### Features of E-Commerce:

##### Ubiquity

Internet/Web technology is The marketplace is extended beyond traditional available everywhere: at work, at home, and boundaries and is removed from a temporal and elsewhere via mobile devices, anytime. geographic location. ―Marketspace‖ is created; shopping can take place anywhere. Customer convenience is enhanced, and shopping costs are reduced.

##### Global reach

The technology reaches Commerce is enabled across cultural and across national boundaries, around the earth. national boundaries seamlessly and without modification.

―Marketspace‖ includes potentially billions of consumers and millions of businesses worldwide.

##### Universal standards

There is one set of There is one set of technical media standards technology standards, namely Internet across the globe.

##### Richness

Video, audio, and text messages Video, audio, and text marketing messages are are possible. integrated into a single marketing message and consuming experience.

##### Interactivity

The technology works Consumers are engaged in a dialog that through interaction with the user. dynamically adjusts the experience to the individual, and makes the consumer a co- participant in the process of delivering goods to the market.

##### Information density

The technology Information processing, storage, and reduces information costs and raises quality. communication costs drop dramatically, while currency, accuracy, and timeliness improve greatly. Information becomes plentiful, cheap, and accurate.

##### Personalization/Customization

The Personalization of marketing messages and technology allows personalized messages to customization of products and services are be delivered to individuals as well as groups. based on individual characteristics.

**Different Types of Networking For E-Commerce:**

### Internet:

The Internet is a global network of computers that allows people to send email, view web sites, download files such as mp3 and images, chat, post messages on newsgroups and forums and much more.

The Internet was created by the Advanced Research Projects Agency (ARPA) of the U.S. government in 1960's and was first known as the ARPANet. At this stage the Internet's first computers were at academic and government institutions and were mainly used for accessing files and to send emails. From 1983 onwards the Internet as we know it today started to form with the introduction of the communication protocol TCP/IP to ARPANet. Since 1983 the Internet has accommodated a lot of changes and continues to keep developing.

### Advantages of internet:

There many advantages to using the internet such as:

**E-mail**

Email is now an essential communication tool in business. It is also excellent for keeping in touch with family and friends. The advantage to email is that it is free ( no charge per use) when compared to telephone, fax and postal services.

**Information**

There is a huge amount of information available on the internet for just about every subject known to man, ranging from government law and services, trade fairs and conferences, market information, new ideas and technical support.

##### Services

Many services are now provided on the internet such as online banking, job seeking and applications, and hotel reservations. Often these services are not available off-line or cost more. **Buy or sell products.**

The internet is a very effective way to buy and sell products all over the world.

**Communities c**ommunities of all types have sprung up on the internet. Its a great way to meet up with people of similar interest and discuss common issues.

##### Improved Customer Service

The companies are available to their customers 24 hours a day, 7 days a week. The Internet never sleeps. Whenever customer needs information about any company, products or services, they can access the company‘s Web Page.

##### Market Expansion

The Internet is a global system. Latest estimates are that there are about 40 million people with access to the Internet, and this number is growing every day. By simply posting a Web Page you are also addressing International markets.

##### Low Cost Marketing

Imagine developing a full color brochure without having to incur the costs of proofs, printers, wasted paper, long lead times between revisions, and more. Then imagine a full color product or services brochure that is interactive and which incorporates text, graphics, audio, and/or video. One that can be immediately updated without incurring the usual costs of product material updates.

##### Low Cost Selling

Without the cost of direct selling potential customers can get detailed information about your products or services at any time. And they can easily order your products over the Internet, or request additional information be sent to them via a request form on your Web page.

##### Lower Communication Costs

Your time, and your employees time, is valuable. Most businesses and organizations spend time answering the same questions over and over again. With a Web page you can make the answers

available to everyone immediately. You can also update your Wed page with new information quickly and easily.

### Intranet:

 An intranet is a computer network that uses Internet Protocol technology to share information, operational systems, or computing services within an organization. This term is used in contrast to extranet, a network between organizations, and instead refers to a network within an organization.

