web Server with a Firewall,
- Firewall and the Security Policy,
- Network Firewalls and Application Firewalls, Proxy Server

A virus is a software that hacks the information stored in the computer system and hamper the functioning of the business. Virus brings things to a standstill, causing huge loss of revenue and employee time. Computer viruses aim to disrupt systems, cause major operational issues, and result in data loss and leakage. A key thing to know about computer viruses is that they are designed to spread across programs and systems. Computer viruses typically attach to an executable host file, which results in their viral codes executing when a file is opened. The code then spreads from the document or software it is attached to via networks, drives, file-sharing programs, or infected email attachments. Computer viruses can be spread via email, with some even capable of hijacking email software to spread themselves. Others may attach to legitimate software, within software packs, or infect code, and other viruses can be downloaded from compromised application stores and infected code repositories. A key feature of any computer virus is it requires a victim to execute its

code or payload, which means the host application should be running.

There are several ways to protect your computer from viruses, including:

1. Use a trusted antivirus product:

Trusted computer antivirus products are crucial to stop malware attacks and prevent computers from being infected with viruses. These antivirus concepts will protect devices from being infected through regular scans and identifying and blocking malware.

2. Avoid clicking pop-up advertisements:

Unwanted pop-up advertisements are more than likely to be linked to computer viruses and malware. Never click on pop-up advertisements because this can lead to inadvertently downloading viruses onto a computer.

3. Scan your email attachments:

A popular way to protect your device from computer viruses is to avoid suspicious email attachments, which are commonly used to spread malware. Computer antivirus solutions can be used to scan email attachments for potential viruses.

4. Scan the files that you download using file-sharing programs:

File-sharing programs, particularly unofficial sites, are also popular resources for attackers to spread computer viruses. Avoid downloading applications, games, or software from unofficial sites, and always scan files that have been downloaded from any file-sharing program.

4.12 Cyber Crime Network Security

Cybercrime is criminal activity that either targets or uses a computer, a computer network or a networked device. Most cybercrime is committed by cybercriminals or hackers who want to make money. However, occasionally cybercrime aims to damage

computers or networks for reasons other than profit. These could be political or personal.

Cybercrime can be carried out by individuals or organizations. Some cybercriminals are organized, use advanced techniques and are highly technically skilled. Others are novice hackers.

Types of cybercrime include:

1. Email and internet fraud.
2. Identity fraud (where personal information is stolen and used).
3. Theft of financial or card payment data.
4. Theft and sale of corporate data.
5. Cyberextortion (demanding money to prevent a threatened
    a. Attack).
6. Ransomware attacks (a type of cyberextortion).
7. Cryptojacking (where hackers mine cryptocurrency using
    a. Resources they do not own).
8. Cyberespionage (where hackers access government or
    a. Company data).
9. Interfering with systems in a way that compromises a network.
10. Infringing copyright.
11. Illegal gambling.
12. Selling illegal items online.

13. Soliciting, producing, or possessing child pornography.

Cybercrime involves one or both of the following:

- Criminal activity targeting computers using viruses and other types of malware.
- Criminal activity using computers to commit other crimes.

Cybercriminals that target computers may infect them with malware to damage devices or stop them working. They may also use malware to delete or steal data. Or cybercriminals may stop users from using a website or network or prevent a business providing a software service to its customers, which is called a Denial-of-Service (DoS) attack.

Cybercrime that *uses* computers to commit other crimes may involve using computers or networks to spread malware, illegal information or illegal images.

Cybercriminals are often doing both at once. They may target computers with viruses first and then use them to spread malware to other machines or throughout a network. Some jurisdictions recognize a third category of cybercrime which is where a computer is used as an accessory to crime. An example of this is using a computer to store stolen data.

Network Security

Network security refers to the technologies, policies, people, and procedures that defend any communication infrastructure from cyberattacks, unauthorized access, and data loss. In addition to the network itself, they also secure traffic and network-accessible assets at both the network edge and inside the perimeter. Network Security protects your network and data from breaches, intrusions and other threats. This is a vast and overarching term that describes hardware and software solutions as well as processes or rules and configurations relating to network use, accessibility, and overall threat protection. Network Security involves access control, virus and antivirus software,

application security, network analytics, types of network-related security (endpoint, web, wireless), firewalls, VPN encryption and more.

Network Security is vital in protecting client data and information, keeping shared data secure and ensuring reliable access and network performance as well as protection from cyber threats. A well designed network security solution reduces overhead expenses and safeguards organizations from costly losses that occur from a data breach or other security incident. Ensuring legitimate access to systems, applications and data enables business operations and delivery of services and products to customers.

Types of Network Security Protections

Firewall : Fiewall control incoming and outgoing traffic on networks, with predetermined security rules. Firewalls keep out unfriendly traffic and is a necessary part of daily computing. Network Security relies heavily on Firewalls, and especially Next Generation Firewalls, which focus on blocking malware and application-layer attacks.

Network Segmentation :Network segmentation defines boundaries between network segments where assets within the group have a common function, risk or role within an organization. For instance, the perimeter gateway segments a company network from the Internet. Potential threats outside the network are prevented, ensuring that an organization’s sensitive data remains inside. Organizations can go further by defining additional internal boundaries within their network, which can provide improved security and access control.

Access Control: Access control defines the people or groups and the devices that have access to network applications and systems thereby denying unsanctioned access, and maybe threats. Integrations with Identity and Access Management (IAM) products can strongly identify the user and Role-based Access Control (RBAC) policies ensure the person and device are authorized access to the asset.

Remote Access VPN : Remote access VPN provides remote and secure access to a company network to individual hosts or clients, such as telecommuters, mobile users, and extranet consumers. Each host typically has VPN client software loaded or uses a web-based client. Privacy and integrity of sensitive information is ensured through multi-factor authentication, endpoint compliance scanning, and encryption of all transmitted data.

Zero Trust Network Access (ZTNA): The zero trust security model states that a user should only have the access and permissions that they require to fulfill their role. This is a very different approach from that provided by traditional security solutions, like VPNs, that grant a user full access to the target network. Zero trust network access (ZTNA) also known as software-defined perimeter (SDP) solutions permits granular access to an organization's applications from users who require that access to perform their duties.

Email Security: Email security refers to any processes, products, and services designed to protect your email accounts and email content safe from external threats. Most email service providers have built-in email security features designed to keep you secure, but these may not be enough to stop cybercriminals from accessing your information.

Data Loss Prevention (DLP): Data loss prevention (DLP) is a cybersecurity methodology that combines technology and best practices to prevent the exposure of sensitive information outside of an organization, especially regulated data such as personally identifiable information (PII) and compliance related data: HIPAA, SOX, PCI DSS, etc.

Intrusion Prevention Systems (IPS): IPS technologies can detect or prevent network security attacks such as brute force attacks, Denial of Service (DoS) attacks and exploits of known vulnerabilities. A vulnerability is a weakness for instance in a software system and an exploit is an attack that leverages that vulnerability to gain control of that system. When an exploit is announced, there is often a window of opportunity for

attackers to exploit that vulnerability before the security patch is applied. An Intrusion Prevention System can be used in these cases to quickly block these attacks.

Sandboxing: Sandboxing is a cybersecurity practice where you run code or open files in a safe, isolated environment on a host machine that mimics end-user operating environments. Sandboxing observes the files or code as they are opened and looks for malicious behavior to prevent threats from getting on the network. For example malware in files such as PDF, Microsoft Word, Excel and PowerPoint can be safely detected and blocked before the files reach an unsuspecting end user.

