

COMPUTER AND COMMUNICATION TECHNOLOGY

INFORMATION SYSTEMS

TYPES OF INFORMATION SYSTEMS

1. *Executive Support System ("ESS")*

- An Executive Support System ("ESS") is designed to help senior management make strategic decisions.
- It gathers, analyses and summarises the key internal and external information used in the business.
- ESS typically involve lots of data analysis and modelling tools such as "what-if" analysis to help strategic decision-making.

2. *Management Information System ("MIS")*

- A management information system ("MIS") is mainly concerned with internal sources of information.
- MIS usually take data from the transaction processing systems (see below) and summarise it into a series of management reports.
- MIS reports tend to be used by middle management and operational supervisors.

3. *Decision-support systems ("DSS")*

- Decision-support systems ("DSS") are specifically designed to help management make decisions in situations where there is uncertainty about the possible outcomes of those decisions.
- DSS comprise tools and techniques to help gather relevant information and analyse the options and alternatives.
- DSS often involves use of complex spreadsheet and databases to create "what-if" models.

4. *Knowledge Management Systems ("KMS")*

- Knowledge Management Systems ("KMS") exist to help businesses create and share information.
- These are typically used in a business where employees create new knowledge and expertise - which can then be shared by other people in the organisation to create further commercial opportunities.
- Good examples include firms of lawyers, accountants and management consultants.
- KMS are built around systems which allow efficient categorisation and distribution of knowledge.
- For example, the knowledge itself might be contained in word processing documents, spreadsheets, PowerPoint presentations, internet pages or whatever.
- To share the knowledge, a KMS would use group collaboration systems such as an intranet.

5. *Transaction Processing Systems ("TPS")*

- As the name implies, Transaction Processing Systems ("TPS") are designed to process routine transactions efficiently and accurately.
- A business will have several (sometimes many) TPS; for example:
 - -Billing systems to send invoices to customers
 - - Systems to calculate the weekly and monthly payroll and tax payments
 - - Production and purchasing systems to calculate raw material requirements
 - - Stock control systems to process all movements into, within and out of the business

6. *Office Automation Systems*

- Office Automation Systems are systems that try to improve the productivity of employees who need to process data and information.
- Perhaps the best example is the wide range of software systems that exist to improve the productivity of employees working in an office (e.g. Microsoft Office XP) or systems that allow employees to work from home or whilst on the move.