 The objective is to organize each individual's desktop with minimal cost, time and effort to be more productive, cost efficient, timely, and competitive.

 An intranet may host multiple private websites and constitute an important component and focal point of internal communication and collaboration.



### Uses of Intranet:

 Increasingly, intranets are being used to deliver tools, e.g. collaboration (to facilitate working in groups and teleconferencing) or sophisticated corporate directories, sales and [customer](http://en.wikipedia.org/wiki/Customer_relationship_management) [relationship management](http://en.wikipedia.org/wiki/Customer_relationship_management) tools, [project management](http://en.wikipedia.org/wiki/Project_management) etc., to advance productivity.

 Intranets are also being used as corporate culture-change platforms. For example, large numbers of employees discussing key issues in an intranet forum application could lead to new ideas in management, productivity, quality, and other corporate issues.

 In large intranets, website traffic is often similar to public website traffic and can be better understood by using web metrics software to track overall activity. User surveys also improve intranet website effectiveness. Larger businesses allow users within their intranet to access public internet through firewall servers. They have the ability to screen messages coming and going keeping security intact.

 When part of an intranet is made accessible to customers and others outside the business, that part becomes part of an extranet. Businesses can send private messages through the public

network, using special encryption/decryption and other security safeguards to connect one part of their intranet to another.

 Intranet user-experience, editorial, and technology teams work together to produce in-house sites. Most commonly, intranets are managed by the communications, [HR](http://en.wikipedia.org/wiki/Human_Resource_Management) or [CIO](http://en.wikipedia.org/wiki/Chief_Information_Officer) departments of large organizations, or some combination of these.

 Because of the scope and variety of content and the number of system interfaces, intranets of many organizations are much more complex than their respective public websites. Intranets and their use are growing rapidly.

### Advantages:

 **Workforce productivity**: Intranets can help users to locate and view information faster and use applications relevant to their roles and responsibilities. With the help of a [web browser](http://en.wikipedia.org/wiki/Web_browser) interface, users can access data held in any database the organization wants to make available, anytime and — subject to security provisions — from anywhere within the company workstations, increasing employees' ability to perform their jobs faster, more accurately, and with confidence that they have the right information.

 **Time**: Intranets allow organizations to distribute information to employees on an *as-needed* basis; Employees may link to relevant information at their convenience, rather than being distracted indiscriminately by email.

 **Communication**: Intranets can serve as powerful tools for communication within an organization, vertically strategic initiatives that have a global reach throughout the organization. By providing this information on the intranet, staff have the opportunity to keep up-to-date with the strategic focus of the organization. Some examples of communication would be chat, email, and/or blogs. A great real world example of where an intranet helped a company communicate is when Nestle had a number of food processing plants in Scandinavia. Their central support system had to deal with a number of queries every day.

 **Web publishing**: allows cumbersome corporate knowledge to be maintained and easily accessed throughout the company using [hypermedia](http://en.wikipedia.org/wiki/Hypermedia) and Web technologies. Examples include: employee manuals, benefits documents, company policies, business standards, news feeds, and even training, can be accessed using common Internet standards (Acrobat files,

Flash files, CGI applications). Because each business unit can update the online copy of a document, the most recent version is usually available to employees using the intranet.

 **Business operations and management**: Intranets are also being used as a platform for developing and deploying applications to support business operations and decisions across the internetworked enterprise.

 **Cost-effective**: Users can view information and data via web-browser rather than maintaining physical documents such as procedure manuals, internal phone list and requisition forms. This can potentially save the business money on printing, duplicating documents, and the environment as well as document maintenance overhead.

 **Enhance collaboration**: Information is easily accessible by all authorised users, which enables teamwork.

### Wireless Application Protocol:

WAP is a technical standard for accessing information over a mobile wireless network.



A WAP browser is a web browser for mobile devices such as mobile phones that uses the protocol.

