BACHELOR OF COMPUTER APPLICATIONS

SEMESTER 5

DCA3143

E-COMMERCE

Unit 14

Implementation of E-Commerce

Table of Contents

1. INTRODUCTION

The rapid digitalization of the economy has transformed lives and society on a large scale, delivering several opportunities and formidable challenges. The changing trends make it necessary for business enterprises to improve their business requirements according to the changing technologies and trends in the marketand customers. New technologies have introduced a paradigm shift that has helped with the growth and development of enterprises to meet their business needs. One of the digital economy's significant elements is e-commerce, which involves the transaction of goods and services between people or organizations using powerful information and communication technology tools. E-commerce has been driven by both market and consumer demands that allow people to exchange goods through distance barriers within a specified duration.

E-commerce is a rapidly expanding channel that offers opportunities to reach wider markets, with a wide variety of choices of goods at lower costs. E-commerce creates opportunities for consumers for a smooth-flowing shopping experience that enables them to interact with different brands and retailers anytime and anywhere across the globe. Many sites on social media platforms allow people to promote and sell products and services online. E-commerce driven by both market and consumer demands allows people to exchange goods through distance barriers within a specified period. The e-commerce business enterprises are involved in increasing their overall efficiency with effective strategies and implementing the right infrastructure to address the needs of the consumers. They have become flexible enough with adapting to the changes and establishing the standard needed for buying and selling products and services online. Infrastructure is the main framework and foundation that helps e-commerce with its functions and operations.

1.1 Learning Objectives

By the end of this unit, you will be able to:

- ❖ *Develop an insight into an e-commerce website*
- ❖ *Discuss the infrastructure of e-commerce and know about security and risk management in e-commerce, app support, monitoring, and plans for scalability*
- ❖ *Develop an insight into understanding and practical implementation of e-commerce*

2. INSIGHT INTO AN E-COMMERCE WEBSITE

The dynamic changes in information technology over the years have changed the concept of marketing with the introduction of e-commerce. The e-commerce websites provide a virtual shopping model by offering various products and services online and help with facilitating the expansion of business globally. People in different parts of the world should be able to access e-commerce websites for their shopping. The websites for e-commerce require the right platform for creating the e-commerce store with an infrastructure in place for making a user-friendly website and making it look attractive. The websites differ in terms of their customization, in-built features, flexibility, and performance.

E-commerce business entities across the globe are making use of artificial intelligence for creating intelligent websites along with adding a personal touch to customer experience. The companies like Amazon, Flipkart, and more are using the latest technologies and adding to personalized and interactive buying experiences. The artificial intelligence-enabled systems help with specialized and reliable shopping experiences for the customers as they can view their preferences in real time. Artificial intelligence plays a major role in identifying customers' behavior patterns by analyzing their search queries, purchasing history, clicks, and personalization. They help deliver effective product suggestions according to the user's preferences. The important steps involved with building an e-commerce website are as follows:

- Buying the domain for the website
- Selecting the website-builder
- Create a site map for easy navigation
- Designing the website for the products that display the brand's value and culture
- Building the webpages
- Providing an effective payment process system
- Optimizing the SEO for gaining online visibility

SELF-ASSESSMENT QUESTIONS - 1

1. The e-commerce websites differ in terms of their customization, in-built features, flexibility, and performance. **(True/ False)**

2. E-commerce business entities across the globe are making use of _____ for creating intelligent websites along with adding a personal touch to customer experience.

STUDY NOTE

E-commerce business entities across the globe are making use of artificial intelligence for creating intelligent websites along with adding a personal touch to customer experience. The companies like Amazon, Flipkart, and more are using the latest technologies and adding to personalized and interactive buying experiences.