Hyper scale Network Security: Hyper scale is the ability of an architecture to scale appropriately, as increased demand is added to the system. This solution includes rapid deployment and scaling up or down to meet changes in network security demands. By tightly integrating networking and compute resources in a software-defined system, it is possible to fully utilize all hardware resources available in a clustering solution.

Cloud Network Security: Applications and workloads are no longer exclusively hosted on-premises in a local data center. Protecting the modern data center requires greater flexibility and innovation to keep pace with the migration of application workloads to the cloud. Software-defined Networking (SDN) and Software-defined Wide Area Network (SD-WAN) solutions enable network security solutions in private, public, hybrid and cloud-hosted Firewall-as-a-Service (FWaaS) deployments.

4.12.1 Encryption

Encryption is a form of data security in which information is converted to cipher text. Only authorized people who have the key can decipher the code and access the original plaintext information. In even simpler terms, encryption is a way to render data unreadable to an unauthorized party. This serves to thwart cybercriminals, who may have used quite sophisticated means to gain access to a corporate network—only to find out that the data is unreadable and therefore useless. Encryption not only ensures the confidentiality of data or messages but it also provides authentication and integrity,

proving that the underlying data or messages have not been altered in any way from their original state.

How Encryption Works

Original information, or plain text, might be something as simple as "Hello, world!" As cipher text, this might appear as something confusing like 7*#0+gvU2x—something seemingly random or unrelated to the original plaintext. Encryption, however, is a logical process, whereby the party receiving the encrypted data—but also in possession of the key—can simply decrypt the data and turn it back into plaintext.

For decades, attackers have tried by brute force—essentially, by trying over and over again—to figure out such keys. Cybercriminals increasingly have access to stronger computing power such that sometimes, when vulnerabilities exist, they are able to gain access. Data needs to be encrypted when it is in two different states: "at rest," when it is stored, such as in a database; or "in transit," while it is being accessed or transmitted between parties.

An encryption algorithm is a mathematical formula used to transform plaintext (data) into cipher text. An algorithm will use the key to alter the data in a predictable way. Even though the encrypted data appears to be random, it can actually be turned back into plaintext by using the key again. Some commonly used encryption algorithms include Blowfish, Advanced Encryption Standard (AES), Rivest Cipher 4 (RC4), RC5, RC6, Data Encryption Standard (DES), and Twofish.

Encryption has evolved over time, from a protocol that was used only by governments for top-secret operations to an everyday must-have for organizations to ensure the security and privacy of their data.

Types of Encryption

There are many different types of encryption, each with its own benefit and use case.

Symmetric encryption

In this simple encryption method, only one secret key is used to both cipher and decipher information. While the oldest and best-known encryption technique, the main drawback is that both parties need to have the key used to encrypt the data before they can decrypt it. Symmetric encryption algorithms include AES-128, AES-192, and AES-256. Because it is less complex and executes faster, symmetric encryption is the preferred method for transmitting data in bulk.

Asymmetric encryption

Also known as public key cryptography, asymmetric encryption is a relatively new method that uses two different but related keys to encrypt and decrypt data. One key is secret and one key is public. The public key is used to encrypt data, and the private key is used to decrypt (and vice versa). Security of the public key is not needed because it is publicly available and can be shared over the internet. Asymmetric encryption presents a much stronger option for ensuring the security of information transmitted over the internet. Websites are secured using Secure Socket Layer (SSL) or Transport Layer Security (TLS) certificates. A query to a web server sends back a copy of the digital certificate, and a public key can be extracted from that certificate, while the private key stays private.

Data Encryption Standard (DES)

DES is a deprecated symmetric key method of data encryption. DES works by using the same key to encrypt and decrypt a message, so both the sender and the receiver must have access to the same private key. DES has been superseded by the more secure AES algorithm. It was adopted by the U.S. government as an official standard in 1977 for the encryption of government computer data. It can be said that DES was the impetus for the modern cryptography and encryption industry.

Triple Data Encryption Standard (3DES)

The Triple Data Encryption Standard involved running the DES algorithm three times, with three separate keys. 3DES was largely seen as a stopgap measure, as the single DES algorithm was increasingly becoming seen as too weak to stand up to brute force attacks and the stronger AES was still under evaluation.

RSA

Rivest-Shamir-Adleman (RSA) is an algorithm and the basis of a cryptosystem—a suite of cryptographic algorithms used for specific security services or purposes. This enables public key encryption and is often used by browsers to connect to websites and by virtual private networks (VPNs). RSA is asymmetric, in which two different keys are used for encryption: one public and one private. If decryption is carried out with the public key, encryption is performed with the private key, or vice versa.

Advanced Encryption Standard (AES)

Developed in 1997 by the National Institute of Standards and Technology (NIST) as an alternative to the Data Encryption Standard, the Advanced Encryption Standard is a cipher chosen by the U.S. government to protect sensitive information. AES has three different key lengths to encrypt and decrypt a block of messages: 128-bit, 192-bit, and 256-bit. AES is widely used for protecting data at rest in such applications as databases and hard drives.

Encryption in the cloud

Cloud encryption is a service offered by cloud storage providers in which data is first encrypted using algorithms before being pushed to a storage cloud. Customers of a cloud storage provider must be aware of and comfortable with the level of depth of the provider's policies and procedures for encryption and encryption key management.

Because encryption consumes more bandwidth, many cloud providers only offer basic encryption on a few database fields, such as passwords and account numbers. This is often not enough for some organizations. So they rely on a Bring Your Own

Encryption (BYOE) model in which they use their own encryption software and manage their own encryption keys to ensure a level of cloud computing security they are comfortable with. As an opposite approach, Encryption as a Service (EaaS) has emerged as a simple, pay-as-you-go service customers can purchase from a cloud provider, managing encryption themselves in a multi-tenant environment.

End-to-End encryption

End-to-end encryption (E2EE) ensures that only the two users communicating with one another can read the messages. Even the intermediary, such as the telecom or internet service provider, cannot decrypt the messages. E2EE is generally seen as the most secure way to communicate privately and securely online. Examples of E2EE in use include the WhatsApp messaging service, which famously asserts that users' messages are secured with "locks."

The Benefits of Encryption

Privacy and security

Encryption can prevent data breaches. Even if an attacker maliciously gains access to a network, if a device is encrypted, the device will still be secure, rendering attempts by the attacker to consume the data useless. Encryption ensures no one can read communications or data except the intended recipient or data owner. This prevents attackers from intercepting and accessing sensitive data.

Regulations

Encrypting data allows organizations to protect data and maintain privacy in accordance with industry regulations and government policy. Many industries, especially those in financial services and healthcare, have explicit rules on data protection. For example, the Gramm-Leach-Bliley Act requires financial institutions to let customers know how their data is being shared and also how their data is remaining protected. Encryption helps financial institutions comply with this act.

Secure internet browsing

Encryption also keeps users safe while browsing the internet. Earlier in the internet's history, attackers found ways to steal unencrypted information sent between users and web services over the Hypertext Transfer Protocol (HTTP). The standard to encrypt web content by running HTTP over the Secure Socket Layer protocol emerged, soon to be replaced with the Transport Layer Security protocol, enabling enterprises, publishers, and e-commerce providers to offer a secure experience for users. With encryption, users feel safer entering personal information into webpages and carrying out financial or e-commerce transactions.

Encryption keeps sensitive data safe

Encryption will continue to be a core security feature in everything from video chats to e-commerce to social media. Basically, if it can be shared or stored, it will be encrypted. Both organizations and individual users would benefit from keeping on top of encryption standards to ensure that both their personal and professional data is safe from misuse or compromise.

