

This report will focus on the available technologies in the two areas of: Business and Organizations and Entertainment and Leisure. This report will briefly describe the technologies that are available in the two areas of *Business and organizations & Entertainment and Leisure*. In using this method and not looking at the two areas individually, I will not be repeating some of the technologies that are available to both areas such as the Internet and this will in turn enable me to include more of the technologies that are available in the two areas.

### **The main Internet technologies.**

**E-mail** – available in the areas of *Business and organisations & Entertainment and Leisure*.

E – mail stands for electronic mail and it is used to send messages from one terminal to another i.e. a computer user can send messages to another computer user. The message can be sent to another terminal in the same building, or to one in a completely different part of the World. To communicate using e-mail you need to have an e-mail address of your own, each user has a unique e-mail address. If you are not connected to an Internet e-mail system then you need to be connected to the Internet. You will also need to know the e-mail address of the person who will receive the e-mail. You can write the e-mail message using special software that is normally provided as part of your Internet connection. The e-mail is then sent and stored on the file server (where data is stored) of the recipient's Internet service provider. As soon as the person to whom you have sent the message logs onto the system they can access their mailbox and read any messages that have been sent to them. E-mails are usually short, to-the-point messages. Files (i.e. text, pictures, music, video clips etc) can be sent with the message as an attachment. Numerous files can be attached to an e-mail, so if you had five photographs to send, you could attach them and send them all at once.

Some **Advantages** of e-mail over conventional mail (snail mail):

- Messages arrive much faster (within a few seconds), as mail is sent immediately and a reply can be sent as soon as the receiver checks their e-mail. Ordinary post takes several days.
- E-mails are quicker to write because they lack the formal structure of a letter.
- You can attach a copy of the sender's e-mail with your reply, so this saves them having to search for the original message.
- E-mail is cheaper than a letter. No stamp, envelope or paper is needed. It is also time saving, so this also makes e-mail cheaper. Even if the e-mail is sent across the World it will not cost any more than a local e-mail.
- You do not have to go out to a post box – can be sent from home (this is an advantage if the weather is bad or if you have a disability). Can also be sent at any time of the day or night.
- You do not have to buy or waste time shopping for stamps, envelopes and paper.
- One message can be sent to a number of users (using mailing lists).
- Attachment files can be sent.
- You can also write or receive e-mail from any connected computer in the World, wherever you are; you don't have to be at home unlike mail.

Some **Disadvantages** of e-mail:

- Not everyone has the equipment to send and receive e-mail. However, with Internet access from televisions, land line phones and mobile phones (WAP) it will soon take over from traditional post.
- Junk mail is a problem. You can waste time looking through e-mails that are just adverts.
- E-mails are not as secure as traditional letters – not suitable to send legal documents etc.
- The system relies on people checking their e-mail regularly.
- The technology involved may deter non-technical people from using e-mail.
- The equipment to send and receive e-mail is quite expensive compared with traditional methods.
- E-mail attachments can contain viruses, which can cause vast damage and be expensive.
- You cannot send physical objects.

E-mail affects the way we work in that companies can pass info to employees far quicker and they can check that all employees have read the info by putting attachments on the e-mail. Also, it provides easy and cheap means by which to contact customers, suppliers, etc, both near and all over the World and this in turn saves companies vast expenditure on things such as mail and calls. Also, e-mail now means that product information can be sent to customers immediately, which is convenient, effective and time saving. E-mail also makes it far easier and quicker to communicate with people, which aids businesses greatly and is also a convenience for people at home. For people who find themselves at home most of the time either through illness or disability, e-mail enables them to keep in touch with a wide range of people instantly.

E-mail has become far more accessible over time and more companies are using it more and more. With the growth of home computers people are using e-mail at home more and more so you don't have to be in work to access your e-mail. In the near future I expect e-mail will become even more accessible with technologies such as Wap and more and more people will have an e-mail address as well as a postal address.

### **The Internet, the Intranet and the World Wide Web (WWW) - available in the areas of *Business and organisations & Entertainment and Leisure*.**

Many people use the terms *Internet* and *World Wide Web* interchangeably, but in fact the two terms are not synonymous. The Internet and the Web are two separate but related things.