Activity I

Do research to find out how the business intelligence (BI) tool can help with improving the efficiency of a website.
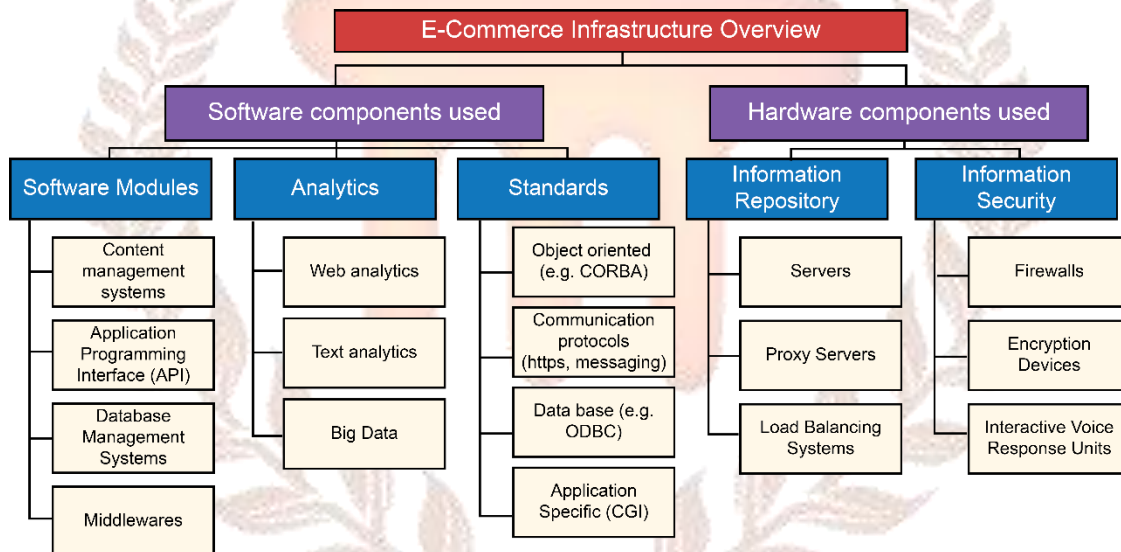
3. INFRASTRUCTURE OF E-COMMERCE

The e-commerce infrastructure forms the main framework for e-commerce business, addressing the needs of the customers and also providing an efficient system for managing the operations and functions of the entire system. The infrastructure requirement for e-commerce determines the functionalities of the hardware and software components and defines the corresponding service level requirements. The infrastructure is used for managing the operations and functions of the entire system. The different components of the infrastructure are as follows:

- **Software Components:** It consists of content management systems, web analytics, text analytics, application programming interface (API), database server, and database management system and middleware.
- **Hardware Components:** This consists of servers, proxy servers, and load balancing systems. Firewalls, encryption devices, interactive voice response units, and more.

The other important components involved in technical and functional processes in the e-commerce domain are as follows:

- **Middleware:** These systems reside between the client or the user and the server (database and application resources). These could be in form of data access components, communication protocols, specialized servers, or a mix of all.
- **Directory Services:** The email directory services help the users to locate other users for sending emails. LAN directory services facilitate functions like connecting to the web, sharing printers, LAN chats, and LAN-based KMS (knowledge management software, which is a part of enterprise content management software)
- **Lookup Database:** This is a form of database that stores information about network resources and user profiles. It helps with the use of network resources based on entitlements.
- **Meta-directories:** These facilitate the flow of data between one or more directory services and databases. Enables synchronization of data across databases or data warehouses.

- **Groupware:** Helps with the automation and streamlining of business processes not implemented in legacy/ERP systems. Group communications and information sharing enable collaboration between teams and individuals.

- **Internet Domain Name Service (DNS):** The DNS helps with the unique identification of an organization or entity on the Internet. DNS maps the domain name of an organization to its IP address.

- **Firewalls:** These are security systems that help to protect networks from outside attackers. It helps the user to decide on the kinds of traffic that are permitted, adding a layer of security.

Fig. 1: infrastructure for E-commerce

3.1. Security And Risk Management In E-Commerce

The technology advancement has prompted major concerns about privacy and security issues for electronic technologies, and security is one of the main concerns that restricts customers and organizations from engaging with e-commerce. Security concerns for e-commerce applications are important since it involves financial transactions for people banking with the e-commerce websites online. The e-commerce websites handle payments through online banking, electronic transactions, or using debit cards, credit cards, PayPal, or other tokens that have many compliance issues. E-commerce security requires the

protection of e-commerce assets from alteration, destruction, use, lack of trust, and unauthorized access. Security concern for users or consumers is the fear of loss of their financial data, and for e-commerce sites, it is the fear of losing important data that would result in break-ins and bad publicity.

