

UNIT I OVERVIEW OF E-COMMERCE

Definition of E-Commerce:

The use of electronic transmission medium (telecommunications) to engage in the exchange including buying and selling of products and services requiring transportation either physically or digitally from location to location.

Potential benefits of E- Commerce :

The following are the potential benefits of E-commerce.

1. Internet or web based e-commerce is more affordable than traditional EDI.
2. Internet or web based E-commerce can reach more business partners.
3. More geographically dispersed customer based.
4. lower costs for procurement processing.
5. Cost of purchases can be lowered.
6. reduction in inventories (storage and handling)
7. lower cycle time.
8. Better customer services
9. lower sales and marketing.

The first three benefits are relative benefits of internet and web based E-commerce over traditional EDI methods. The cost and installation of EDI system is generally quite high and it has typically only been beneficial to larger firms that have enough sales volume to justify the costs of developing their own networks or Subscribing to a value added network (VAN)

A VAN is a service to which a firm can subscribe. Vans provide many services such as data transmission, EDI translation and storing and forwarding the messages.

Because of software developments that allow web based EDI systems to interface with traditional EDI systems, businesses of all sizes can now transact with one another. This expands the number of potential electronic business partners. The internet offers a greater choice of global partners with which it can conduct E- Commerce.

Procurement costs can be lowered by traditional EDI system by consolidating purchases, developing relationships with key suppliers, negotiating volume discounts etc.

The cost of items purchased can be lowered due to the ability to seek out and negotiate with a greater number of suppliers.

A reduction in inventory is desirable because of the associated reduction in storage , handling, insurance and transmission and administrative costs. Internal E-Commerce can help firms to more optimally order the inventories by electronically linking suppliers and purchasers together.

The production cycle time is the time it takes a business to build a product beginning with design phase and ending with the completed product. Internet E-commerce is enabling the reduction of cycle time by allowing engineers and production teams to electronically share design specifications etc.

Customer service can be enhanced using internet E-Commerce by helping the customer to access information before, during and after the sale.

Internet allows firms to reach many customers in a very low cost fashion.

E-Business :

The term E- Commerce is restricting however does not firstly encompass the true nature of many types of information exchange occurring via telecommunication devices. The term E-Business also includes the exchange of information not directly related to buying and selling of goods. Business are using electronic mechanisms to distribute information and provide customer support. These activities are not commerce but they are business activities. Thus the term electronic businesses is a broader way and eventually replace electronic commerce.

Difference between E-commerce and EDI:

EDI is a subset of E-commerce. A primary difference between EDI and E-commerce is that E-commerce encompasses a broader commerce environment than EDI. Traditional EDI systems allow pre established trading partners to electronically exchange business data. These EDI systems are generally expensive to implement. E-Commerce allows the market place to exist where buyers and sellers can meet and transact with each other.

Classification of E-commerce:

A common classification of E-commerce is by the nature of transaction. The following are the types which are distinguished

1. Business to business (B2B):
Most of the E-commerce today is of this type. It includes the electronic market transactions between the organizations.
2. Business to Consumer (B2C):
These are retailing transactions with individual shoppers.
3. Consumer to Consumer (C2C) :
Here consumers sell directly to consumers. Examples are individual selling of residential property, cars etc. Advertising personal services on the internet and selling knowledge and expertise is another example.
4. Intra Business E-commerce:
Here we include all internal organizational activities usually performed on intranets, that involve exchange of goods , services or information. Activities can range from selling a corporate product to employees to online training and cost reduction activities.

5. Non-Business E-commerce:

An increased number of non business institutions such as academic institutions, social organization activities usually performed on intranets that involves exchange of information , goods and services.

Internet and WWW as enabler of E-commerce:

Internet is a very unique infrastructure. It is a network of networks. The internet came online in 1969. More and more computer sites were added to this network. The internet is neither owned nor run by anyone. Every organization that is plugged into the internet is responsible for its own computer. It is more or less like an anarchy. Among its advantages are no membership fee, no censorship, no govt control. The prominent disadvantage is that when something goes wrong there is no central control to ask for help.