4.12.2 Protecting Web Server with a Firewall

Firewalls are an integral part of the tools necessary in securing web servers. In this article, we will discuss all relevant aspects of web application firewalls. We'll explore a few concepts that touch on these firewalls, both from a compliance and technical point of view, as well as examine a few examples of how we can use Mod Security to enforce some rules.

Web application firewalls (WAFs) are security solutions that can be installed on web servers with the aim of protecting web applications from abuse by hackers. Put another way, a WAF is an application firewall for HTTP applications. A WAF can either be a server plugin, appliance or filter and can be used to protect various web applications from attacks such as cross-site scripting (XSS) or SQL injection (SQLi). Some WAFs are open-source while others are proprietary.

WAFs can provide very good security when it comes to protecting web applications. They effectively block against multiple attacks, preventing hackers from conducting information gathering and exploiting web applications. The techniques applied involve issuing rulesets that check against certain characters that can be fed into input fields.

Hackers can bypass WAFs by checking for blind attacks that still affect these WAFs in the event that security patches have been pushed by the vendor but the owners of the WAF have not updated. Such bypasses effectively allow hackers to circumvent security measures put in place to secure the web application against certain attacks.

4.12.3 Firewall and the Security Policy

A security policy refers to a set of security requirements, controls, and process requirements established by an organization to ensure its information security. It establishes the overall goal of information security, defines the management structure of information security, as well as puts forward the security requirements for the members of the organization. This kind of security policy usually exists in the form of documents and belongs to the scope of enterprise governance.

When it comes to firewalls, a security policy specifies rules used to protect networks. It is configured by the administrator in the firewall system to determine which traffic can pass through the firewall and which traffic should be blocked. Security policies are a basic concept and core function of firewalls. Firewalls use security policies to provide service management and control capabilities to ensure network security.

To avoid concept ambiguity, a security policy for an organization is usually referred to as an information security policy, and a security policy for a firewall is usually referred to as a firewall security policy and sometimes referred to as a firewall policy or firewall rule. This document mainly describes firewall security policies, which are called security policies for short.

A security policy defines a set of rules that contain specific matching conditions and actions. After receiving a packet, the firewall matches the packet attributes against the matching conditions of the security policy. If all conditions are matched, the packet

successfully matches the security policy, and the firewall processes the packet and subsequent bidirectional traffic according to the action defined in the security policy. Therefore, the core elements of a security policy are matching conditions and actions.

The protocols to which the preceding rule is applied includes basic network interconnection and interoperability protocols including BGP, BFD, DHCP, DHCPv6, LDP and OSPF. You need to configure security policies for unicast packets of these protocols. This is the biggest difference between firewalls and routers and switches. To quickly access a network, you can run the **undo firewall packet-filter basic-protocol enable** command to disable security policy control for these protocols. After this command is executed, unicast packets of these protocols will not be controlled by security policies.

4.12.4 Network Firewalls and Application Firewalls

A strong firewall is a critical part of any system's security infrastructure, but what exactly is it? Typically broken up into two core types, network firewall, and computer firewall, all firewalls monitor all incoming and outgoing traffic, either on a network or an individual computer.

A Network Firewall is a security device used to prevent or limit illegal access to private networks by using policies defining the only traffic allowed on the network; any other traffic seeking to connect is blocked.
Network firewalls are located at the network's front line, serving as a communications link between internal and external networks. The default firewall protects all connected computers from unsolicited incoming traffic on a home router system, such as someone trying to hack one of your computers. That group of computers is known as your home network and, in many ways, it's a simpler version of your business's network, which may include many more computers, servers, and other devices; both are network firewalls. But while a home network's firewall is fairly low-stakes, you need to take a more active approach to firewall management when employing a network firewall for your business's security needs.

Some types of malicious traffic are obvious. As known threats, even low quality systems know to block them. In professional settings, though, you need to actively manage your network firewall's settings.

There are several ways to approach this customization process. One option is to create narrow restrictions, such that only pre-authorized traffic is permitted. This can be excessively restrictive, making it hard for team members to complete tasks, but it does offer a high degree of security. Alternatively, you might opt to set strict, but less clearly defined settings based on your typical activities.

Traditional firewalls have been around since the 1980s – essentially since there was any type of network to protect – and in the most basic sense they remain unchanged. More recently, though, there's been a shift toward a more advanced type of firewall known as Next Generation Firewall.

In addition to monitoring incoming and outgoing traffic on your computer's network, Next Generation Firewalls can also inspect the content of incoming information packets, such as application downloads, to better protect your network. This allows it to identify and block malware, among other dangerous incoming traffic, while maximizing productivity.

Application Firewalls

n application firewall is a security system that monitors and controls the incoming and outgoing network traffic based on predetermined security rules. It is designed to protect a website or application from various types of attacks, such as SQL injection, cross-site scripting, and malware injection.

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Application firewalls are typically implemented at the application layer of the OSI model, which is a structure for how different devices communicate in a network. This allows the firewall to monitor and control traffic specific to the application rather than just at the network level.

Application firewalls can be hardware-based, software-based, or a combination of both. They may be configured to block certain types of traffic or to allow only certain types of traffic to pass through. In addition to protecting against attacks, application firewalls can also be used to monitor and control access to specific features or functions within an application. This can be useful for enforcing security policies or complying with regulatory requirements. Overall, an **application firewall** is an important tool for protecting the security and integrity of a website or application.

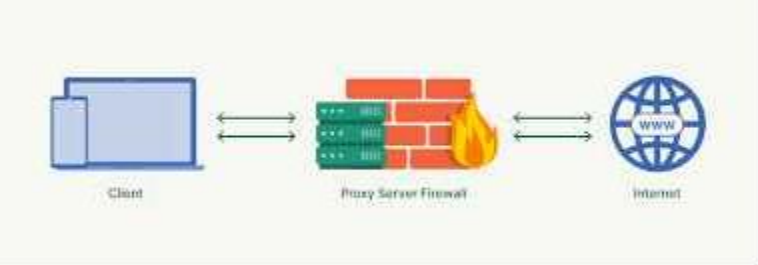
Web Application Firewall (WAF)

One type of application firewall is a web application firewall which is specifically designed for HTTP applications. WAFs are expected to protect web applications from a few types of attacks, including injection attacks and application layer denial of service (DoS). They are generally deployed in front of web servers, protecting web apps from internal and external threats.

WAFs are often used as an additional layer of security in conjunction with other security measures, such as intrusion detection systems and intrusion prevention systems. They can be an effective way to protect a website or web application from a wide range of threats, including those that are targeted specifically at web-based applications.

4.12 5 Proxy Server

A proxy server is a system or router that provides a gateway between users and the internet. Therefore, it helps prevent cyber attackers from entering a private network. It is a server, referred to as an “intermediary” because it goes between end-users and the web pages they visit online.



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When a computer connects to the internet, it uses an IP address. This is similar to your home’s street address, telling incoming data where to go and marking outgoing data with a return address for other devices to authenticate. A proxy server is essentially a computer on the internet that has an IP address of its own.

Proxies provide a valuable layer of security for your computer. They can be set up as web filters or firewalls, protecting your computer from internet threats like malware.

This extra security is also valuable when coupled with a secure web gateway or other email security products. This way, you can filter traffic according to its level of safety or how much your network traffic—or individual computers—can handle.