The total framework that is used for working is the fundamental part of security that should be arranged properly to deal with security and risk issues within the business online. The security threats can be in form of:

- **Weak Passwords**

  The security threats can be because the users keep weak passwords, share them with their friends and colleagues, or never change their passwords. The users need to change their passwords regularly and should keeppasswords of a minimum length and a combination of letters, numbers, and keyboard symbols.

- **Access Control**

  The accessibility of information on the intranet could also be measured for a security threat. Access to information can be kept secure on the Internet through different file permissions and page permissions. These permissions can be set according to the job, team functions, or location of the users for accessing the appropriate data, and these permissions should be reviewed regularly.

- **Encryption**

  Encryption is normally used for protecting sensitive information that can be viewed by specific users. It is a process of converting data to an "encrypted" form for protecting sensitive business documents and information and unauthorized access. The standard encryption security technology commonly used is the "Secure Socket Layer" (SSL) by many enterprises all over the world, especially for online shopping.

- **Malicious Content**

  Intranet users are vulnerable to many kinds of malicious content that can attack their systems in form of viruses, worms, and Trojan Horses. These get attached to the emails;

hence, the users and the business enterprises need to maintain and update their security software regularly on every PC and server on an intranet for ensuring protection.

- **Security Breaches**

There are many times when the Internet encounters suspicious traffic like spam, phishing, spyware, adware, and malware. This requires the organization to deploy an effective email filter like the firewall that can help block suspicious traffic from entering the network.

The systems can be protected from risks and threats of invasions by ensuring the following measures:

- Antivirus or anti-fraud software helps to keep the systems safe and protects them from hackers who can log into the system from anywhere in the world.
- Firewall software is effective in protecting the systems for e-commerce business enterprises and they are pocket-friendly. They do not allow the intrusion of any untrusted networks and regulate traffic that enters and leaves the site.
- The e-commerce security plug-ins are an effective and simple way to provide security protection on the website. They protect against bad bots, SQLi, XSS, code injections, and many other forms of attacks.
- An effective way to protect against loss of data is to make a backup of data to be safe from hardware malfunction or cyber-attacks, which are very common. It is essential to keep a backup regularly for preventing loss of data and make a copy of the backup data. The other option is to use a c-commerce web hosting service that automatically helps to keep a backup like the Cloudways hosting service.
- An effective way of protecting the systems is using HTTP protocols that protect the systems from being vulnerable to attacks. Switching HTTPS helps to protect the sensitive information users submit, and their user data as well.
- It is essential to use complex passwords and usernames and change them regularly. One can even establish methods where the panel can notify the user every time an unknown IP attempts to log in.

- Authentication and enabling privacy to ensure that entities sending, receiving messages, or accessing systems are entitled or authorized to undertake such actions. It help to determine that only the intended recipient can view an encrypted message

- There should be systematic application and acceptance across multiple applications where the system automatically enforces the security policy so that security is maintained at all times.
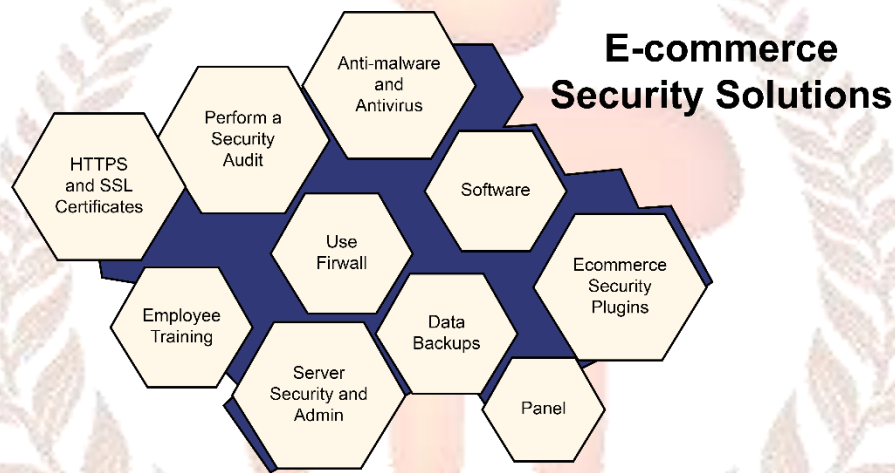
Fig. 2: E-commerce Security Solutions

3.2. App Support, Monitoring, And Plans For Scalability

Globalization along with newer technologies has increased the need for gaining a competitive advantage, which has prompted e-commerce entities to improve their performance by adding value and reducing costs. It has brought a total change to the e-commerce business concerning its supply chain functions with the process of managing the global markets with an effective support system.