Services provided by VAN(Value Added Network):

It is the service to which an organization can subscribe itself. Following are the services provided by VAN

1. Data Transmission.
2. EDI Transaction
3. Store and forward managing of translation data.

Impact of E-commerce on Business Models:

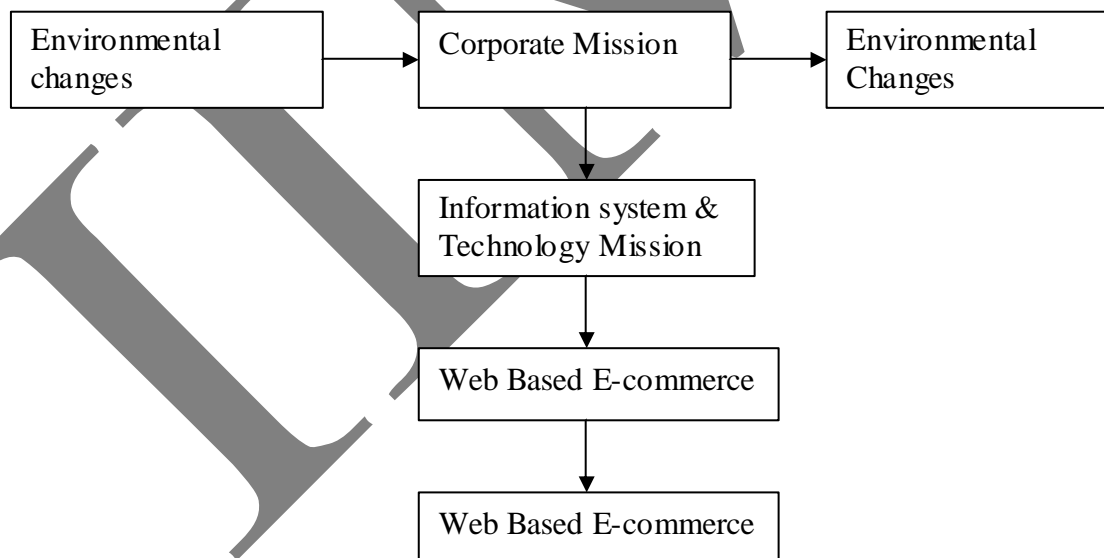
E-commerce is forcing businesses to rethink their traditional business models. E-commerce is about reengineering outward facing process including industry process reengineering. Thus E-commerce is not just technology , it is the way of conducting business that has potential impact on every aspect of the organizational value chain.

Thus new business models are necessary that integrate E-commerce initiatives with overall business goals.

Overall Business & E-commerce goal congruence:

E-commerce strategies need to be formulated so that they help a business to achieve its overall business goals. The relationship between the organizations corporate mission and goals and its web based E-commerce plan as shown below

Business and Commerce Goal Congruence

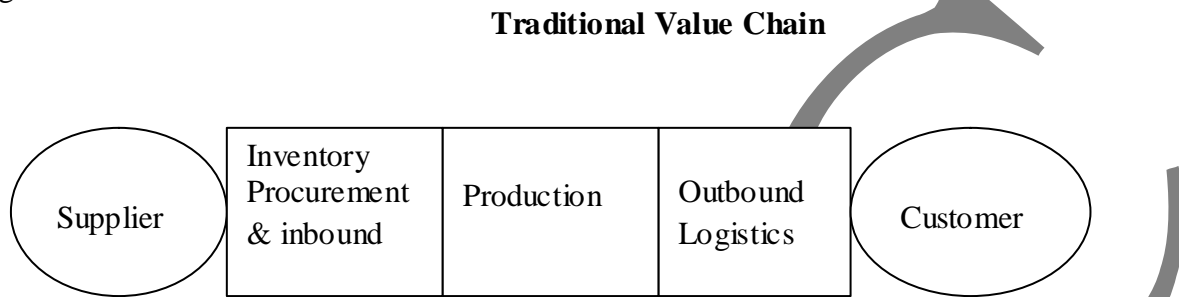


Environmental Changes may cause a business to rethink or adjust its mission and goals, such as entrance of new competitions into market place. The environmental changes may be business trends.

