Chapter 20

PERFORMANCE MANAGEMENT INFORMATION SYSTEMS

1. Introduction

The purpose of the information system in a business is to provide management with the information that they need in order to make good decisions and in order to monitor the progress of the company.

In this chapter we will look at the different information needs of management for different levels of decision making.

2. Levels of management and information requirements

2.1. Strategic planning

Strategic planning is deciding on the long-term (usually at least five years) direction of the business and making decisions on how to follow this strategy. The sorts of decisions that may be considered are, for example, what new products to launch, or which new markets to enter.

Information is required mainly from external sources (for example, information about competitors, and information about government policies insofar as they may affect the business), and also from internal sources (for example, overall profitability forecasts, and capital spending requirements).

2.2. Management control

Management (or tactical) control is managing the implementation of the strategic plan in the short-term - generally around twelve months. Short-term budgets will be prepared and operations measured against the budgets.

Information will be required from both external and internal sources, and will include such things as variance analysis reports and productivity measurements.

2.3. Operational control

Operational control is concerned with monitoring and controlling the day-by-day performance of the business

The information required will be primarily be internal to the business and will include such things as hours worked by employees, raw material usage and wastage reports, and quality control reports.

3. Information systems used by management

In order to make decisions at the various levels outlined in the previous paragraph, management need information systems to supply the information they require and to present it in a way that is useful for them.

You should be aware of the following types of information processing system, and the level of management that benefits from them.

3.1. Transaction processing systems

Transaction processing is the recording of the daily routine transactions of the business. This includes recording all the financial transactions, keeping records of inventory, the processing of orders etc..

The information provided is used mainly for operational control.

3.2. Management information systems

The purpose of the management information system is to convert data into information that is useful for managers at all levels, but is particularly useful at the level of management control.

For example, the transaction processing system will provide a list of all receivables on a given day, but the management information system can process the transactions and provide information as to sales per customer and as to the trends in sales.

Similarly, it is the management information system that can process the transaction information and produce reports of variances.

3.3. Executive information systems

Whereas the a tradition management information system can produce reports as outlined above, these reports tend to be standard reports and need planning for in advance (for example, it may be programmed to produce a standard variance report each month).

An executive information system enables the user to access the data and produce flexible 'non-standard' reports. They are designed to be easy to use - the user can request a report without any programming knowledge, there is an emphasis on presenting the information graphically, and there is the ability to 'drill-down' (the information is initially presented very much in summary, but by clicking on the graphs it is possible to get more and more detail as required).

These systems are mainly for the use of top management and are more for the strategic level of decision making.

3.4. Enterprise resource planning systems

The word 'planning' here gives the wrong impression in that these systems are not really anything directly to do with planning!

These systems integrate all departments and functions into a single computer system. Instead of the accounting department having their own system, separate from (for example) the system used by the warehouse, there is a single system serving all the departments.

The system runs off a single database so that the various departments can more easily share information.

As an example of its usefulness, an order received from a customer will be entered into the system and its status will be updated by the relevant department as it progresses (the warehouse will update when it is despatched, the accounts department will update when it is invoiced for, and so on.)

If implemented well, it means greater efficiency, less duplication, greater accuracy, and the ability of any department to access information related to other departments.

3.5. Open and closed systems

Open systems are systems that can respond to changes external to the company, whereas closed systems follow a fixed set of 'rules' and do not change.

For example, basic accounting system is a closed system in that it follows fixed rules. However, businesses do need to change in response to changes in external factors such as the actions of competitors and changes in the economic environment. As a result, although there may be sub-systems that are closed, the overall information system needs to be an open system in that information requirements will change as the business itself changes.

Closed systems are easier to control and maintain because they do not change. Open systems provide flexibility and can provide better information, but are harder to control and maintain because of the changes made.