The e-commerce app is involved with performing several tasks that include:

- Receiving the customer's order
- Regularly updating the stock and inventory levels
- Processing payment for the orders placed
- Confirmation of funds while receiving the order

- Providing notification to the customers on successful order processing
- Coordinating with the shipping and logistic units regarding the shipment of the order to the customer

The implementation method of the app should be well analyzed and evaluated by the enterprises to avoid the risk of failure that can lead to the loss of major investments. The e-commerce app is created to offer customers "personalization" and ease of usage, which is simpler to handle and has more features.

It is necessary to monitor the working of the e-commerce website for ensuring the availability of a product according to the requirement of the consumer for facilitating the smooth movement of goods for meeting the customer demand in a timely and cost-effective manner. It requires several other activities that need to be carried out during the various job functions, which culminate in the critical aspect of customers receiving their orders at the right time and in proper condition. Many key parameters are involved in the day-to-day activities of e-commerce operations and they play an important role in the completion of e-commerce orders. There are specific performance parameters that are commonly assessed by the use of indicators that are present in the working of the system. The common performance parameters that are measured for order fulfillment are based on four factors:

- Delivering the orders on time
- Fulfilling the orders
- Shipped in proper condition
- Correct documentation

Regular monitoring of the working of the e-commerce system has a direct impact on the overall business costs and customer satisfaction. It also helps with improving the performance and efficiency of the e-commerce business organization by providing the right product, at the right place, and at the right time for the customers.

The change in customer demands and the fast-evolving business dynamics have made it necessary for business organizations to change for keeping up with the demands of customers and staying ahead of their competitors. The e-commerce sites need to be moving

fast and be scalable with the smooth execution of their operations for achieving long-term goals and providing positive user experiences. An effective scalable e-commerce experience can be achieved by focusing on:

- Positive User Experience: By providing the customers' positive experience, which helps with retaining the customers and also attracting new customers.
- Tracking Website Metrics: It is important to monitor the website performance, which helps to study and analyze the business performance and work on areas needing improvement, which helps with increasing the e-commerce revenues.
- Integrating with Other Business Processes: The e-commerce platform needs to integrate with other processes, products, and platforms for creating a larger impact and adding to business growth.
- Achieving Business Growth: The company needs to be able to handle high-volume traffic efficiently for the steady growth of the company.

Scalability ensures the capability of handling a surge in web traffic efficiently with on-time deliveries, positive customer experience, the ability to gain a competitive edge, and the growth of the company. For an e-commerce business to be scalable, it is necessary to:

- Ensuring effective and dependable performance for high-order volumes
- Managing peak traffic
- Optimal use of systems for distributing workload efficiently
- Create multiple domains for different stores and brands
- Being able to support several regions in one place

_____

STUDY NOTE

Dell is a good example of one of the few corporations, which were able to remain at the top of the market due to its marketing strategies. Dell's strategy was built around many key elements of operating business units that target large corporate customers, and other public and private sector based on the following:

- Build-to-order manufacturing

- Mass customization

- Partnerships with suppliers

- Just-in-time components inventories

- Direct sales

- Market segmentation

- Customer service

- Sharing of data and information with the supply partners and customers

SELF-ASSESSMENT QUESTIONS - 2

3. E-commerce security requires the _____ of e-commerce assets from alteration, destruction, use, lack of trust, and unauthorized access.

4. _____ is normally used for protecting sensitive information that can be viewed by specific users

   a. Strong password   b. Remote access   c. Encryption   d. Security measures

5. The _____ of the e-commerce sites helps the customers protect themselves from cyber-attacks and fraud.

6. Firewall software is effective in protecting the systems for e-commerce business enterprises and they are pocket-friendly. (True/False)

7. It is essential to keep a _____ of regularly for preventing loss of data and make a copy of the backup data.

_____

4. UNDERSTANDING AND PRACTICAL IMPLEMENTATION OF E-COMMERCE

E-commerce has benefitted organizations with better access to markets and increased competitiveness adding to the economic growth of the country. It is fast emerging as a competitive market and helping business enterprises in contributing to the economic success of the country.

