

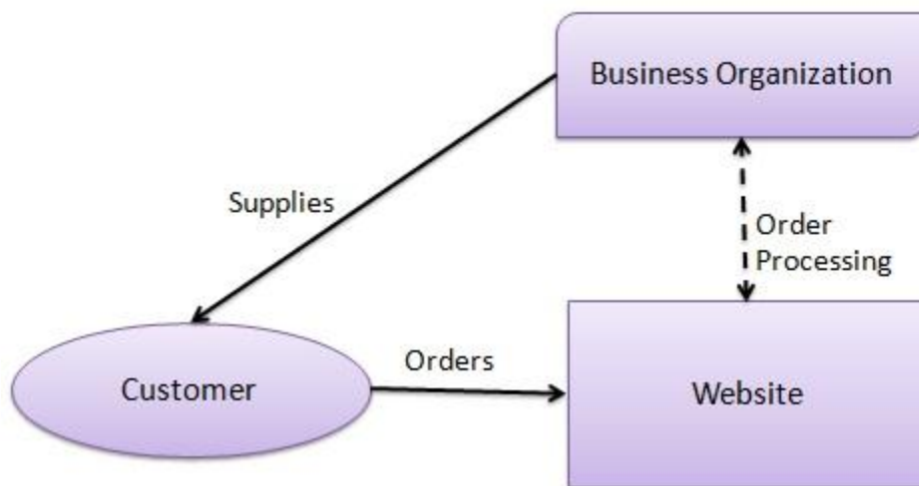
## Business Models of E-Commerce and E-Governance.

### **Business models of e-commerce:**

There are mainly 4 types of business models based on transaction party.

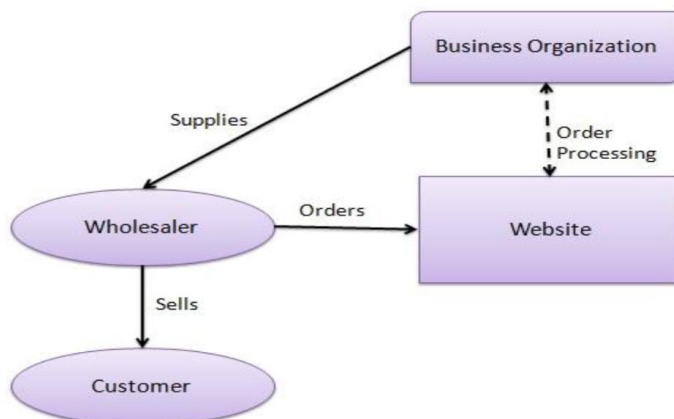
#### **Business-to-Consumer (B2C)**

In a Business-to-Consumer E-commerce environment, companies sell their online goods to consumers who are the end users of their products or services. Usually, B2C E-commerce web shops have an open access for any visitor, meaning that there is no need for a person to login in order to make any product related inquiry.



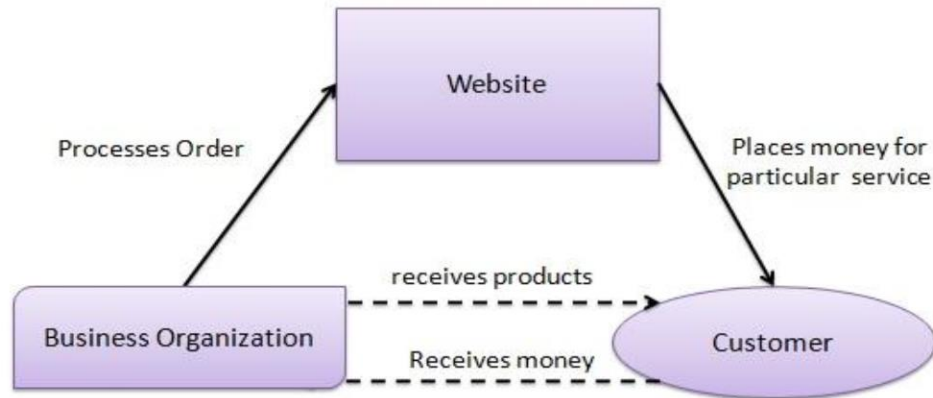
#### **Business-to-Business (B2B)**

In a Business-to-Business E-commerce environment, companies sell their online goods to other companies without being engaged in sales to consumers. In most B2B E-commerce environments entering the web shop will require a log in. B2B web shop usually contains customer-specific pricing, customer-specific assortments and customer-specific discounts.