 WAP is a specification for a set of communication [protocol](http://searchnetworking.techtarget.com/definition/protocol)s to standardize the way that [wireless](http://searchmobilecomputing.techtarget.com/definition/wireless) devices, such as [cellular telephones](http://searchmobilecomputing.techtarget.com/definition/cellular-telephone) and radio transceivers, can be used for Internet access, including e-mail, the World Wide Web, newsgroups, and [instant messaging](http://searchunifiedcommunications.techtarget.com/definition/instant-messaging).

The WAP layers are:

* Wireless Application Environment (WAE)
*  Wireless Session Layer (WSL)
* Wireless Transport Layer Security([WTLS](http://searchmobilecomputing.techtarget.com/definition/Wireless-Transport-Layer-Security))
*  Wireless Transport Layer (WTP)

## **Chapter three: Technological convergence:**

 Technological convergence is the tendency that as technology changes, different technological systems sometimes evolve toward performing similar tasks.

 Digital convergence refers to the convergence of four industries into one conglomerate, ITTCE (Information Technologies, Telecommunication, Consumer Electronics, and Entertainment).Previously separate technologies such as voice data and productivity applications, and video can now share resources and interact with each other synergistically.

 Telecommunications convergence, network convergence or simply convergence are broad terms used to describe emerging telecommunications technologies, and network architecture used to migrate multiple communications services into a single network.

 Convergence in this instance is defined as the interlinking of computing and other information technologies, media content, and communication networks that has arisen as the result of the evolution and popularization of the Internet as well as the activities, products and services that have emerged in the digital media space.

### Technology Implications:

Convergent solutions include both fixed-line and mobile technologies. Recent examples of new, convergent services include:

 Using the Internet for voice telephony  [Video on demand](http://en.wikipedia.org/wiki/Video_on_demand)

 [Fixed-mobile convergence](http://en.wikipedia.org/wiki/Fixed-mobile_convergence)

 [Mobile-to-mobile convergence](http://en.wikipedia.org/wiki/Mobile-to-mobile_convergence)

 [Location-based services](http://en.wikipedia.org/wiki/Location-based_service)

 Integrated products and bundles

Convergent technologies can integrate the fixed-line with mobile to deliver convergent solutions. Convergent technologies include:

 [IP Multimedia Subsystem](http://en.wikipedia.org/wiki/IP_Multimedia_Subsystem)  [Session Initiation Protocol](http://en.wikipedia.org/wiki/Session_Initiation_Protocol)

 [Voice over IP](http://en.wikipedia.org/wiki/Voice_over_IP)

 [Voice call continuity](http://en.wikipedia.org/wiki/Voice_call_continuity)

 [Digital video broadcasting - handheld](http://en.wikipedia.org/wiki/DVB-H)

### Collaborative Product Development:

 CPD is a business strategy, work process and collection of software applications that facilitates different organizations to work together on the development of a product. It is also known as collaborative product definition management (cPDM).

### Technologies and methods used:

Clearly general [collaborative software](http://en.wikipedia.org/wiki/Collaborative_software) such as email and chat (instant messaging) is used within the CPD process. One important technology is application and desktop sharing, allowing one person to view what another person is doing on a remote machine. For [CAD](http://en.wikipedia.org/wiki/Computer-aided_design) and [product](http://en.wikipedia.org/wiki/Product_visualization) [visualization](http://en.wikipedia.org/wiki/Product_visualization) applications an ‗appshare‘ product that supports [OpenGL](http://en.wikipedia.org/wiki/OpenGL) graphics is required. Another common application is Data sharing via Web based portals.

##### Specific to (Product Life Cycle) PLM collaboration

Collaboration using PLM tools requires technology to support the needs of:

* + 1. People: Personnel of different disciplines and skill levels;
    2. Organizations: Organizations throughout an enterprise or extended enterprise with different rules, processes and objectives;
    3. Data: Data from different sources in different formats.

Appropriate technologies are required to support collaboration across these boundaries.

##### People

Effective PLM collaboration will typically require the participation of people who do not have high level CAD skills. This requires improved user interfaces including [tailorable user](http://en.wikipedia.org/w/index.php?title=NX_5&action=edit&redlink=1) [interfaces](http://en.wikipedia.org/w/index.php?title=NX_5&action=edit&redlink=1) that can be tailored to the skill level and specialty of the user.