E-commerce has helped many business organizations create opportunities for conducting business over the web with the help of cloud computing. E-commerce organizations require having the right competency for satisfying the different needs of various customers and providing them with a vast range of goods and services. Customers need to have the right information for selecting the products for meeting their needs with several choices and information available to them.

E-commerce needs efficient and comprehensive use of Information and Communication Technology (ICT) not only within a business organization but also through a more seamless linking and cooperation of information and communication systems that involve all the business partners.

Let us now look into and understand the requirements for the practical implementation of e-commerce:

- Requirements of Telecommunication Infrastructure and Adapting to New Technologies:

  It has become imperative for e-commerce companies to adopt new and innovative technology solutions since the customers have become more demanding and technological advancements can increase productivity by minimizing errors, cost, and time. E-commerce enterprises require the following:

- **Automated Systems:** The companies need to go for automated systems and data-driven software solutions required for their various logistic functions of packaging, labeling, warehouse sorting, transportation, and more. It enables the companies to

track their shipment and monitor them regularly by getting alerts and notifications and setting up customized reporting.

- **Effective Enterprise Resource Planning (ERP):** The ERP software helps with integrating all departments and functions across the enterprise. The main objective is for providing quick and effective information when required.

- **Having Proper Bandwidth and Security:** The most important element for e-commerce is the requirement of proper bandwidth and security. The components of security for e-commerce are taken care of by the firewall and encryption or algorithm mechanism.

The companies need to go for automated systems and data-driven software solutions required for the various operational functions of packaging, labeling, warehouse sorting, transportation, and more.

- **Software Requirements for E-commerce:** E-commerce functionality requires different software applications like Apache Web Server, Apache Jserv protocol, Linux Operating System, MySQL database, Postgresql, and more. Most of the software is available free on the Internet and can be used to build e-commerce applications.

- **Hardware Requirements for E-commerce:** Hardware requirements for high-traffic e-commerce sites depend on the traffic flow and the requirements are as follows:
  - Desktop computer or laptop
  - External hard drive
  - Network server
  - Mobile device

- **Technical Skill Requirements:** The implementation of e-commerce requires a systems administrator having a good knowledge of computer hardware, and the ability to maintain and upgrade hardware when required. They must also have the required skill for installing and upgrading the software along with being a high-level programmer with experience in the industry and having a clear understanding of the implementation of e-commerce.

- **Financial Infrastructure:** E-commerce requires a systemized payment procedure where the seller can receive payment in return for the goods or services sold. These

mainly depend on the banking infrastructure in the location of selling and customers' locations. E-commerce organizations need to have an effective and efficient method of electronic funds transfer for their transaction systems in the banking and retailing industries. Information technologies make use of electronic systems for processing money and credit transfers between banks, business entities, and their customers. They need to adhere to the basic security measures for implementing the electronic transfer with the following measures:

- o   Encryption of data passing between the customer and merchant.
- o   Encryption of data passing between the customer and the company to authorize the credit card transaction.
- o   Taking sensitive information offline.

- Abiding with Government regulations, Legal, and Policy Framework:

E-commerce organizations need to comply with the regulations imposed by the government for the transportation and delivery of goods and services. There are various forms of permits, laws, regulations, transportation laws, security, and taxation on international and domestic shipping that create a major impact on integrated logistic networks. E-commerce companies have the important function of complying with government regulations that vary from one country to another. The e-commerce business entities need to follow the general policies that ensure legal certainty, security, and consumer protection for online transactions and interactions.

- Providing User-friendly Services

The important function of e-commerce is to provide customers with user-friendly services regarding the following:

- o   **Continuous Service of Business:** An important function of the e-commerce business is carrying out their business 24 hrs a day on all days of the week. Customers can utilize their services from their home comfort at any time.
- o   **Easy Navigation Through User-friendly Websites:** E-commerce provides the convenience of easy navigation where the customers can easily search for the product needed by them in less time through user-friendly websites provided by

the business entities. They do not need to waste their time searching for a specific product. The website can be accessed easily by customers on their cell phones, tablets, or tablet anytime.

o **Easy Comparison of Products:** There are several products available over the Internet and the customers have the convenience of comparing the products for deciding what they require. The products can be compared in regards to their price, terms, quality, and many other features through different websites.