Once the corporate mission and goals are set then information system and technology group's mission can be set to help accomplish that mission. Ultimately a web based E-commerce plan can be setup.

Impact of E-commerce on Value Chain:

The traditional value chain typically depicts the information system data as flowing sequentially through the processes with inputs and outputs to the supplier at the back-end stage and to the customer at the front-end stage. Firms engaging in e-commerce may share information with their customers and suppliers at many stages of the value chain.



the above figure shows a traditional value chain which is no longer rich enough to encompass relationships underlying flow of information between a firm, its customer and suppliers.

Customer oriented Value Chain

The above figure shows a new view of the value chain with the customer set at the center of focus to a firms information system that links all phases of its processes together. The customer oriented value chain enables the customer to access the firms(suppliers) information system at virtually every phase in order to access the assess the progress of the order. The internet is enabling companies to fully integrate their supply chains and this integration has a dramatic influence on the structure of participating companies to fully integrate their supply chains.

The ICDT (information, communication, distribution, transaction)Business strategy Model.

This is the model developed by Albert Angehrn called the information, communication, Distribution ,transaction (ICDT). It is used as the basis for discussing the internet starategy of business while thw internet strategy of business may be the primary or over riding strategy of the business .

Angehrn's model is based on four virtual spaces

1. Virtual Information Space:

This space is where a firm displays information about their organization about their products or services. This space is the easiest space for the business to enter and it is a typically first step taken towards the virtual markwet space.

For example E-commerce major concerns are

- (i) the information that it displays is accurate and current.
- (ii) The information that it displays is only viewed by authorized users.
- (iii) Customers can easily find the site and negotiate through it once they have reached the site.
- (iv) The site accessible without long unit times.

2. Virtual Distribution Space:

This space is used to deliver the product or services required or purchased by the consumer. For virtual delivery to occur , the products being delivered must be digital (software) or the service performed digitally (ex – online broker). Online news services and software companies have been quick to market and deliver their products electronically.

For e-Commerce major concerns are

- (i) delivery of products and services to legitimate customers only.
- (ii) Reliable delivery of product and services.

3. Virtual Transaction Space:

this space is used to initiate and execute the sales order which are nothing but transactions. Apart from those companies engage in virtual distribution space, most companies have been reluctant to enter this space. The major concern contributing to this reluctant is data security.

The major concerns of E-commerce are

- (i) security over data.
- (ii) Accuracy and integrity of processing data methods.
- (iii) Privacy concerns by customers.

4. Virtual Communication Space:

this space is used to enable relationships building, negotiations and exchange of ideas such as chat room, virtual communities, forums etc. E-commerce is effected if such a community is a service for which its members pay.

Three Pillars of E- Commerce :

It is another electronic business model that builds on traditional market place.

It is called as three pillars of E-commerce model which is designed by peter finger. At the foundation of the model is the existing market space. Three electronic pillars support open market processes. They are electronic information, electronic relationship and electronic transaction .thus this model builds on existing market space and utilizes electronic mechanism as an enabler of supporting open market processes.

The first pillar i.e. E-information is similar to angrahms virtual information space. Constructing on electronic information pillar is easy. Most of the word processing software packages will easily convert documents into a web readable format. The challenge is to construct a good, sold pillar where the web page does not freeze up or links do not lead a visitor to a dead end.

The second pillar i.e. E-Relationships is the central pillar and is similar to angrahms virtual communication space. The E-relationship pillar is about building a site that has the feeling of being a port of entry into an E-community. In order to attract users again and again to a site it must be innovative, it must provide information and interaction not otherwise available.

In order to build good customer relationships E-commerce websites need to be designed to give potential customers the feeling of community and interaction which they expect.