The *Internet* is a global network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which anyone who has access to it can access websites throughout the World and correspond with anyone connected to it by using e-mail. You can access almost any kind of information on this network, from the latest news and sports results to research information on a certain illness. Information that travels over the Internet does so via a variety of languages known as protocols.

There is also a technology called the intranet, this is like a private Internet. It is like a website that is only accessible to the members of a business, company. For example, many schools now have their own intranet, with information for staff and students. Members of the public do not have access to it.

The *World Wide Web*, or simply the *Web*, is a way of accessing information over the medium of the Internet where graphics, sound, video and animation are used as well as text (this type of media is called hypertext). It is an information-sharing model that is built on top of the Internet. Special hypertext links are built into the World Wide Web to allow the user to move around the Internet by using the mouse to click on words or graphics on the screen. Special software, called web browser software, is needed to take full advantage of the World Wide Web.

Some **Advantages** of the Internet, Intranet, World Wide Web:

- Almost any kind of information can be found on the Internet and so can be used to carry out research and gain information.
- The Internet offers online computer aided learning and there is access to an unlimited quantity of resources and information on the Internet in which people can use to do this.
- The intranet means that pupils in schools can do online learning in safety and for businesses it means that staff can communicate and find information within their own company and can do other things such as share and distribute documents, access databases, allow group work and video conferencing. Intranets are easy to use as they function exactly as a web site and they are cheaper to set up and use than any other private type of network.
- There are countless online games, music, and movies etc, which provide entertainment.
- For entertainment and leisure people can download or listen to music or other forms of media from websites over the Internet, which is much cheaper (or free) than the prices in shops.
- For businesses it can provide both customers and potential customers with information and it can be used for advertisement.
- For businesses, customers can buy products and services via the firm's website.
- People can communicate with other people with similar interests or topics over the Internet via chat rooms. This could be useful for disabled or old people who may not be able to get out of their place of living but want to interact with other people.

Some **Disadvantages** of the Internet, Intranet / World Wide Web:

- It can be expensive to set up the Internet and be online, especially for businesses. Some families cannot afford a constant Internet connection.
- The Internet can be confusing and unreliable when searching for information, as there is so much of it. The quality and accuracy of materials varies greatly and there is no easy way to predict or verify the quality or accuracy, of what you are browsing-a lot is rubbish. This is because no one runs the Internet; it is a vast unregulated computer communications network.
- The Internet is also unreliable as websites move and change.
- Connection onto the Internet can be very slow and people get impatient.
- There are undesirable sites, which can be distressing, disturbing and offensive for people.
- Intranets have Security issues: They need to be well protected (usually with a firewall) to allow access to authorised users only. They still need to be set up and maintained, so cost issues are not negligible. If they are not maintained well they can very quickly become a jungle of information.
- There are around 45 000 viruses in circulation which spread global via the Internet and these can be damaging and expensive, especially for businesses - total security is impossible.
- Some employees may not be familiar with the terminology – this is a problem for businesses.
- Sometimes the language used may not be a viewer's native language.

The intranet and the Internet bring about new employment opportunities because it means people can now work from home and the Internet has also thrown up new careers such as web designers, for example. Also, work is made easier as companies don't need to keep lots of paper documents as information can be downloaded from the intranet as and when needed. However, at work the Intranet can take up more time and work. For example, at careers offices near me, employees have to spend time searching the Intranet to find information and have to load all the new information onto the Intranet at the end of the day. The Internet can make people jobless. For example, the Swedish authority have dismissed 500 personnel, which work at

social insurance offices as the citizen will fill in the form via Internet, which means reduction of personals. Work has also changed as companies can go into vast expenditure in preventing and dealing with viruses and there can be an information overload; problems with junk email. These technologies have enabled people to access information at the touch of a button on a very wide range of subjects. However, there can be an over-reliance upon these technologies and people can become isolated from other people. The Internet has also enabled computer-aided learning for people and people can now do things such as shopping and banking from home via the Internet, which has many advantages.