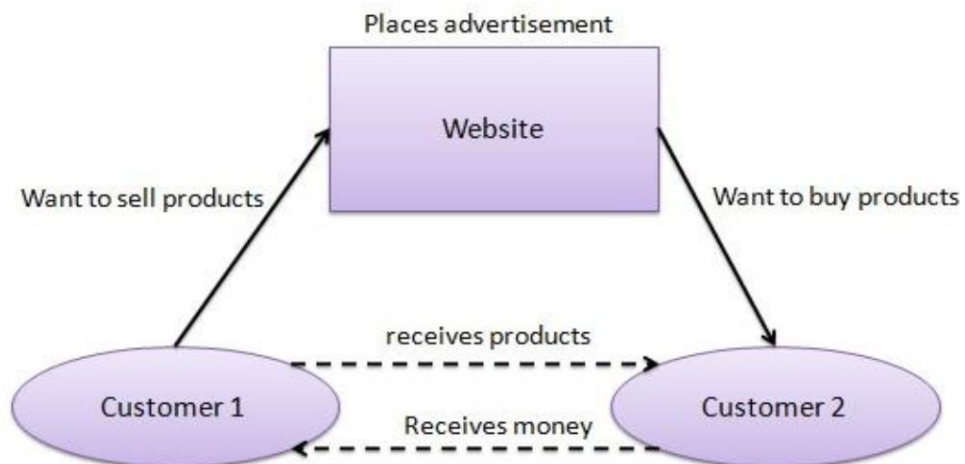
### Consumer-to-Business (C2B)

In a Consumer-to-Business E-commerce environment, consumers usually post their products or services online on which companies can post their bids. A consumer reviews the bids and selects the company that meets his price expectations.



### Consumer-to-Consumer (C2C)

In a Consumer-to-Consumer E-commerce environment consumers sell their online goods to other consumers. A well-known example is eBay.



### E-Governance:

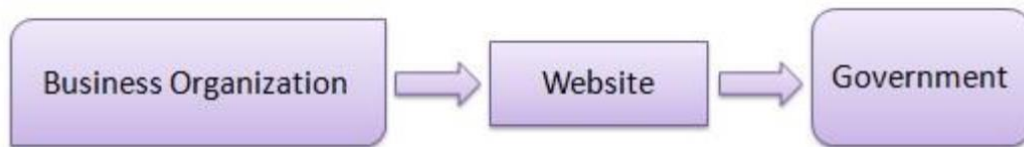
E-governance is the application of information and communication technology (ICT) for delivering government services, exchange of information communication transactions, integration of various stand-alone systems and services between government-to-customer (G2C), government-to-business (G2B), government-to-government (G2G) as well as back office processes and interactions within the entire government framework.

Through e-governance, government services will be made available to citizens in a convenient, efficient and transparent manner. The three main target groups that can be distinguished in

governance concepts are government, citizens and businesses/interest groups. In e-governance there are no distinct boundaries.

### **Business - to - Government (B2G)**

B2G model is a variant of B2B model. Such websites are used by government to trade and exchange information with various business organizations. Such websites are accredited by the government and provide a medium to businesses to submit application forms to the government.



### **Government - to - Business (G2B)**

Government uses B2G model website to approach business organizations. Such websites support auctions, tenders and application submission functionalities.



### **Government - to - Citizen (G2C)**

Government uses G2C model website to approach citizen in general. Such websites support auctions of vehicles, machinery or any other material. Such website also provides services like registration for birth, marriage or death certificates. Main objectives of G2C website are to reduce average time for fulfilling people requests for various government services.



## **Factors contributing further to the popularity of e-Commerce.**

### **1. Greater target audience for advertisements**

The problem with online advertising is that people have to be 'online' to view it. Several E-Commerce players in the world have come out with TV commercials to advertise their websites. However, mobile is a better platform to do the same. Even with Government's regulation on bulk messaging, companies could still target a mass of people collectively by sending promotional content via SMS if a user hasn't activated the DND service or wants to receive those ads.