- **Customer Relationship Management:**

The customer service approach in e-commerce focuses on building long-term and sustainable customer relationships that help with adding value for the customer and the company. The e-commerce companies through their efficiency meet the requirements of the consumers by adopting effective measures for delivering goods on time.

o **Customer Satisfaction:** It becomes a challenging task for integrated e-commerce networks to keep customers satisfied. Every customer is different and they have their requirements and they want full transparency into where their delivery is at all times.

o **Need for Transparency and Punctuality:** The important factors for the customers are transparency and punctuality in the delivery of goods. Customers prefer to use technology for tracking their parcel status and uploading the same on social media platforms. Customer expectations have increased and e-commerce enterprises need to become innovative and fulfill the needs of the customers by providing the best customer services for retaining loyal customers.

o **Increase Profitability and Reduce Costs:** Every e-commerce company likes to have a strategy that helps with collaborating information from all data sources within an organization and external sources to provide a proper and holistic view of each customer in real time. Their main objective is to reduce costs and increase profitability along with providing customer satisfaction.

- **Effective Supply Chain and Logistics Analytics**

  In e-commerce, logistic information and analytics software tools are used to keep a track of information and analyze the shipping history and improve clients' operations that help to reduce logistical costs and minimize the shipment delivery time. The software helps with data and information through business intelligence, performance metrics and KPIs, and other forms of a computer model for taking care of supply chain issues. These help with better control, monitoring, and tracking of shipments and play a vital role in delivering a superior service to the customers. The logistics management software (LMS) has a huge amount of data, which is used for:

  o   Tracking freight accruals
  o   Identifying carrier reports
  o   Provides the KPI reports of company performance

- **Order Processing**

  Order processing is an important task for e-commerce and it includes activities of handling, receiving filling, and making a record of the order. It is important to manage the orders properly to avoid double handling errors and the order along with the inventory, supplier, and customer data should be effectively entered into the system. The order details include the name of the product, price, delivery period, payment terms, taxes, and other commercial terms. The enterprise needs to minimize the time between receiving the order and dispatch of the order to maintain reliability, accuracy, and speed from the moment they are placed until the customer confirms delivery. Activities related to order processing require:

  o   Checking the order for any deviations as agreed upon or negotiated terms.
  o   Delivery terms, prices, and payment details.
  o   Ensuring the availability of materials in stock.
  o   Production and material scheduling for shortages.
  o   Acknowledging the order.

- **Inventory and Warehouse Management**

Management of inventory is an important part of the supply chain that is responsible for controlling and documenting the raw materials, the quantity of semi-finished, and the finished goods for sale. It involves tracking inventory, receiving and storing goods, and dealing with dynamic changes with accurate information about products. It involves keeping a track of inventory changes while avoiding stock-outs and excess stock with maintaining balance in replenishment. This reduces the risk of ordering and keeping excess inventory and tracking low stock levels, losses, damages, and pilferage.

Warehouse management is a set of processes required for controlling, automating maintaining, and storing finished goods until they are sold. Warehousing facilitates time utility by storage of goods after production till they are transported to the final destination for e-commerce entities. Warehouses receive the goods, help to streamline the workflow with storing the goods, moving them and keeping track within the location, and dispatching them.

> ### STUDY NOTE
>
> Data security is a major challenge for e-commerce businesses today. It requires technology and other technical issues that can be one of the most difficult to overcome. Cyber attackers can infect the website with viruses and they are also capable of exposing confidential data

SELF-ASSESSMENT QUESTIONS - 3

8. E-commerce organizations need to comply with the regulations imposed by the _____ for the transportation and delivery of goods and services.

9. _____ defines the process of e-commerce.

   a. Sale and purchase of goods   b. Doing business   c. Doing business electronically   d. None of these

10. The companies do not need to go for automated systems and data-driven software solutions required for their various logistic functions of packaging, labeling, warehouse sorting, transportation, and more. (True/False)

11. _____ is a function of e-commerce.

   a. Sales and marketing   b. Supply chain   c. Finance   d. All of the above

12. _____ is an important part of the supply chain that is responsible for controlling and documenting the raw materials, the quantity of semi-finished, and the finished goods for sale.