Ten years ago, the Internet was practically unheard of by most people. However, the Internet is now far more widely used and is even now available in public places such as libraries, making it far more accessible. The Internet has progressed in that it is now used for online shopping and banking. The Internet has also progressed with the development of web cameras – where you can see the people you are speaking to, this in turn could lead to greater use of video conferencing and even lessons being taught over the web in the near future. This is something that is already happening at one of my local Colleges (called Eccles College) where pupils are being taught and shown demonstrations by people in universities in America.

### **Mobile Telephone Technologies**

**Mobile Phones** – *available in the areas of Business and organisations & Entertainment and Leisure.*

Mobile phones are one of the most popular modern-day technologies. Many people would be lost without them. They are basically just a mobile equivalent of ordinary telephone, and so their one purpose is for having telephone conversations on the go. However, the development of the Internet and other messaging systems such as SMS means that mobile phones can now offer much more.

Some **Advantages** of mobile phones:

- It is a popular form of communication (lots of people to communicate with).
- It is effective and fast. You are contactable wherever you are.
- Can talk in detail because of speech (unlike text).
- You get instant feedback in speech.
- Mobile phones also come with a text feature.
- They are abundant and there is a large selection of choice/ there are also cheap mobile phones e.g. the Nokia 3200 is £29.99.
- There are many tariffs and deals available/ the correct tariff can also lower the cost.

Some **Disadvantages** of mobile phones:

- Still quite expensive, even though they have been around for a while and have recently gone up after mobile companies were having profit lowered.
- Expensive bills, from constant use.
- Networks expenses vary and calling different networks increases price.
- They are well known targets of stealing and can cause violent assaults.
- Reception is not everywhere.
- Mobile phone radiation may cause health risks in years to come if in constant use.

Provided all employees have a mobile phone companies can be constantly in touch with all their employees. Mobile phones mean that people can communicate with each other wherever and whenever they want to.

Over time mobile phones have become a lot smaller. At the same time they have also incorporated far more features such as: access the web, text messaging, taking pictures, voice messages and the latest developments include polyphonic ringtones or monophonic ringtones and video links so you can see who you are talking to. In the future all mobile phones may have video link facilities, at the time being this facility only exists on one network (network three). Some time in 2004 there will also be mobile phones available, which are simply a small device that you attach to your finger and put to your ear. These are already becoming available in Japan where they were developed.

**SMS** – *available in the areas of Business and organisations & Entertainment and Leisure.*

Simple message service (or SMS) is the service that is commonly used to send and receive text messages using mobile phones. This is its sole purpose, however, today it is one of the most common forms of communication. The total number of chargeable person-to-person text messages sent across the four UK network operators during March 2002 was 1.72 billion. It can be compared to the pager service where you are able to send and receive short messages. Sending a message is less expensive than making a one-minute phone call. The message has to be basic text and is restricted to a message length of 160 characters (a character is a letter of the alphabet, a number or a punctuation mark or symbol). When a text message is sent from your phone it will let the receiver know there is a message by causing their phone to give out a noise when it arrives. The message is then stored in the receiver's phone until they have a chance to read it.

Some **Advantages** of SMS:

- Unlike e-mail, SMS as it currently stands is relatively SPAM free.
- Unlike an e-mail, a text message is much more like to be read by a person at any one time and so it is more personal.
- A text message is far cheaper than a phone call yet in most instances you will convey just as much information as you would have if you had called.
- Unlike a phone call, an SMS message is automatically stored where it can be re-read. This proves particularly useful in the case of fairly detailed information that might otherwise be forgotten.
- The discreet nature of text messaging ensures you stay in touch with minimal disturbance. Unlike a phone call you do not have to run out of the restaurant where you are eating to field the call, yet you still know when an SMS has arrived.
- Sending and receiving text messages is quick and easy.

Some **Disadvantages** of SMS:

- Cannot write long or detailed messages (limited length) – maximum space of 160 characters.
- Very basic (only sent plain text)—there are no additional features such as images, audio or video.
- The simple message service has privacy and security problems (eavesdropping) this may especially be a disadvantage to businesses exchanging information and details.