How to use a proxy? Some people use proxies for personal purposes, such as hiding their location while watching movies online, for example. For a company, however, they can be used to accomplish several key tasks such as:

- Improve security
- Secure employees' internet activity from people trying to snoop on them
- Balance internet traffic to prevent crashes
- Control the websites employees and staff access in the office
- Save bandwidth by caching files or compressing incoming traffic

Proxies come with several benefits that can give your business an advantage:

- Enhanced security: Can act like a firewall between your systems and the internet. Without them, hackers have easy access to your IP address, which they can use to infiltrate your computer or network.
- Private browsing, watching, listening, and shopping: Use different proxies to help you avoid getting inundated with unwanted ads or the collection of IP-specific data. With a proxy, site browsing is well-protected and impossible to track.
- Access to location-specific content: You can designate a proxy server with an address associated with another country. You can, in effect, make it look like you are in that country and gain full access to all the content computers in that country are allowed to interact with. For example, the technology can allow you to open location-restricted websites by using local IP addresses of the location you want to appear to be in.
- Prevent employees from browsing inappropriate or distracting sites: You can use it to block access to websites that run contrary to your organization's principles. Also, you can block sites that typically end up distracting employees from

important tasks. Some organizations block social media sites like Facebook and others to remove time-wasting temptations.

Summary :

This unit elaborately explains about EDI its benefits, technology, Communications, Implementation, Agreements and Security. Various electronic payment system can understood by students. This unit presents various threats like virus, cyber crime and other network issues.

Test your Skills

1. EDI standards are

a. not universally available

b. Essential for B2B commerce

c. not required for B2B commerce

d. Still being evolved

2. Electronic Data Interchange Software consists of the following four layers:

a. Business application, Internal format conversion, Network translator, EDI envelop

b. Business application, Internal format conversion, EDI translator, EDI envelop

c. Application layer, Transport layer, EDI translator, EDI envelop

d. Application layer, Transport layer, IP layer, EDI envelop

3. Which e-business model allows consumers to name their own price for products and services?

a. B2B

b. B2G

c. C2C

d. C2B

4. E-commerce involves:

a. Electronic Data Interchange

b. Electronic mail

c. Electronic Bulletin Boards

d. All of the above

5. The principal electronic payment systems for electronic commerce is

a. Credit Card

b. Digital Wallet

c. Electronic Cheque

d. All of the above

Check the Answers:

1. **b**
2. **b**
3. **d**
4. **d**
5. **d**

Glossary of Terms

1. Electronic Data Interchange (EDI)

A standardized system for exchanging business documents (like purchase orders, invoices, and shipping notices) electronically between companies using a structured format.

2. EDI Standards

Agreed-upon formats for exchanging business documents electronically, ensuring consistency and compatibility across systems. Common standards include ANSI X12 and EDIFACT.

3. Value-Added Network (VAN)

A private network provider that facilitates the secure transmission of EDI documents between business partners.

4. AS2 (Applicability Statement 2)

A standard for securely transmitting EDI data over the internet using encryption and digital certificates.

5. Digital Signature

An electronic signature that uses cryptographic techniques to verify the authenticity of a document or message, ensuring it was not altered during transmission.

6. Encryption

The process of converting data into a secure format (ciphertext) to protect it from unauthorized access during transmission.

7. Public Key Infrastructure (PKI)

A system for managing digital keys and certificates that enables secure electronic transactions and communications.

8. Transmission Control Protocol/Internet Protocol (TCP/IP)

The set of communication protocols used to connect devices on the internet and ensure data transmission is secure and reliable.

9. Message Authentication

A security measure that verifies the integrity and authenticity of an EDI message to ensure it has not been tampered with.

10. Data Integrity

The accuracy and consistency of data during storage or transmission, ensuring that it is not altered, corrupted, or lost.

11. Non-Repudiation

A security measure that ensures that a party in a transaction cannot deny the authenticity of their electronic communications or documents.

12. Interchange Control Structure

A set of standards and rules that governs how EDI messages are formatted and transmitted between trading partners.

13. Trading Partner Agreement (TPA)

A formal agreement between businesses outlining the terms, conditions, and responsibilities for exchanging EDI documents.

14. Acknowledgment (EDI 997)

A standard EDI document used to confirm the receipt of a transmitted document, ensuring that messages have been received successfully.

15. Transport Layer Security (TLS)

A cryptographic protocol designed to secure data transmitted over the internet, commonly used to protect sensitive EDI exchanges.

16. Firewall

A network security system that monitors and controls incoming and outgoing traffic based on predefined security rules to prevent unauthorized access.

17. Secure File Transfer Protocol (SFTP)

A secure version of the File Transfer Protocol (FTP) that encrypts data during transmission, ensuring secure file exchanges over the internet.

18. Authentication

The process of verifying the identity of a user, device, or system before granting access to resources or exchanging sensitive data.

19. EDI Translator

Software that converts business documents into a standard EDI format, ensuring compatibility between systems of different organizations.

20. Data Breach

A security incident in which sensitive, protected, or confidential data is accessed, stolen, or used by unauthorized individuals.

UNIT - V

Abstract : This unit explains the major Issues in Ecommerce and Understanding Ethical, Social and Political Issues in E-Commerce. It describes the Model for Organizing the Issues along with Basic Ethical Concepts, Analyzing Ethical Dilemmas, Candidate Ethical Principles, Privacy and Information Rights Collected at E-Commerce Websites.

Ethics in E-Commerce

Introduction to Ethics in E-Commerce

As e-commerce continues to expand rapidly, the ethical implications of online business practices have come to the forefront of discussions among businesses, consumers, and regulators. Ethics in e-commerce refers to the moral principles and standards that guide behavior in the digital marketplace, ensuring that businesses operate transparently, responsibly, and with integrity.

In an environment where transactions occur virtually and data flows freely, ethical considerations are vital in building trust and credibility among consumers. E-commerce raises unique ethical challenges, including issues related to privacy, data security, intellectual property, transparency, and the impact of marketing practices. Businesses must navigate these challenges while fostering an online culture that respects consumer rights and promotes fair competition.

Moreover, the global nature of e-commerce introduces complexities regarding differing ethical standards and regulations across countries. As consumers increasingly demand accountability and social responsibility from the brands they engage with, e-commerce companies must adopt ethical practices to not only comply with legal standards but also meet the expectations of informed and conscientious customers.

Ethics in e-commerce is essential for fostering a positive online environment, maintaining consumer trust, and promoting sustainable business practices in an increasingly interconnected world.

5.1 Issues in Ecommerce

E-commerce is the evolution in technology, the buying and selling feature online not only have shown growth in the online business but also allows customers to have a variety of choices for buying their products. Now, customers can get the same product in a variety of ranges with a variety of brands anywhere and anytime.

Buying and selling now are not only limited to a specific region or state, anyone can buy from anywhere in the world.

Privacy violation

- Many times we heard that companies have sold the personal details of their customers. This is a very common issue nowadays even sometimes we allow sites to fully access our devices, and also when we fill personal details in our account section these details can be used for many purposes.
- E-commerce also keeps track of our online activity or product preferences and product listing based on this information they recommend products to us and advertise on platforms which we use like Facebook, Instagram, and many more.
- Privacy invasion can also be done when there is low security in the e-commerce site. Hackers can hack the servers of e-commerce sites and gets personal information of users like credit card details, phone number, and passwords.

Website spoofing

t is a technique to create the same lookalike website as other websites. When the user by mistake types any other word in place of the original word they land on a page that is the same as the original website. Or when a link is circulated among a group of persons of the fake website they basically contain malicious code or they lure customers to buy their product and give their personal details.

Online piracy it is unauthorized copyright of the original property. Many sites provide free copyright e-books, e-music, e-movies which are unethical. Sometimes original trademarks are used to sell fake products. It is basically the use of other's content without their permission or without any right to download and distribute it. It has become the most dangerous threat to content owners.