Improved visualization capabilities, especially those that provide a meaningful view of complex information such as the results of a fluid flow analysis will leverage the value of all participants in the collaboration process. Effective collaboration requires that a participant be freed from the burden of knowing the [intent history](http://en.wikipedia.org/w/index.php?title=NX_5&action=edit&redlink=1) typically imbedded within and constricting the use of parametric models.

##### Organizations

[Community collaboration](http://en.wikipedia.org/wiki/Teamcenter#Community_Collaboration) requires that companies, suppliers, and customers share information in a secure environment, ensure compliance with enterprise and regulatory rules and enforce the process management rules of the community as well as the individual organizations.

Data

The most basic collaboration data need is the ability to operate in a MultiCAD environment. That is, however, only the beginning. Models from multiple CAD sources must be assembled into an [active digital mockup](http://en.wikipedia.org/w/index.php?title=NX_5&action=edit&redlink=1) allowing change and/or design in context.

## Content Management System:

 A content management system (CMS) is a computer application that allows publishing, editing and modifying content, organizing, deleting as well as maintenance from a central interface. Such systems of content management provide procedures to manage workflow in a collaborative environment.

 CMSs are often used to run websites containing blogs, news, and shopping. Many corporate and marketing websites use CMSs. CMSs typically aim to avoid the need for hand coding, but may support it for specific elements or entire pages.

### Main features of CMS:

 The function and use of content management systems is to store and organize files, and provide version-controlled access to their data. CMS features vary widely. Simple systems showcase a handful of features, while other releases, notably enterprise systems, offer more complex and powerful functions. Most CMS include Web-based publishing, format management, revision control (version control), indexing, search, and retrieval. The CMS increments the version number when new updates are added to an already- existing file. Some content management systems also support the separation of content and presentation.

 A CMS may serve as a central repository containing documents, movies, pictures, phone numbers, scientific data. CMSs can be used for storing, controlling, revising, semantically enriching and publishing documentation.

The content management system (CMS) has two elements:

* Content management application (CMA) is the front-end user interface that allows a user, even with limited expertise, to add, modify and remove content from a Web site without the intervention of a Webmaster.
* Content delivery application (CDA) compiles that information and updates the Web site.

### Web Traffic:

Web traffic is the amount of data sent and received by visitors to a web site.

Web traffic is measured to see the popularity of web sites and individual pages or sections within a site. This can be done by viewing the traffic statistics found in the web server log file, an automatically generated list of all the pages served. A *hit* is generated when any file is served.

The following types of information are often collated when monitoring web traffic:

 The number of visitors.

 The average number of page views per visitor – a high number would indicate that the average visitors go deep inside the site, possibly because they like it or find it useful.

 Average visit duration – the total length of a user's visit. As a rule the more time they spend the more they're interested in your company and are more prone to contact.

 Average page duration – how long a page is viewed for. The more pages viewed, the better it is for your company.

 Domain classes – all levels of the IP Addressing information required to deliver Webpages and content.

 Busy times – the most popular viewing time of the site would show when would be the best time to do promotional campaigns and when would be the most ideal to perform maintenance

 Most requested pages – the most popular pages

 Most requested entry pages – the entry page is the first page viewed by a visitor and shows which are the pages most attracting visitors

 Most requested exit pages – the most requested exit pages could help find bad pages, broken links or the exit pages may have a popular external link

 Top paths – a path is the sequence of pages viewed by visitors from entry to exit, with the top paths identifying the way most customers go through the site

 Referrers; The host can track the (apparent) source of the [links](http://en.wikipedia.org/wiki/Hyperlink) and determine which sites are generating the most traffic for a particular page.

### Content marketing:

 Content marketing is any marketing that involves the creation and sharing of media and publishing content in order to acquire and retain customers.

 It is a strategic marketing approach focused on creating and distributing valuable, relevant, and consistent content to attract and retain a clearly-defined audience — and, ultimately, to drive profitable customer action.