In work staff are able to keep in touch at all times and leave messages if necessary. Text messaging now means that companies can send branded, personalised messages to their customers and staff in a variety of

ways to suit the way that they work. Additionally they can receive messages back - which is a fantastic way staff and clients to interact with companies. The SMS service has affected mostly the younger generation and indeed all ages as people are now able to communicate as and when they want to in a quick and convenient manner.

Over the years progressively more and more people have begun to use text messaging and it is now one of the most common forms of communication. At present SMS is the ideal communication channel to cut through the clutter, but this may change over the next year as marketing departments worldwide are climbing aboard to try and target their customers in this one-on-one manner and evidence is being seen now as people receive messages.

**WAP** – *available in the areas of Business and organisations & Entertainment and Leisure.*

WAP or Wireless Application protocol, adds a new dimension to the Internet i.e. mobility. The basic function of WAP is for mobile phones to be able to communicate with a server installed in the mobile phone network. It brings together the web and telecommunications. With a mobile phone or a laptop that supports WAP you can send and receive e-mail and text messages, book tickets, order food and check your bank account at any time. You can play games while stuck in traffic, get the stock market news in the elevator... complete mobility, the World Wide Web with you all the time. It also includes services such as downloading entire phone books and new, improved ways of controlling outgoing and incoming calls will make mobile telephony even easier.

Some **Advantages** of WAP:

- Multi-party communication – WAP technology makes it possible for several people to communicate on the move using different devices. Instant and mobile voice, text, image and position messaging make this media an extremely powerful tool.
- Astrology WAP applications give you constant round-the-clock access to an up-to-the-minute horoscope.
- Wherever you are in the World, your WAP-enabled mobile phone is your personal guide to your location. You can plan your evening's entertainment. Reserve seats at a restaurant, take in some local art, book cinema tickets or find a quiet place to drink.
- An updated World-wide detailed weather report is always available if you have a WAP-enabled mobile phone, it can be automatically directed to your phone wherever you are.
- WAP-enabled mobile phones have every Yellow Pages directory in the World at your fingertips and millions of useful telephone numbers. Anywhere, at any time, you can locate and avail of local services such as taxi services because you have the local Yellow Pages in you pocket.
- Your automatic WAP-based stock-broker tells you the price of your shares. You can carry out the entire transaction over the Web without moving from the spot.
- WAP-enabled, mobile phones give you access to all categories of up-to-the-minute local or international news.
- Entertain yourself in a traffic jam. Check out the entertainment sites, online games etc.
- Easy, and fast access to the Internet.

Some **Disadvantages** of WAP:

- WAP technology on the whole is expensive.
- Did not have a pocket-based service for a long time.

- Limited size of RAM and ROM (limited memory and storage space).
- Limited power supply.
- Low bandwidth (determines how fast data can be passed along a communication channel)
- Difficult to keep the phones up-to-date with new WAP services.

Wap technology means that employees have a wide range of resources available to them at all times, without the need to return to the office and employees can access information on the go via the Internet which can save time. Wap technology possibly means that more people will start using the web if they have this facility on their phone.

WAP is a fairly new technology and is not widely used. However, since their release, more features and gadgets have been added to them such as office applications and voice messaging. In the near future if costs come down people may use WAP technology to access their e-mails more often via their mobile phones. As it stands WAP mobile phones are quite difficult to use and many people find it frustrating and would prefer to wait until they have access to a personal computer. However, this is soon to change, as a service called 3G is soon set to replace WAP and make the Internet as easy to use on a mobile phone as it is using a PC.

**A further form of personal communication: Personal digital assistants (PDAs) and organisers**  
*- available in the areas of Business and organisations & Entertainment and Leisure.*

PDAs are electronic organisers that can be used for a busy schedule. PDAs are small portable computers, usually handheld or pocket size, that organize data, such as your schedule, appointment calendar, address book, e-mails and to-do list. They often allow you to surf the web and also include connections to your desktop PC; you connect the two devices with a serial cable and then you use the PDA's included software to manage tasks on your desktop PC and to synchronize tasks with the PDA. Some PDAs provide a voice recorder and note taker, and others even let you read e-mail and information downloaded from the Internet. They simply assist in organizing users' lives and their main function is to make information highly accessible to users. Once the domain of early adopting gadget lovers, PDAs now organize and update millions of mobile business professionals. They're ideal for anyone who needs portable information but doesn't want the size or expense of a laptop computer. They do not need to handle bloated spreadsheets, databases, or text documents. That work is best left to a desktop computer or laptop. Most mainstream PDAs are simple and inexpensive. An example of a simple PDA is the U.S. Robotics Pilot, which has all the basic, necessary functions.