The third pillar is the E-transaction pillar. This pillar is similar to angrahms Virtual Transaction Space and also encompass angrahms Virtual distribution space. The two impediments to construct this pillar are the ability to engage in meaningful and sufficient negotiation process and security of transaction data.

Market forces influencing the I-Way:

Demands and Requirements of market participants.

The failure and success of any product or service is a factor of market forces. To become a reality, E-commerce needs a network infrastructure to transport the content also known as the electronic interactive or multimedia I-Way. The I-Way has become the leading word.

The principle drawback of existing communication infrastructure lies in its inability to provide integrated voice, data and video services. Thus a business user requiring voice, data and video conferencing services often had to use three separate networks such as voice network, data network and video conferencing network. This understanding is important because e-commerce applications are dependent on the underlying I-way.

Until recently the market place was fragmented into communication, entertainment and information sectors. The following two points worth considering are

1. The boundaries among communication are not absolute.

Ex: Video is a part of Information, entertainment and communication.

2. The boundaries among equipment are absolute.

Ex: Today technology exists to allow television sets and pcs to interact or exchange any sort of data. The emerging compatibility results in the flexibility needed to take advantage of new services. The expectations of I-way are on demand publishing, real time video conferencing, telemarketing, tele medicine, tele communication etc.

The cable industry wants to expand services from tv programming or paper view services such that the consumer can pay bills, shop or check stock prices.

Defination of I-Way:

I – Way is defined as universal affordable access to high performance network capable of carrying billions of bits per second in the context of e-commerce.

Components of I-Way:

The major components of I-way are

1. Consumer access equipments.
2. Ramps
3. Global Information Distribution Network.

1. Consumer Access Equipment :

It is often ignored component of I-way but represent critical category. The absence of slow progress in which holding of up other segments of I-way. This segment of I-way includes hardware and software vendors who provide physical devices such as computer software platforms such as browsers and operating system.

2. Ramps:

they simplify the leakages to schools and home to the communication backbone. This component is often called as last mile because they provide links. The providers of access ramps can be differentiated into

four categories viz. telecom based , cable tv based, wireless based & computer based. Online information services. The backbone access provides links and uses e-commerce application providers.

3.Global Information Distribution Networks:

The development of new communication technologies and continued employment of fiber optic facilities has resulted in higher transmission speeds at significantly low cost. The end result is a seamless web called the I-way of communication network, computer digital libraries and compute electronics that will put vast amount of information at users finger tips. The two major technologies under pinning high speed global information distribution networks are

- a) long distance networks
- b) satellite networks.

a) Long distance network:

Long distance connectivity is available through cable (coaxial) or (fiber) owned by long distance interchange carriers (Ixc)

Submarine cables provide an attractive economic advantage for selected routes, where growth advantage for selected routes, where growth is in demand and communication capacity is high. The Ixc's also play a significant role in the local access market by teaming with firms in the wireless and cable tv business. Ixc's are exploring alternative arrangements that would lower the cost of using the local network.

Uniform speed efficiency, levels of technology and cost of telecom services are necessary for both voice and data services.

Fibre optics have emerged as technology of choice because it is capable of providing higher bandwidth than satellite also it is immuned to electro magnetic interference. Long distance network infrastructure is now been deployed under seas to carry international traffic.

b) Satellite network:

Satellite networks have advantages over terrestrial network and they are accessible from any point on the globe. Satellite networks can provide broadband digital services including voice, data and video to many points without the cost of wide installation. Wide range of services include broadcast radio, video and overseas telephone links.

Thus communication satellites are the crucial part of the global communication and infrastructure.

Main Questions.

1. Define E-commerce and its applications.
2. list & explain the potential benefits of E-commerce.
3. Discuss the impact of E-commerce on customer oriented value chain.
4. Discuss the Angrehn's ICDT business model.
5. Explain 3 pillars of E-commerce.
6. Discuss the impact of E-commerce on business models.
7. Discuss the market forces influencing the I-way.
8. Write a short note on global Information Distribution network.