## **2. Low tariffs-High revenue**

Mobile data tariffs in most countries are now cheap. Unlike PC Internet affordability of 3G connectivity has improved significantly. Such low rates will encourage people to use more of Mobile Internet, and eventually engage into M-Commerce as well.

## **3. Personalization**

In a true sense Personal Computers are not really personal. Desktops and even laptops are shared by multiple people living in the same family or working together in an office. However, the same isn't true in case of cell-phones. Whichever strata of the society a person may belong to, a phone has become an indispensable extension of oneself. People are more comfortable using their phones for various activities, as it gives them a sense of privacy and security, while offering easy usability. Since already there are way more mobiles in the world than computers, M-Commerce could gradually grow bigger than E-Commerce.

## **M-Commerce Application**

Many more people have access to a mobile phone than to a computer and this means that m-commerce has the opportunity to connect not just big businesses but also small business and consumers on a massive scale. In this sense, mobile phones have the potential to bridge the digital divide and allow organizations and individuals to reach out to one another more easily than ever before.

After the appearances of a new technology a remarkable growth occurs in it. This has been the same in mobile commerce.

Mobile Commerce has gained increasing acceptance amongst various sections society in last few years. The reasons for its growth can be traced back to technological and demographical developments that have influenced many aspects of the socio-cultural behavior in today 's world. Mobile services have registered impressive growth in preceding years and m-commerce is slowly but surely showing signs of a healthy growth.

The major mobile commerce applications along with details of each is given below:

### **1 Travel and Ticketing**

By utilizing the BAR CODE technology or NFC technology we could use the mobile phone as a means receiving E-Tickets. BAR CODE tech consists of sending text SMS which is scan able from the mobile phone display screen through the related set. So, by receiving the chosen SMS, the ticket is practically received and we could present the mobile phone to the scanning machine at the ticket receipt spot.

### **2 Commerce**

Commerce is the exchange or buying and selling of commodities on a large-scale involving transportation of goods from place to place. It is boosted by the convenience and ubiquity

conveyed by mobile commerce technology. There are many examples showing how mobile commerce helps commerce. For example, consumers can buy products from a vending machine or pay a parking fee by using their cellular phones, and mobile users can check their bank accounts and perform account balance transfers without needing to go to a bank.

## **Education**

Similar to other wired technologies, mobile wireless technologies have first been used in industry sectors such as business. The movement of mobile wireless technologies in education is a recent trend, and it is now becoming the hottest technology in higher education.

## **Enterprise Resource Planning (ERP)**

(This will be discussed in detail later.) In the coming mobile commerce era, users will want to be able to have access to the right resources and work as efficiently as possible- whether they are traveling, seeing a customer or working at other remote locations- with their ERP systems. Many ERP vendors are currently researching for means to provide mobility to ERP users. They attempt to connect employees to their work more effectively than ever before by enabling mobile phones and other wireless devices to become a new kind of tool to seamlessly exchange information, automate data entry and perform a range of transactions anytime, anywhere

## **Entertainment**

Entertainment has always played a crucial role in Internet applications and is probably the most popular application for the younger generation. Mobile commerce makes it possible to download game/image/music/video files at anytime and anywhere, and it also makes on-line games and gambling much easier to access and play.

## **Health Care**

The cost of health care is high and mobile commerce can help to reduce it. By using the technology of mobile commerce, physicians and nurses can remotely access and update patient records immediately, a function which has often incurred a considerable delay in the past. This improves efficiency and productivity, reduces administrative overheads, and enhances overall service quality. Mobile technologies such as PDAs, Laptops or Tablet PCs can be of great value in hospitals and healthcare facilities by allowing better access to critical information - e.g., patient status, staff and patient location and facilities availability. Healthcare facilities that choose to adopt such technologies may be able to not only perform better but ultimately provide more efficient and better quality of care for patients.

## **Inventory Tracking and Dispatching**

Just-in-time delivery is critical for the success of today 's businesses. Mobile commerce allows a business to keep track of its mobile inventory and make time- definite deliveries, thus improving customer service, reducing inventory, and enhancing a company 's competitive edge. Major delivery services such as UPS and FedEx have already applied these technologies to their business operations worldwide with great success.

