



Higher Still Notes

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Higher Business Management

HSN81200
Unit 1
Outcome 2

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Information and Information Technology

Data and Information

Facts that have been formally collected and organised are known as **data**.

Information is data that has been *processed* into a form that can help decision-making, planning, control and performance.

Information Sources

Primary Information

This has been researched by people within an organisation, and is used for the business's own purposes. The information could be collected by observation, interview, or from returned questionnaires.

Advantages

The information collected is *first-hand* information, and should be fit for the purpose for which it was gathered.

Disadvantages

It may cost a lot of money to collect market research, and the questions asked may be flawed because they are collected from too few people. When a market researcher asks you to sample something, you feel pressured into saying that you like it and would buy it, even when you know that you probably would not buy it. The researcher may be biased – meaning they are more inclined to side with their own point of view than anyone else's.

Secondary Information

Secondary information is gathered from *published* sources – books, newspapers, the internet etc.

Advantages

Secondary information is usually less expensive to access than primary information, and there are a wide variety of sources available, with others already carrying out the research that you would like to undertake.

Disadvantages

The information already collected by other people may be irrelevant, or out of date (published statistics take a long time to analyse). The author may be biased towards their own point of view like primary information could be, and therefore you are getting *their* opinion instead of the real statistics. Also, a major disadvantage is that if you have managed to find this information, your competitors might also be able to find it and use it.

Internal Information

This is data that has been taken from records kept inside the organisation – e.g. financial statistics and wages, previous sales records, customer databases, etc.

Advantages

Past performance can be looked at and interpreted in order to predict future performance. Once an organisation has been established for a number of years, the information will be more accurate and trends can be identified.

Disadvantages

New organisations may not have information to access. You need to keep accurate records and it will be costly to set up and produce the records.

External Information

External information is gathered from outside sources, for example the government and competitors.

Advantages

Information on PEST factors (see the unit entitled Business in Contemporary Society) can be gathered. Generally, external information gives a broader range of opinion and offers more sources of hard data than can be found internally.

Disadvantages

As with secondary information, it may be out of date and available to your competition. It will be expensive and time-consuming to gather all the sources required, and once again may have bias.

Information Types

There are many types of information available to a business. They include:

Oral Information

This is information collected verbally or through the use of sound, and could include telephone calls and discussions. This type of information is useful for providing help and instructions, but is much less formal than written information, and there is no way of referring back to what was said, unless it was taped or in the case of meetings, minutes were prepared.

Graphical Information

This is in the form of charts and graphs, for example line graphs and pie charts, and is a good way to display information in a clear format, and can prove useful for making comparisons between things.

Written Information

Written information is usually textual information – memoranda, letters, reports, and emails are all types of written information. This is useful for providing advice or giving instructions to people, can be passed on to other people, retained easily, and can be distributed easily.

Pictorial Information

This could be in the form of pictures and photos, and could also be a set of photo slides. This is used to pass on information that can be remembered easily by people, to make documents look better, draw emphasis to a document etc.

Numerical Information

This is information in the form of numbers (spreadsheets or tables). You can use numerical information to plan ahead, calculate things, and analyse the business's overall performance – the percentage of profit per product sold, number of goods sold, etc.

Quantitative Information

This is *measured* information which is expressed numerically. It helps businesses to analyse information and to make predictions using the information.

Qualitative Information

This is *descriptive* information, and involves making judgements or having an opinion on something. It allows the business to find out the opinion of the public on their products, etc, however this may prove to be biased, and is difficult to analyse.

The Value of Information

If the decision-making process is to be successful, an organisation must use high quality information, that is to say it has to be:

- Accurate
- Appropriate (fit for the purpose)
- Timely (up-to-date)
- Objective (free from bias)
- Available (can be obtained easily)
- Cost-effective
- Concise (to the point)
- Complete

These criteria should be applied to evaluate each potential source of information. For example, primary information gathered by a professional Market Research campaign is likely to be:

Accurate (because of the use of discriminators in the questionnaire which are used to filter out inconsistencies in a respondent's answers); *appropriate*; *timely*; *objective*; *complete*, but it will be less likely to be *readily available* and will not be *cost-effective* or *concise*.

The firm which considers commissioning this type of research must balance the positive and negative criteria to decide whether or not to go ahead with the research. Cost-effectiveness on its own may outweigh all the others.

The Use of Information in Businesses

To Monitor and Control the Business

Information can be used to ensure the business is running properly, and can be used to check progress so that the company can see where the problems are.

To Assist in the Decision-Making Process

Quality information would allow owners and managers to make decisions on setting prices, hiring and firing staff, choosing suppliers, meeting targets etc.

To Measure Performance

You can evaluate how well the business is performing using information gathered.

To Identify New Opportunities

In identifying new or changing opportunities to be involved in, you may have to collect written and oral information.

Types of Information Technology

Personal Computers

These are normal desktop computers, which are used in homes and offices. Laptop computers are also available; these are easy to move around, and are flexible for staff working away from the business's offices. These types of computers are still expensive to buy, become out-of-date very quickly, and may need upgrading frequently.

Mainframe Computers

These are the large, powerful computers that larger corporations have – due to the fact they can have many users accessing the system at any one time. Although very expensive to install and maintain, they are a lot more powerful than personal computers.

Networks

Networks are divided into two categories:

- LANs (Local Area Networks) – these are terminals which are linked up to each other on the same site and allow information to be shared. One computer is called the *fileserver*, which controls the disks that hold the data files.
- WANs (Wide Area Networks) – these are similar to LANs in that they link terminals up to each other, but connect computers via communication lines. The internet is an example of a WAN, in that it connects users across the world, not only in one small building or a group of buildings in the one area.