5. CONCEPT MAP
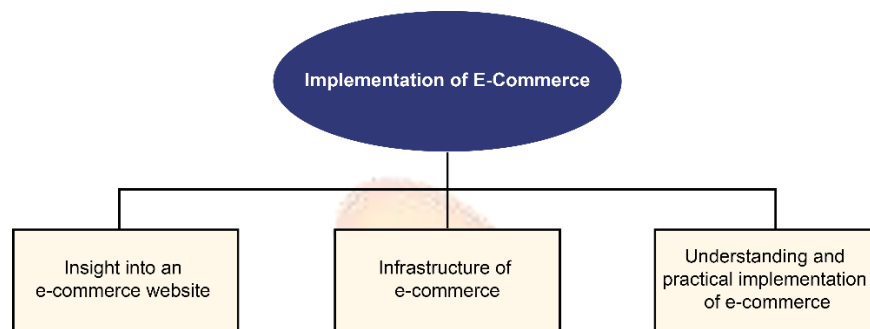
Fig. 3: Concept Map

5. SUMMARY

- E-commerce has been driven by both market and consumer demands that allow people to exchange goods through distance barriers within a specified duration.

- The infrastructure for e-commerce is the collaboration of hardware, software, network, and other devices, and more that are required to run an e-commerce business.

- The websites of e-commerce facilitate the expansion of business globally where customers all over the world can access e-commerce websites for their shopping.

- Designing a website involves a dedicated team of skilled professionals for developing the website and the content and making it functional for being presented through the visual interface.

- All the transactions on an e-commerce website are done online in terms of identifying the products, marketing, shopping for the products, making payments, and shipping.

- The e-commerce infrastructure forms the main framework for e-commerce business, addressing the needs of the customers and also providing an efficient system for managing the operations and functions of the entire system.

- Technology advancement has prompted major concerns about privacy and security issues for electronic technologies and security is one of the main concerns that restrict customers and organizations from engaging with e-commerce.

- E-commerce organizations require having the right competency for satisfying the different needs of various customers and providing them with a vast range of goods and services.

6. GLOSSARY

- **E-commerce Websites:** These are online portals that facilitate the buying and selling of goods and services online with effective methods of online transfer of information and funds.

- **Security Breaches:** These are when many kinds of malicious content can attack the systems and networks in form of viruses, worms, and Trojan Horses.

- **Encryption:** This is normally used for protecting sensitive information that can be viewed by specific users.

- **Firewall Software:** This is effective in protecting the systems for e-commerce business and do not allow the intrusion of any un-trusted networks and regulate traffic that enters and leaves the site.

- **Meta-directories:** These facilitate the flow of data between one or more directory services and databases.

- **Internet Domain Name Service (DNS):** The DNS helps with the unique identification of an organization or entity on the Internet.

7. TERMINAL QUESTIONS

Short Questions

1. What is e-commerce?

2. What are the two important components of e-commerce infrastructure?

3. Explain the need for firewalls.

4. What is encryption?

Long Questions

1. Why do e-commerce companies need to have a website?

2. What are the security issues in e-commerce?

3. Explain any five factors required for the practical implementation of e-commerce.

8. CASE STUDY

Recket Global Pvt. Ltd was a European-based manufacturer. They produced a wide variety of chemicals, including that included hydrogen peroxide, soda ash, specialty polymers, polyvinyl chloride, polyamide intermediate products, and many other kinds of chemicals. Recket Global had offices globally and they had around 35k employees working for them throughout 150 locations in over 60 countries.

The general problem was the client's issue with visibility, which mainly had to do with buying patterns that were in fragments. This fragmented buying pattern of the clients led to spending of data that was not categorized and there was a method of tracing or analyzing the patterns of consumption. The client was interested in connecting with a business partner who was willing to have consolidated and aggregated spending through different locations of the plants and offices. They were interested in sourcing expertise and end-to-end visibility and has standardized methods of spending, using the methods of procurement and gaining a competitive advantage. Their e-commerce business also involved a long list of online seller partnerships.