Email-spamming Email spamming is a very common way to defraud users. This technique is also known as phishing. In this, spammers sent emails to customers and lure them with products and exciting offers. They tempt users to purchase their products and give their personal details on their fake websites. Sometimes these emails are marked as spam mails but most often when we give personal details such as name, email, and phone number then they can easily send their mails to defraud users. It is also known as junk mails.

Security: Security is a significant issue in e-commerce. Customers must trust the online store they are purchasing from and be confident that their personal and financial information is secure. Online businesses must ensure that their payment systems are secure and that they have strong measures in place to protect customer data.

Fraud: E-commerce is vulnerable to fraud. Fraudsters may use stolen credit card information to make purchases or create fake websites to deceive customers into sharing their personal and financial information. Online businesses must be vigilant in detecting and preventing fraud, such as implementing security measures like two-factor authentication.

Privacy: Privacy concerns are another issue in e-commerce. Customers may be hesitant to share their personal information, such as their name, address, and email, with online businesses. Companies must be transparent in their data collection and use policies and provide customers with clear options for opting out of data collection.

Shipping and delivery: Shipping and delivery can be a major issue in e-commerce. Customers expect timely and reliable delivery of their purchases, and online businesses must have efficient logistics systems in place to meet those expectations. Unexpected delays, lost shipments, or damaged goods can lead to dissatisfied customers.

Customer service: E-commerce companies must provide high-quality customer service to retain customers and build a positive reputation. Customers expect prompt

responses to their inquiries and concerns and easy returns and exchanges if necessary. Online businesses must have efficient customer support systems in place to address customer issues.

Competition: E-commerce is a highly competitive industry, and online businesses must differentiate themselves from their competitors to succeed. They must offer unique products, excellent customer service, and attractive prices to stay ahead of the competition.

Regulatory compliance: E-commerce companies must comply with a range of regulations, such as data protection laws and tax regulations, depending on their location and the locations of their customers. Failure to comply with these regulations can result in legal and financial consequences.

5.2 Understanding Ethical, Social and Political Issues in E-Commerce

Business ethics is concerned with principles that guide organizations' performance in the way of doing business. Particularly, ethics sets standard rules for people to follow and hold their self-interest down which influence the others. Meanwhile business ethics considers the way firms take responsibilities for their pursuit of making profits that affects involved people among stockholders, stakeholders and the whole society. Daily decision-making at business has to ensure benefits and satisfactions, as well as morality. It means that, for example, for the stockholder, institutions' ethical duty is to bring business profits without breaking the law or taking part in occupational fraud; for stakeholder, ethical responsibility of corporations is to manage all stakeholder's equitable interest and benefits and for the society, companies have to take all members of society where companies exist into consideration.

Ethical issues in E Commerce

Ethics is more than knowing what is right and what is wrong. It's about the values we hold and implement. They are the moral principles that guide behaviour, and they are crucial for business success on multiple levels. Businesses, their employees and

investors, and more importantly your customers know that. And when you hold on to your principles and customs, you are bound to offer a great customer experience. With exceptional customer satisfaction, you will gain the trust and loyalty of your customers. In the exciting world of e-commerce, where convenience meets endless possibilities, it's easy to get caught up in the fast-paced growth and forget the importance of ethical practices. But building trust and a positive reputation goes hand-in-hand with success.

Shady Sourcing and Production

Where do your products come from? Are working conditions fair? Are materials ethically sourced? Unethical labor practices or environmentally harmful materials can tarnish your brand image and leave a bitter taste in customers' mouths. Opt for transparency: showcase your suppliers, highlight ethical practices, and prioritize sustainability.

Misleading Marketing and Fake Reviews

Don't overhype! Exaggerated claims, hidden fees, or fabricated reviews break trust faster than you can say "bait and switch." Be honest about product features, clearly display pricing, and encourage genuine customer reviews. Remember, authenticity sells!

Data Privacy Shenanigans

In today's digital age, customer data is gold. But mishandling it can turn that gold into dust. Be transparent about data collection and usage, obtain informed consent, and implement robust security measures. Remember, privacy is not a privilege, it's a right.

Predatory Pricing and Targeting

Don't exploit vulnerabilities! Avoid targeting low-income communities with inflated prices or manipulating user data to push unnecessary purchases. Price fairly, offer genuine discounts, and treat all customers with respect, regardless of their background.

Counterfeit Chaos

Selling knock-offs is not only illegal, it hurts both creators and consumers. Uphold intellectual property rights, source authentic products, and be vigilant against counterfeiters. Protect your brand and ensure genuine quality for your customers.

Unclear Return Policies and Hidden Costs

Surprise returns shouldn't be a nasty surprise for anyone. Make your return policy clear, easy to understand, and fair. Avoid hidden restocking fees or complicated procedures that discourage returns. Remember, a smooth return experience fosters trust and repeat business.

Shady Shipping Practices

Speedy deliveries shouldn't come at the cost of the environment or unfair labor practices. Be mindful of the environmental impact of packaging and shipping methods. Explore sustainable options and advocate for fair treatment of delivery workers.

Ignoring Customer Concerns

Communication is key! Don't leave customer complaints unanswered or buried in complex support systems. Listen attentively, respond promptly, and offer genuine solutions. Remember, happy customers are your biggest brand ambassadors.

Neglecting Social Responsibility

Your business exists within a larger community. Don't be an island! Consider partnering with social causes, supporting local initiatives, or actively working towards positive change. Remember, social responsibility is not just good PR, it's the right thing to do.

Social issues in E Commerce

E-commerce brands do more than create products or provide services. Intentionally or not, e-commerce businesses have an impact on society, the environment, the economy

and social change. Social impact is the effect – which can be either positive or negative – of the actions your e-commerce business takes.

Your e-commerce brand can generate positive social impact in a number of ways:

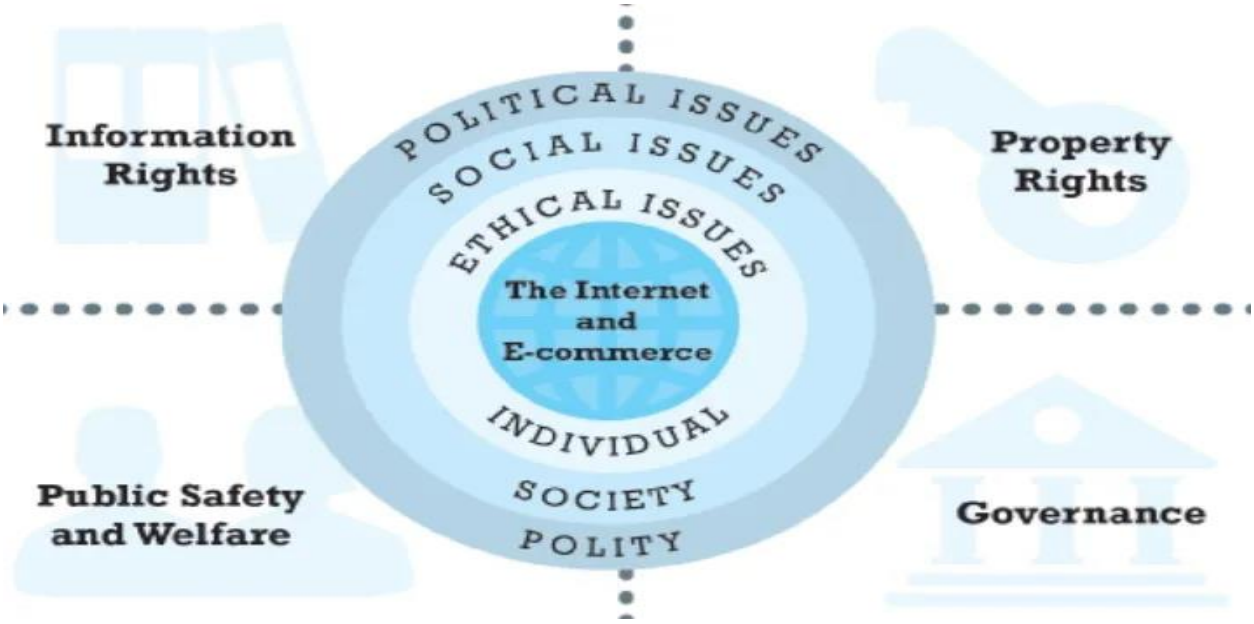
- Create products using sustainable materials that won't harm consumers
- Ensure manufacturing of your products is safe for the environment
- Collaborate only with stakeholders whose values are aligned with your own
- Provide an ethical and equitable environment for employees
- Develop strategies that support social and environmental issues
- Create authentic partnerships with charities and donate regularly
- Social issues refers to the difference your e-commerce brand is making in the world and highlights where you stand on matters that affect your surroundings by including a cause in your marketing strategy – a tactic referred to as cause-related marketing. Cause-related marketing allows e-commerce businesses to align themselves with social issues and non-profit organizations or charities to bring awareness to a cause and bolster their social responsibility.
- The idea is to develop policies that reflect an increased commitment to your impact on society while boosting your brand's image. Using cause-related marketing to garner a positive social impact allows you to build your business, create brand awareness, attract consumers and generate sales while driving awareness and donations to a worthy cause.
- E-commerce systems are part of the human communication and social system. E-commerce systems, as part of our social system, enable us to send, manipulate and interpret information across global networks. Business is about getting things done through information, and through information our meanings and intentions can be brought across to the recipient to alter the state of our

social world, for example, as new owners of a product we just bought over the Internet. An e-commerce system cannot be treated as a trading tool isolated from business norms. Benefits are gained from the way we use e-commerce systems, not from their technological components.

- With the development of e-commerce, technical problems are gradually no longer the object that people need to worry about. On the contrary, whether it is the disclosure of personal privacy or the infringement of intellectual property rights, all kinds of ethical, social and political issues raised in e-commerce have become the focus of people's attention. But why the Internet and its use in e-commerce have raised pervasive ethical, social, and political issues on a scale unprecedented for computer technology? Part of the answer lies in the underlying features of Internet technology itself, and the ways in which it has been exploited by business firms. Internet technology and its use in e-commerce disrupt existing social and business relationships and understandings.

- It is precisely because the internet makes the world as a whole that personal privacy can easily be spread around the world in an instant. Imagine this: the first second you post a selfie of yourself eating a cookie in New York, the next people in Paris would know you're eating a vanilla cookie. Internet is just like automobiles, before automobiles, there was very little interstate crime and very little federal jurisdiction over crime. Likewise, with the Internet: before the Internet, there was very little "cybercrime".

- What exactly does the concept "ethical, social and political issues raised in e-commerce" mean? Ethical, social, and political issues are interrelated. In short, the introduction of the Internet and e-commerce impacts individuals, societies, and political institutions. These impacts can be classified into four moral dimensions: property rights, information rights, governance, and public safety and welfare. For most Internet users, what they are most concerned about is whether they inadvertently reveal their privacy when using the Internet.



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- In fact, almost all e-commerce companies collect some personally identifiable information in addition to anonymous information and use cookies to track clickstream behavior of visitors. Advertising networks and search engines also track the behavior of consumers across thousands of popular sites, not just at one site, via cookies, spyware, search engine behavioral targeting, and other techniques. This blog will briefly introduce how to protect online privacy from the following aspects. In addition to the above-mentioned ethical, social and political issues, Internet and e-commerce also bring about major public safety, welfare issues and other issues. Although it is difficult to completely avoid these issues, they can be reduced to some extent by law, industry self-regulation, and advances in technology, thus providing a better development environment for e-commerce.

5.3 A Model for Organizing the Issues

- A Model for Organizing the Issues E-commerce—and the Internet—have raised so many ethical, social, and political issues that it is difficult to classify them all, and hence, complicated to see their relationship to one another. Clearly, ethical, social, and political issues are interrelated. One way to organize the ethical, social, and political dimensions surrounding e-commerce. Some of the ethical, social, and political issues raised in each of these areas include the following:

- Information rights- What rights to their own personal information do individuals have in a public marketplace, or in their private homes, when Internet technologies make information collection so pervasive and efficient? What rights do individuals have to access information about business firms and other organizations?

- Property rights – How can traditional intellectual property rights be enforced in an Internet world where perfect copies of protected works can be made and easily distributed worldwide in seconds?

- Governance – Should the Internet and e-commerce be subject to public laws? And if so, what law-making bodies have jurisdiction—state, federal, and/or international?

- Public safety and welfare – What efforts should be undertaken to ensure equitable access to the Internet and ecommerce channels? Should governments be responsible for ensuring that schools and colleges have access to he Internet? Are certain online content and activities—such as pornography and gambling—a threat to public safety and welfare? Should mobile commerce be allowed from moving vehicles?

- Basic Ethical Concepts: Responsibility, Accountability and Liability Ethics is at the heart of social and political debates about the Internet. Ethicsis the study of principles that individuals and organizations can use to determine right and wrong courses of action. It is assumed in ethics that individuals are free moral agents who are in a position to make choices. When faced with alternative

courses of action, what is the correct moral choice? Extending ethics from individuals to business firms and even entire societies can be difficult, but it is not impossible. As long as there is a decision-making body or individual (such as a board of directors or CEO in a business firm, or a governmental body in a society), their decisions can be judged against a variety of ethical principles. If you understand some basic ethical principles, your ability to reason about larger social and political debates will be improved.

- In western culture, there are four basic principles that all ethical schools of thought share: responsibility, accountability, liability, and due process. Responsibility means that as free moral agents, individuals, organizations, and societies are responsible for the actions they take. Accountability means that individuals, organizations, and societies should be held accountable to others for the consequences of their actions. The third principle—

- Liability—extends the concepts of responsibility and accountability to the area of law. Liability is a feature of political systems in which a body of law is in place that permits individuals to recover the damages done to them by other actors, systems, or organizations. Due process is a feature of law-governed societies and refers to a process in which laws are known and understood, and there is an ability to appeal to higher authorities to ensure that the laws have been correctly applied.

5.4 Basic Ethical Concepts

Basic Ethical Concepts refer to fundamental principles that guide human behavior in determining what is right or wrong, fair or unfair, just or unjust. These concepts form the foundation of ethical decision-making and are essential in personal, professional, and societal contexts. Here's a description of some key ethical concepts:

1. Honesty

Description: Honesty involves being truthful, transparent, and straightforward in communication and actions. It requires that individuals refrain from lying, cheating, or deceiving others.

Importance: Honesty builds trust, which is crucial in relationships, business transactions, and social interactions. In ethical decision-making, being honest is essential for fostering integrity and fairness.

2. Integrity

Description: Integrity is the consistency of actions, values, methods, and principles. It means doing the right thing, even when no one is watching, and adhering to a moral code.

Importance: Integrity ensures that individuals and organizations remain committed to ethical values over time. It fosters respect and reliability in both personal and professional spheres.

3. Fairness

Description: Fairness means treating others impartially, without favoritism or discrimination. It involves making decisions that are just and equitable, considering the rights and needs of all parties involved.