Electronic Mail

Email is a form of sending electronic messages to people across the world. Each user can be given their own personal *email address*, which diverts mail sent to them to their own personal mailbox on their computer. It is a form of instant communication, cost-effective, and you can send the same message to a number of different people at the same time. However, junk mail has increased and staff can waste time on sending mail messages to each other; also, viruses are spread by electronic mail, so it is dangerous for businesses to let staff use electronic mail on networked computers.

Video Conferencing

Nowadays, people in different locations can link up to each other without the need to travel, thanks to video conferencing and computer conferencing. This is where computers or video and sound links are set up in each location, which transmits data between the two locations, allowing for instant feedback and face-to-face discussing of important issues. It can save a business a large amount of money – you now no longer have to fly employees around the world, put them up in accommodation and organise travel arrangements for them – you simply have to connect to a computer or a satellite link. However, sometimes, especially when you use the internet to hold a conference, connections may become sluggish or disrupted. Time differences also apply, and there is a limit on the number of people who can participate in the conference – there is no point setting up expensive equipment in many different locations if it would be easier for them to meet up in a single location.

The Internet

The internet lets companies access a large amount of information from a computer. Advertisement can take place on websites, you can sell your products online from your website, and you can access information from the government, competition, and find out about new products which are entering the market.

E-commerce

E-commerce is the selling of products and services to consumers using the internet. Personal contact is lost when using e-commerce, and consumers are still reluctant to hand over credit card details online, as data transferred across the net may be insecure.

CD-Rom and DVD

A wide range of business activity is demonstrated on CD-Rom and DVD, and used for training purposes. They allow users to control videos and make decisions using a computer. The software package enclosed on the CD or DVD can respond to the input made by the trainee and can provide feedback to the user.

CAM

CAM is Computer Aided Manufacture, and is used by companies who manufacture products. Robots and machines produce goods using CAM hardware and software, which saves on the cost of labour and produces goods that are of the same quality.

Costs and Benefits of Using IT

Costs of using IT

- Development, installation, maintenance, retraining costs.
- New skills have to be learned by staff, and retraining can be difficult.
- Production will stop during the implementation of the new IT.
- Staff motivation will decrease when workers no longer have to use their own skills.
- Staff do not respond well to change.

Benefits of using IT

- Productivity increases.
- Reduction in waste.
- Speed of work increases.
- Accuracy is improved – computers make fewer mistakes.
- Consistent quality can be achieved.
- Labour costs decrease.
- Communication is improved.
- Working conditions are improved, as robots can tackle more dangerous conditions.

Software

Database

This can be used to keep records of staff, customers and suppliers.

You can search for information, sort records into an order, perform calculations, and produce summaries or reports from the information.

The Data Protection Act 1998 covers information held on computers. Businesses which hold information on staff, customers and suppliers must register with the Data Protection Registrar, and state the purpose of the information they hold. Data subjects (customers, staff and suppliers) have the right to see the information held on them, and can take action to have the information changed if it is incorrect.

Companies who store information must:

- Process the information fairly and lawfully.
- Hold accurate, up-to-date information.
- Hold information for the length of time they need it, no longer than necessary.
- Take preventative measures against security – in order to prevent inappropriate access or unauthorised access.

Spreadsheets

These are electronic worksheets that are used to calculate, e.g. cash budgets, trading, profit and loss accounts etc. They can perform calculations to provide totals, averages etc. They can also perform 'what if' scenarios – whereby you provide the spreadsheet with values and it can calculate the effect on changing these values. You can also produce charts and graphs on the calculations made.

Word Processing

You can create, edit, store and retrieve text using a word processor. You can use formatting commands, perform mail merges (mass-produced mailshots), and import pictures as well as exporting text.

DTP

DTP is short for Desktop Publishing, which is used to produce high quality documents. You can import material produced by all the other software packages into a DTP package in order to display the information professionally.

Presentations

Microsoft PowerPoint is the most widely used presentation package available to businesses. This allows them to create slide-show presentations that can be shown to large audiences on projector screens, or simply on a computer screen.

CAD

CAD is Computer Aided Design. This is software used by architects and designers to design 3D products on computer. The drawings made can be manipulated on-screen, saving the time of having to redraw them by hand.

Costs and Benefits of Using Business Software

Costs

- Costly to buy.
- Staff have to be trained to use the package.
- Workers are less efficient in the short-term.
- You may have to update your hardware to cope with the software.

Benefits of using IT

- Information can be handled easily, quickly and efficiently.
- Fewer errors are made by performing calculations automatically, rather than manually.
- Quality of work can increase.
- Integrated packages are more flexible.
- Staff costs will reduce – the work they have to carry out will go down, as well as the time it takes them.

The Use of IT

IT assists with effective decision-making, provides accurate information to staff, maintains accurate business records, and helps to bring effective communication to the business.

Effects of IT

Effects on the Organisation

- Decentralisation may occur – more decisions can be made away from head office. Email and videoconferencing can help this.
- Additional departments may have to be created – web design/e-commerce department.
- Redundancies and de-layering may occur.
- The span of control of managers may decrease.

Effects on Employees

- Greater productivity, so fewer staff are required.
- Retraining may have to be undertaken, in order to update their skills.
- Customer relations will change – there is little conversation between employee and customer unless there is a problem.
- Personal contact between staff decreases – email is less personal than face-to-face.