They soon announced their strategic partnership for building out a digital transformation with effective business solutions and changes to their network infrastructure. Their global headquarter is located outside of Dayton, Ohio. Apart from their offices in the United States, they have 600 employees working for them in over 25 countries, which include China, Japan, Singapore, India, Panama, and Switzerland. Since their employees are distributed geographically, they can do business anywhere in the world. The business solutions helped them with delivering transformational global supply chain and program management solutions. Their systems are enhanced with digital and process consulting. The business enterprise solutions made a thorough analysis of the Recket Global processes and systems and their analysis was based on the following:

- Initiate the planning for using the cloud-based enterprise system that serves as the framework for managing all of its resources.
- The capability to plug in existing system applications to the upgraded version of software applications.

- Broader and more efficient opportunities for e-commerce identified the issues and created a baseline spend report.
- Created more opportunities through automated warehousing and decreased the overhead costs of the client.
- Making use of artificial intelligence for supply chain relationships and initiating strategic relationships with suppliers and vendors.
- Analyzing the processes and identifying the historical purchasing patterns brought down the number of global suppliers.
- Started a digital-based electronic catalog based on the procurement process for maintaining and controlling the future consumption patterns.

The methods and changes in the network systems architecture through the enterprise helped Recket Global in achieving savings of over 45%. They provided the perfect supplier rationalization with the latest technologies and brought down the number of global suppliers, which significantly increased the cash flow of the client.

Source:https://corbus.com/sites/default/files/casestudies/StrategicSourcingOfOfficeSupplyProducts-Corbus_0.pdf

Questions

1. What were the issues faced by Recket Global?

   (Hint: Unorthodox methods of working and spending, no proper systems in place, using old traditional technologies)

2. How did Recket Global benefit from implementing changes to its systems network?

   (Hint: Significant savings, brought down numbers of suppliers, increase in cash flows, extend the business network to wider domains, expanding the products and services to reach more customers)

9. ANSWERS

Answers for Self-assessment Questions

1. True
2. Artificial intelligence
3. Protection
4. c
5. Security
6. True
7. Backup
8. Government
9. c
10. False
11. d
12. Management of inventory

Terminal Questions

Short Answer Questions

Answer 1: E-commerce is a rapidly expanding channel that offers opportunities to reach wider markets, with a wide variety of choices of goods at lower costs. E-commerce creates opportunities for consumers for a smooth-flowing shopping experience that enables them to interact with different brands and retailers anytime and anywhere across the globe.

For more details, refer to section 14.1.

Answer 2: The two important components of e-commerce infrastructure are:

- Software components
- Hardware components

For more details, refer to section 14.3.

Answer 3: Firewalls are security systems that help to protect networks from outside attackers. It helps the user to decide on the kinds of traffic that are permitted, adding a layer of security.

For more details, refer to section 14.3.

Answer 4: Encryption is normally used for protecting sensitive information that can be viewed by specific users. It is a process of converting data to an "encrypted" form for protecting sensitive business documents and information from unauthorized access.

For more details, refer to section 14.3.

Long Answer Questions

Answer 1: The websites of e-commerce facilitate the expansion of business globally where customers all over the world can access e-commerce websites for their shopping. The Web sites provide a virtual shopping model by offering various products and services online. The development of e-commerce websites involves various applications and tools necessary for making the website look attractive and user-friendly for online clients.

For more details, refer to section 14.2.

Answer 2: The technology advancement has prompted major concerns about privacy and security issues for electronic technologies and security is one of the main concerns that restrict customers and organizations from engaging with e-commerce. Security concerns for e-commerce applications are important since it involves financial transactions for people banking with the e-commerce websites online. The e-commerce websites handle payments through online banking, electronic transactions, or using debit cards, credit cards, PayPal, or other tokens that have many compliance issues.

For more details, refer to section 14.3.

Answer 3: E-commerce has enhanced business opportunities, with better access to markets, and increased competitiveness adding to the economic growth of the country. E-commerce is fast emerging as a competitive market and helping business enterprises in contributing to

the economic success of the country. E-commerce has helped many business organizations create opportunities for conducting business over the web with the help of cloud computing.

For more details, refer to section 14.4.

10. SUGGESTED E-REFERENCES AND E-BOOKS

E-Books

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