Importance: Fairness is a cornerstone of ethical behavior, ensuring that everyone has equal opportunities and is treated justly. In business and society, fairness promotes equality and justice.

4. Responsibility

Description: Responsibility refers to the obligation to act ethically and be accountable for one's actions. It means accepting the consequences of one's behavior and fulfilling duties or obligations to others.

Importance: Being responsible ensures that individuals and organizations take ownership of their actions and their impact on others. It is key to maintaining ethical standards and ensuring accountability.

5. Respect

Description: Respect involves valuing the dignity, rights, and opinions of others. It requires treating people with consideration and acknowledging their perspectives, regardless of differences.

Importance: Respect fosters healthy, positive interactions in both personal and professional environments. It is crucial for maintaining ethical relationships and promoting tolerance and understanding.

6. Justice

Description: Justice refers to the principle of fairness and ensuring that everyone is treated equitably under the same rules or laws. It involves distributing benefits and burdens in a fair and just manner.

Importance: Justice is essential in creating a society where individuals are treated equally and their rights are protected. It upholds fairness in legal, business, and social frameworks.

7. Compassion

Description: Compassion involves empathy and understanding toward others, especially those who are suffering or in need. It drives individuals to help and support others out of care and concern.

Importance: Compassion fosters a humane and ethical approach to interactions with others, encouraging kindness, charity, and social responsibility.

8. Loyalty

Description: Loyalty means being faithful and supportive to a person, group, or cause. It involves maintaining commitments and upholding trust in relationships.

Importance: Loyalty is a key ethical concept in maintaining trust and long-term relationships, whether in personal settings or in business partnerships.

9. Privacy

Description: Privacy refers to the right of individuals to keep their personal information confidential and free from unauthorized access. It is the ethical responsibility of individuals and organizations to protect sensitive data.

Importance: In the digital age, privacy is a critical ethical issue, particularly in e-commerce and online interactions. Safeguarding privacy is essential for building trust and ensuring the security of personal information.

10. Accountability

Description: Accountability involves being answerable for one's actions and accepting the consequences, whether positive or negative. It requires individuals and organizations to be transparent about their decisions and behavior.

Importance: Accountability promotes ethical behavior by ensuring that individuals and entities are responsible for the outcomes of their actions, particularly in positions of power or authority.

These basic ethical concepts provide the framework for making moral choices and maintaining ethical standards in various aspects of life, including personal relationships, professional conduct, and societal interactions. By adhering to these principles, individuals and organizations can foster trust, fairness, and social responsibility in their actions and decisions.

5.5 Analyzing Ethical Dilemmas

- With values as focal point, the National Association of Social Workers has created a framework that is used by social workers to address ethical dilemmas. The framework includes six steps:

- Determine whether there is an ethical issue or/and dilemma. Is there a conflict of values, or rights, or professional responsibilities?

- Identify the key values and principles involved. What meanings and limitations are typically attached to these competing values?

- Rank the values or ethical principles which – in your professional judgement – are most relevant to the issue or dilemma. What reasons can you provide for prioritizing one competing value/principle over another?

- Develop an action plan that is consistent with the ethical priorities that have been determined as central to the dilemma. Have you conferred with clients and colleagues, as appropriate, about the potential risks and consequences of alternative courses of action? Can you support or justify your action plan with the values/principles on which the plan is based?

- Implement your plan, utilizing the most appropriate practice skills and competencies. How will you make use of core social work skills such as sensitive communication, skillful negotiation, and cultural competence?

- Reflect on the outcome of this ethical decision making process. How would you evaluate the consequences of this process for those involved: client(s), professional(s), and agency (ies)?

- In comparison, Evans and MacMillan (2014) have developed a framework involving 10 steps to make ethical decision-making efficient and practical. This framework is specific to law enforcement officers and addresses the consideration of laws, regulations, policy, and procedures that other frameworks assume will be followed, but in law enforcement are very important to avoid charges and allow cases against suspects to proceed. The framework concludes

with a follow-up to determine the effectiveness of the course of action taken by the officer.

5.6 Candidate Ethical Principles

- The Golden Rule: Do unto others as you would have them do unto you. Immanuel Kant's Categorical Imperative: If an action is not right for everyone to take, then it is not right for anyone. (If everyone did this could the organization, society survive?)

Descartes' rule of change: If an action cannot be taken repeatedly, then it is not right to be taken at any time. (The slippery slope rule: Once started down a slippery path you may not be able to stop.)

- The utilitarian principle: Take the action that achieves the higher or greater value.
- Aversion Principle: Take the action that produces the least harm, or the least potential cost the "no free lunch rule": Assume that virtually all intangible and tangible objects are owned by someone else unless there is a specific declaration otherwise.
- Appearance of unethical behavior can do as much harm as actual unethical behavior
- Professional Codes of Conduct
- When groups of people claim to be professionals, they enter into special, even more constraining relationship with employers, customers, and society given their special claims to knowledge, wisdom and respect.
- Association of Computing Machinery:
- Contribute to society and human well-being
- Avoid harm to others

- Be honest and trustworthy
- Honor property rights including copyrights and patents
- Give proper credit for intellectual property
- Access computing resources only when authorized
- Respect the privacy of others
- Information Rights

5.7 Privacy and Information Rights

Privacy is the claim of individuals to be left alone, free from surveillance or interference from other individuals, organizations, or the state. Today, millions of employees are subject to electronic surveillance Because of information technology, invasion of privacy is cheap, profitable and effective. In U.S. privacy is protected mainly by the First Amendment (Freedom of speech and association) and Fourth Amendment (protection against unreasonable search and seizure of one's personal documents or home and the guarantee of due process). Most American and European Privacy law is based on a regime called fair information practices (FIP) first set forth in 1973 by the federal government advisory committee.

The Privacy Act of 1974 regulates the federal government's collection, use, and disclosure of information. Most federal privacy laws apply only to the federal government. Only credit, banking, cable, and video rental industries have been regulated by federal privacy law Internet Challenges to Privacy Information sent over the Internet passes through many different computer systems before it reaches its final destination. Each of these systems is capable of monitoring, capturing, and storing communications that pass through it. For example, an ISP can collect information about which files you have accessed and which WEB sites you have visited. Also the sites you visit may collect information about you Cookies

Intellectual Property

- Intellectual property is tangible property created by individuals or corporations which is subject to protections under trade secret, copyright and patent law
- Trade secret: Any intellectual work or product used for a business purpose that can be classified as belonging to that business provided it is not based on information in the public domain.
- Copyright is a statutory grant that protects creators of intellectual property against copying by others for any purpose for a period of 28 years.
- Patent is a legal document that grants the owner an exclusive monopoly on the ideas behind an invention for 17 years.
- System Quality
- The software industry has not yet arrived at testing standards for producing software of acceptable but not perfect performance (Collins, e.al., 1994).
- A total of 70 % of IS executives in a recent survey reported data corruption as a source of business delay,
- 69 % said their corporate data accuracy was unacceptable, and
- 44 % said no systems were in place to check data base information quality

5.8 Information Collected at E-Commerce Websites.

Currently, the ecommerce sector is encountering a multitude of challenges . The rise of numerous online shopping platforms, ever-changing consumer expectations, and the volatile business environment has forced ecommerce companies to be more strategic, proactive, and innovative. Amid these

disruptions, data emerges as a potent tool. E Commerce data collection is fueling businesses with the resources required to become more aware and resilient. There are two types of data you should be concerned with collecting; qualitative data and quantitative data. **Qualitative data** is descriptive and comes from sources such as customer reviews.