 Basically, content marketing is the art of communicating with your customers and prospects without selling.

 It is non-interruption marketing. Instead of pitching your products or services, you are delivering information that makes your buyer more intelligent.

### Call centre:

 A call centre is a centralised office used for receiving or transmitting a large volume of requests by telephone.

 An inbound call centre is operated by a company to administer incoming product support or information inquiries from consumers.

 Outbound call centers are operated for telemarketing, solicitation of charitable or political donations, debt collection and market research.

 A contact centre is a location for centralised handling of individual communications, including letters, faxes, live support software, social media, instant message, and e-mail.

 A call centre has an open workspace for call centre agents, with work stations that include a computer for each agent, a telephone set/headset connected to a telecom switch, and one or more supervisor stations. It can be independently operated or networked with additional centres, often linked to a corporate computer network, including mainframes, microcomputers and LANs.

 The contact centre is a central point from which all customer contacts are managed. Through contact centres, valuable information about company are routed to appropriate

people, contacts to be tracked and data to be gathered. It is generally a part of company‘s customer relationship management.

## Components of call centre:

There are 6 key components which should be integrated into the call centre operation:

 Location, building and facilities  Customer

 Technology Process

 People

 Finance and business management

##### Location, building and facilities

Where a centre is located is critical in terms of the cost of the building but more importantly the ability to recruit and retain employees to work in the centre. The ease and cost to get to a centre is important for those employed in the centre but also in the integration with the Head Office functions that the centre needs to work with. The facilities and working environment is more critical than for functional line departments because of the intensity with which the Agents have to sit at their desks and the need to manage resource patterns. Visiting a call centre and looking at how it might feel to work in it will be extremely telling as to how good the centres performance is, but also how the organisation view and treat their employees.

##### Customer

Customers can be anyone, and the Agent needs to have the skills to be able to adapt their style and vocabulary to suit different customer types. The Agent talks to more customers in any one day that any other person in the organisation. If you want to know what is going on with customers, ask the Agents! With average call durations of less than 3 minutes, how do you form a relationship and build loyalty from a customer in that time. That is one of the biggest challenges that the Agents face, especially given many customers do not like the impersonal touch that call centres often provide.

##### Technology

There are significant amounts of technology available and it is very easy to be bamboozled by it all! It very much depends on the size and nature of your business as to what you require. The basic equipment to handle calls is the Automated Call Distributor but these can range from basic to a Rolls Royce! Many centres do not fully utilise the technology that they have.

In addition there is usually a disjoint between what the technology can do and what it is actually used for.

##### Process

Every centre has a multitude of processes, but the biggest challenge that it faces is to understand the end to end process from the customer perspective. The customer journey is what happens from the point in time when a customer decides to contact you through to the completion of that request or transaction. How long does this journey take and what does it feel like taking the steps along the way. How long is spent waiting? Does the agent have the customer details to hand? Can the agent answer the query first time? Does the fulfilment when expected? One very easy but critical way of looking at the customer journey is to mystery shop the centre and to see what it really feels like to be the customer. Put yourselves in the shoes of your key customer demographic type and call your own centre today.

##### People

People are the most critical asset in a call centre as it is they who really deliver the business performance. Unfortunately the investment and perception of your staff may be rather poor. The people (Agents) often have to deal with difficult situations when things have gone wrong in your organisation and deal with a large volumes of calls that result, whilst not always having the necessary training or skills. However, the teams in Centres can be very resilient and are often very social, making the centre a great place to work. There are many different roles on offer and so they can a good environment to start and develop a career.

##### Finance and business management

There will be more management information statistics in a call centre than in any other part of the organisation. The centre is measured from every different angle but unfortunately, this does not always give a complete picture!

One of the most challenging roles is the planning, measuring and reviewing of performance because so many centres are under pressure from calls and other expectations, that being able to step back and take an objective view maybe difficult. Most centres are run to very tight budgets so factors such as turnover of staff will have a huge impact.