## **Traffic**

Traffic is the movement of vehicles or pedestrians through an area or along a route. The passengers in the vehicles and the pedestrians are all mobile objects, ideal clients of mobile commerce. Also, traffic control is usually a major headache for many metropolitan areas. Using the technology of mobile commerce can easily improve the flow of traffic in many ways. For example, a mobile handheld device can have the capabilities of a GPS, such as determining the driver's exact position, giving directions, and advising on the current status of traffic in the area. A traffic control centre could also monitor and control the traffic according to the signals sent from mobile devices in the vehicles.

## **Limitations of M-Commerce**

Despite the fact that the use of M-Commerce is growing rapidly there are still limitation that causes limited use of M-Commerce:

### **Bandwidth**

The limited bandwidth that can be support by mobile devices currently is very small which causes web developers to reduce the usage of rich data.

### **Screens Size**

The screen size of a mobile device is very limited. This also limits the viewing capacity of the user.

### **Less Powerful Processors**

Due to the slow processing speed web developer would have to use server-side scripting which will bring more load to the servers.

### **Cost of Wireless Connection**

As wireless connection of a mobile device to the internet is still a relatively new technology the cost of using such connection is also expensive as the technology is still under heavy development.

### **Lack of Security**

Currently there is no dedicated standard protocol for M-Commerce which is a very big limitation.

### **Lack of Standard**

There are a lot of device operating systems and platforms, middleware solutions and networks and make application development for the wireless Internet a formidable task with compare to the wired operating systems. Currently there is no standard dedicated for the M-Commerce Applications. Currently several progress/efforts are going on for this.

## **Health Limitation**

Cellar mobile frequencies is sometimes dangerous to health. Sometimes they are cause of Cancer. It is invented that they sometime interfere the operations of some medical devices i.e., pacemaker.

## **Mobile Generations**

G in 2G, 3G, 4G and now 5G stands for the “Generation” of the mobile network. Today, mobile operators have started offering 5G services in the country. A higher number before the ‘G’ means more power to send out and receive more information and therefore the ability to achieve a higher efficiency through the wireless network.

As the name would suggest, 1G was the first generation of mobile networks. Here basically, radio signals were transmitted in ‘Analogue’ form and expectedly, one was not able to do much other than sending text messaging and making calls. But the biggest disadvantage, however came in the form of limited network availability, as in the network was available only within the country.

2G networks on the other hand, were based on narrow band digital networks. Signals were transmitted in the digital format and this dramatically improved the quality of calls and also reduced the complexity of data transmission. The other advantage of the 2G network came in the form of Semi Global Roaming System, which enabled the connectivity all over the world.

Between 2G and 3G there was a short phase in between where mobile phones became sleeker and more ‘pocketable’ if we can call it that. This is popularly referred to as 2.5G where the quantity of radio waves to be transmitted was much lower. This in turn had an effect on the shape and structure of mobile phones. But most of all, 2.5G helped in the ushering of GPRS (General Pocket Radio Service).

The 3rd generation of mobile networks has become popular largely thanks to the ability of users to access the Internet over devices like mobiles and tablets. The speed of data transmission on a 3G network ranges between 384KBPS to 2MBPS. This means a 3G network actually allows for more data transmission and therefore the network enables voice and video calling, file transmission, internet surfing, online TV, view high-definition videos, play games and much more. 3G is the best option for users who need to always stay connected to Internet.

4th Generation mobile networks are believed to provide many values added features. In addition to all the 3G facilities, data transmission is believed to go through the roof with

speeds ranging between 100MBPs to 1GBPS. Phew! Happy talking, surfing, conferencing, chatting, networking, partying, or whatever you want to do on your mobile phone.

5G is the 5th generation mobile network. It is a new global wireless standard after 1G, 2G, 3G, and 4G networks. 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.

5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users. Higher performance and improved efficiency empower new user experiences and connects new industries.

### **Is 5G available now?**

Yes, 5G is already here today, and global operators started launching new 5G networks in early 2019. Also, all major phone manufacturers are commercializing 5G phones. And soon, even more people may be able to access 5G.

5G has been deployed in 60+ countries and counting. We are seeing much faster rollout and adoption compared with 4G. Consumers are very excited about the high speeds and low latencies. But 5G goes beyond these benefits by also providing the capability for mission-critical services, enhanced mobile broadband and massive IoT. While it is hard to predict when everyone will have access to 5G, we are seeing great momentum of 5G launches in its first year and we expect more countries to launch their 5G networks in 2020 and beyond.

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