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Data and Information

This article defines data and information, considers the information framework hierarchy within organisations and the attributes of quality information.

It is interesting to note that the ASB's Statement of Principles (available to download from the main Study Corner page of the ICB website) and the IASB's Regulatory Framework focus on the needs of the users of financial statements and the characteristics of information. These include the concepts of Relevance, Reliability, Understandability and Comparability all of which make information useful.

Data and Information

The terms 'data' and 'information' are often used interchangeably but there is a clear distinction between these separate concepts.

Data has been defined as the raw material for data processing and relates to facts, events and transactions.

Data can also be classified as:

- qualitative
- quantitative
- discrete
- continuous
- primary
- secondary

Qualitative data cannot be measured numerically but may reflect distinguishing characteristics eg. the type and quality of raw material used to produce one unit of output.

Quantitative data is that capable of being measured numerically eg. the standard quantity of raw material required to produce one unit of output.

Data is referred to as discrete when it can take on specific fixed values eg. the actual number of commercial vehicles crossing a toll bridge in a day could be 580 but not 580.5. Whereas continuous data takes on any numerical value and we could, in a 24 hour day, measure the volume of vehicles as 24.17 vehicles per hour ie $580/24$.

Data needs to be collected and summarised in the manner required by the user.

Primary data is collected for a particular enquiry, for example by observation, employees in the quality control unit would be observed so that a standard time can be determined per inspection. Inspection being a value adding activity.

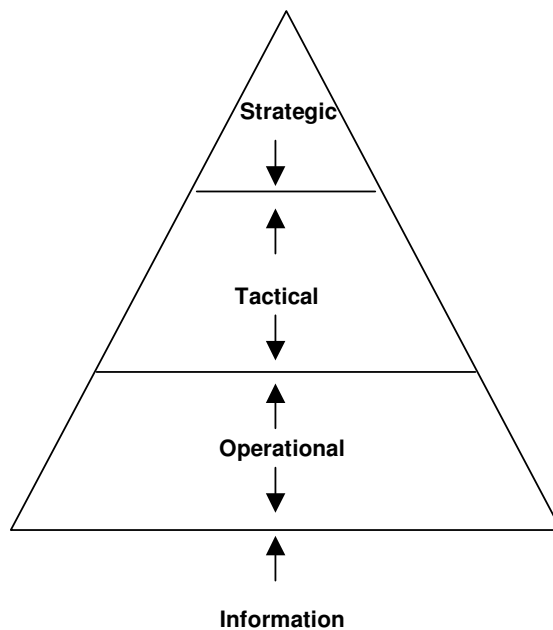
Trade association inter-firm comparison performance indicators would be prepared from data collected by them and would become secondary data when used by a firm in the sector making an enquiry of its own.

What then is the distinction between data and information?

Information has been defined as 'data that has been processed in such a way that it is meaningful to the end user'.

Within any organisational structure information has a defined hierarchy.

This is shown as:



Information is classed as:

Strategic – that which relates to and influences the longer-term decision making processes in a business and is strategically focused.

Tactical – that used in short-term planning and decision making, within for example, the budget period.

Operational – that relevant to day to day value adding activities within the organisation.

From top down the following example refers to the resource 'Human Capital'.

Strategic information would relate to the longer-term strategy, for example a 3 to 5 year manpower plan.

Tactical information could relate to the short-term budget period of 12 months and consider the grades and skill of the labour required, together with the planned standard hours of direct labour per value adding activity across the organisation.

Operational information would include a current week's report per cost centre and activity in terms of labour efficiency and this measure would be expressed as:

$$\frac{\text{Standard hours produced} \times 100}{\text{Actual hours worked}}$$

This could also be reported, for control purposes, on a daily basis.

Attributes of Information

Quality Information is that which when used 'adds value'. Research suggests that information should possess numerous attributes which include:

- relevant for its purpose
- complete enough for the issue in question
- accurate for the purpose
- from a reputable source
- communicated to the right person
- timely in communication
- communicated in an appropriate channel
- the volume should be manageable
- must be understandable by the end user
- it must be cost effective

The attributes which 'add value' and together underpin quality of information are examined further below.

Relevant for Purpose

Information should always be relevant to the issue being considered. It is often the case that memos, reports and schedules contain irrelevant sections which can have an adverse effect on the understanding of the issue by the user.

Completeness

It is desirable that all information required for decision making is made available. There must be close co-operation between the information provider and the end user. Therefore all factors influencing decision making should be included.

Accurate for Purpose

Managers rely on information to effectively manage their 'value adding' activities. For example, to satisfy the VAT regulations, a VAT invoice must be accurate to the nearest penny. However, the aged debtors list would contain rounding to the nearest '£'.

Reputable Source

For information to be used effectively by managers, the users must have confidence in its source.

This would be supported by the fact that the source was reliable in the past and that there is a good and clear channel of communication between the provider and the user of the information.

Communicated to the Right Person

Where responsibility accounting is used in practice managers have a clear and defined level of responsibility and must achieve their predetermined objectives.

Managers should therefore receive information to carry out their defined tasks. Such information should be communicated to the right person at the right level within the organisation.

Timely

For effective decisions to be taken information needs to be reported to management on a timely basis.

For example, a budgetary control or standard costing report containing adverse variances would need to be timely for managers to take immediate corrective action. Likewise if a favourable position was reported 'late', the reward and recognition to employees may be delayed and effect morale.

Communicated in an Appropriate Channel

For a manager to use information effectively it must be transmitted in the communication process. The process takes many forms and the channel selected must take account of nature, purpose, speed and requirement of the user.

Volume

The detail and volume of the information communicated should be that consistent with the need of the user.

The information should focus clearly on the issue and the main points highlighted and not "clouded" by superfluous and excessive volume.

Understandable

Managers can only use information to good effect if they understand its purpose.

The level and skill of the manager is important here. Managers need to continually update their skills and therefore (CPD) Continuing Professional Development is important.

For example for managers to understand fully their role in a responsibility accounting environment and to interpret the management accounting reports they need training.

Training aids understanding.

The provider needs also to choose the style and language appropriate to the user.

Cost Effective

The costs of providing the information must not outweigh the 'value added' benefits derived from its use.

An understanding of the underpinning knowledge, principles and concepts above are all relevant to your development as account s managers – the providers of information for the effective management of business.

IASB – International Accounting Standards Board

ASB – Accounting Standards Board (UK)