Some **Advantages** of PDAs and Organisers:

- Provide the advantage of information on the go to keep people informed, organized, and entertained e.g. they organise your schedule, appointment calendar, phone numbers, address book, enable you to surf the web and more – all this storage in a very small portable unit.
- PDAs range from the size of a credit card to a notebook computer and so are convenient and easily portable – unlike a laptop. For further convenience a few recognize spoken commands.
- Many PDAs are able to download e-mail from a personal computer that you can then read offline on the PDA. PDAs also enable you to prepare, edit and sent faxes, and receive them.
- In addition to transferring data to your desktop PC through a serial port, many PDAs can communicate with each other through an infrared port. Any two PDAs running the same operating system, in close proximity, and in a straight line of sight to each other should be able to exchange data through their IrDA ports. Some units are more powerful than past computers.

### Some **Disadvantages** of PDAs and Organisers:

- A smaller PDA is an advantage, but it has to be taken into consideration that the number of features and the computing power increases with the size. Credit-card-size units typically offer only basic PIM functions and have about a small 512-KB RAM (up to 16 MB in larger models).
- Because some units are so small, the screen may be difficult to read, and there's little room for buttons, so entering data can be tedious or require you to connect to a desktop PC and to use the PC's keyboard – this is not so convenient.
- Only larger PDAs have actual keyboards, so most PDAs require you to enter information through the touch screen with the stylus. You must form your letters precisely according to the software's rules; this can be difficult and can take some time to adjust to.
- Setting up a PDA to work with an Internet Service Provider's (ISP) e-mail server can be a tedious, time-consuming process-especially if you've never done it before.
- Buying PDAs and their accessories is expensive. PDAs range in price from about £100 to £1,000. A typical day planner in a quality leather binder will cost about £150. Each year new dated inserts will have to be purchased. If one considers an average of £75 as the annual update costs for a professional edition of inserts, the total outlay after three years will be about £475. This happens to be the midrange price point for the PDAs. Plus, batteries, chargers etc may eventually result in a significantly higher outlay. One set of alkaline batteries usually lasts only a few weeks with normal use and rechargeable battery packs typically last just several hours between charges. Other add-ons such as memory cards and applications also raise the cost.

PDAs increase flexibility, allowing employees to access all the information that they would have access to in the office but on the go. PDAs also mean that employees now have access to a huge range of information. They have given greater freedom to some disabled people in that they are able to access information on their own (using a handheld stylus) and they are also able to carry that information around with them so that they are not so much reliant on others, giving them more independence and a chance to achieve their full potential.

PDAs are the one of the fastest selling consumer devices in history. Since their release, more than 9 million personal digital assistants have been sold. They were originally designed as organizers. They could store addresses and phone numbers, keep track of appointments, and carry lists and memos. PDAs still do those things, but over time, more and more features have been incorporated into these devices and they have since become more versatile, for example they can now retrieve or send e-mail or download other information from the Internet and can play music, movies and video games. They have also become easier to use and handle and they are now used in places such as schools and disability centres. In the near future, the price of PDAs should come down slightly in order to appeal more because as it stands to many, their purpose is rather ambiguous. Also in the near future, customers may be able to watch streaming videos or to listen to sound clips as these functions may become supported and PDAs and Global Positioning System (GPS) receivers will be combined into one handheld device. Also, Some PDAs will be able to capture and store images, as a digital camera does and Hewlett-Packard is developing software that could wirelessly connect a PDA to a printer, most PDAs will also incorporate voice recognition technology, where you speak into a built-in microphone while software converts your voice waves into data. Soon enough, more consumers will become attracted to PDAs because they now have the same functionality as laptops but are much more portable and convenient and in some cases offer more features.