Quantitative data is largely numeric, and therefore more easily measurable. It can include things like bounce rates and customer retention rates. It can be easily stored and analyzed using a variety of tools.

Why data collection important for eCommerce businesses? Surviving in the highly competitive ecommerce landscape hinges upon the collection and analysis of market data. This data encapsulates trends in consumer behavior, industry benchmarks, some ways of how online businesses leverage market data:

- Identifying trends

Market data helps in predicting emerging consumer trends, allowing online businesses to adapt their product offerings, website design, and marketing strategies accordingly

- Competitor analysis

Understanding competitors' strategies enables online businesses to differentiate themselves effectively and learn from others' successes and failures in terms of website functionality, user experience, customer service, and digital marketing tactics.

- Regulatory compliance and technological adoption

Awareness of new regulations and tech advancements prevents businesses from falling foul of the law and missing out on innovative opportunities. Technologies such as:

- Secure payment gateways
- Data protection measures,
- Fulfillment technologies etc.

Strategic planning: Market data informs strategic decision-making, such as resource allocation for digital advertising, online store optimization, product development based on customer preferences, and pricing strategies that align with market realities and online shoppers. Practices to consider while collecting ecommerce data with case studies. The best practices that online retailers can consider while collecting market data.

- **Prioritize customer data collection**

Central to the success of any ecommerce business is understanding its customers. Therefore, ecommerce customer data collection should be a top priority. The types of customer data include:

- Demographic data
- Buying behavioral data
- Preferences
- Historical data on purchases
- Search patterns and more

Such data can be used to segment customers and provide a more personalized shopping experience. The algorithm of Amazon, for instance, learns from customer interactions with the website, offering relevant product recommendations and thereby improving both the customer experience and conversion rates.

- **Utilize automated data collection tools**

The vastness of data in the ecommerce sphere and its collection can be overwhelming. Automated data collection tools can streamline the data collection process, offering real-time information with high accuracy. They can be used to gather data from competitor websites. The collected data provides insights into pricing strategies, promotional campaigns, and product offerings.

- **Engage in social media listening**

With the digital age, customers' voices are louder and more influential than ever before and one way to hear that voice is social media monitoring. Businesses can leverage social media analysis tools to monitor, listen and analyze these online conversations. This can provide insights into the latest trends, consumer sentiment, and the strategies of competitors.

- **Deploy advanced analytics**

The collection of data alone isn't enough; online retailers must also be able to analyze and interpret this data. Advanced analytics can offer deep insights, identify hidden patterns, predict future trends, and support data-driven decision-making. A fashion retailer can use predictive analytics to forecast product demand, ensuring they maintain an optimal inventory and reduce warehouse costs. Ecommerce analytics tools usually offer combined features for market data extraction and analytics.

- **Invest in a CRM system**

CRM systems are indispensable tools for managing customer data effectively. They provide a comprehensive view of customer interactions, aiding in understanding customer journeys, identifying patterns, and improving customer service. Adidas, for example, uses Salesforce CRM to gain a holistic view of its

customers, leading to personalized marketing strategies and improved customer relationships.

- **Ensure data security**

With the increasing amount of data collected, data security becomes paramount. Businesses must ensure they have robust security and data protection measures in place, including encryption, secure storage, and regular security audits. Shopify prioritizes data security, using several layers of protection to ensure the security of both merchant and customer data.

- **Respect privacy regulations**

Finally, online businesses must comply with global privacy regulations, such as GDPR in Europe and CCPA in California. This includes informing customers about data collection practices, seeking consent where required, and respecting data rights. Data privacy-related issues can lead to expensive and damaging lawsuits between companies. Therefore, it is important to consider all data protection regulations of the state in which your business operates.

Test your skills:

1. The primary source of financing during the early years of e-commerce was _____.
   (a) bank loans
   (b) large retail firms
   (c) venture capital funds
   (d) initial public offerings
2. The largest component of a Web site budget is _____.
   (a) system maintenance
   (b) system development
   (c) content design and development
   (d) telecommunications

3. Which of the following terms can be considered synonymous with the term e-commerce?
   - e-business
   - digital commerce
   - the Internet
   - the Web

a) The total number of users or customers an e-commerce business can obtain is a measure of which of the following?
(a) ubiquity
(b) interactivity
(c) reach
(d) information density

4. Which type of e-commerce is distinguished by the type of technology used in the transaction rather than by the nature of the market relationship?
(a) consumer-to-consumer (C2C)
(b) social e-commerce
(c) mobile e-commerce
(d) business-to-business (B2B)

Check the Answers

1) c

2) a

3) b

4) d

5) b

Glossary of Terms

1. E-Commerce Issues

Challenges and concerns related to conducting business online, including security, privacy, intellectual property, fraud, and regulatory compliance.

2. Ethical Issues in E-Commerce

Moral questions surrounding online business practices, such as consumer rights, data protection, transparency, and fair pricing.

3. Social Issues in E-Commerce

Concerns about how e-commerce affects society, including issues like job displacement, inequality, and the digital divide.

4. Political Issues in E-Commerce

Matters involving government regulation and legal frameworks that influence e-commerce operations, such as taxation, trade policies, and censorship.

5. A Model for Organizing the Issues

A framework that helps to categorize ethical, social, and political issues in e-commerce, typically including stakeholders like consumers, businesses, and governments.

6. Basic Ethical Concepts

Fundamental principles of right and wrong that guide behavior in e-commerce, such as fairness, transparency, honesty, and respect for privacy.

7. Ethical Dilemmas

Situations where there is no clear right or wrong decision, often involving conflicts between competing moral principles (e.g., profit vs. privacy).

8. Privacy

The right of individuals to control their personal information and protect it from unauthorized access, particularly in the context of data collected by e-commerce websites.

9. Information Rights

The rights individuals have concerning their personal data, including access, correction, deletion, and consent for use, as well as protection against misuse.

10. Analyzing Ethical Dilemmas

A process that involves identifying the ethical issue, considering the stakeholders involved, evaluating potential solutions, and choosing the most ethically sound option.

11. Candidate Ethical Principles

Various principles that can guide decision-making in ethical dilemmas, such as **Golden Rule (treat others as you would like to be treated)**, **Utilitarianism (maximize overall good)**, and **Rights Approach (respect individuals' rights)**.

12. Informed Consent

A principle that individuals should be fully aware of how their personal data will be used and give their explicit permission before it is collected or processed.

13. Transparency

The practice of being open and clear with customers about how their data is collected, stored, and used, particularly in online transactions.

14. Opt-in/Opt-out

Mechanisms that allow consumers to choose whether they want to participate in certain activities, such as receiving marketing emails or having their data shared with third parties.

15. Intellectual Property Rights

Legal protections for creators of original works, such as software, music, and designs, which are particularly relevant in e-commerce for preventing unauthorized copying and distribution.

16. Data Breach

An incident where unauthorized parties gain access to confidential information, often involving personal customer data stored by e-commerce platforms.

17. Consumer Protection

Laws and regulations designed to safeguard consumers from fraudulent, deceptive, or unfair practices in e-commerce, ensuring safety, privacy, and fair treatment.

18. Cybercrime

Criminal activities carried out through digital platforms, such as hacking, identity theft, and online fraud, which pose major ethical and security challenges in e-commerce.

19. Cookies

Small data files stored on a user's device by websites to track their online activity and preferences. While useful for improving user experience, they raise privacy concerns when used without consent.

20. Data Mining

The process of analyzing large sets of data to discover patterns and trends, often used by e-commerce companies for marketing purposes. Ethical concerns arise when data mining is done without user consent.