Identify the various types of computer based information systems

Evaluate alternative approaches for acquiring and developing business information systems for the international organization

Explain why it is important for the international organization to make information resources widely available

Critically evaluate approaches used to enable the international organization to achieve its goal of integrated information

Identify what an enterprise systems is and the arguments for and against adoption

Evaluate the role of IT as a strategic resource for the international organization
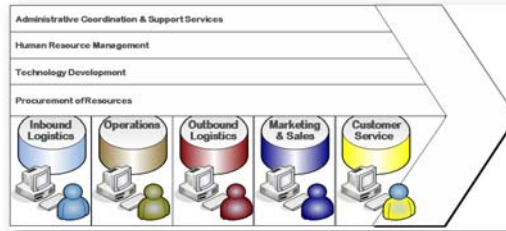
Computer-based Information Systems are used to support all roles at all levels of the organisation. They improve information access but not necessarily the flow of information within the whole organisation. Traditionally, the business functions acquired and developed computer-based Information Systems to help them meet their localised goals. A functional business information system is used to support a specific organisational activity. The value chain can be used to match such systems against the primary and secondary activities of the company. Historically, computer-based Information Systems were used within the organisation. Traditional approaches created silos (information Islands) and a fragmented organisation. This resulted in coordination, communication and control problems leading to increased cost and poor responsiveness. Systems may be acquired, developed and implemented in many ways. Each has relative strengths and weaknesses in terms of strategic fit, timeliness, cost and quality. Historically, systems were developed to meet the unique needs of the organisation.

Development projects were typically led by the IT manager who would follow a linear, command and control approach to implementation (such as the systems development lifecycle). Such approaches are less appropriate for the implementation of an enterprise system. Developments in database, Internet and middleware technologies paved the way for integrated systems and resultant information flows. As a result, software developers and vendors created enterprise resource planning software as single software solutions, available off the shelf for purchase by large multinational corporations. This fully integrated software (FIS) utilised a single monolithic database which enabled the organisation to integrate its primary activities. With time, vendors have added (integrated) additional components and functionality to such systems, upstream and downstream within the organization.
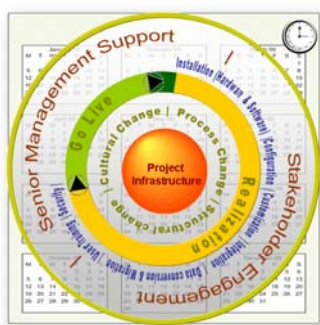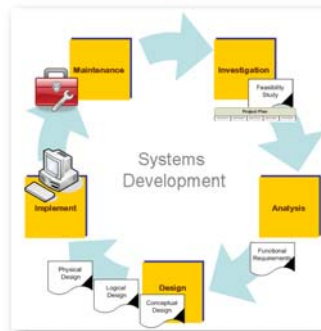
Fully integrated ERP software (FIS) is available off-the-shelf and therefore easily imitated. An alternative, best of breed (BoB) approach presents an opportunity to develop a unique enterprise system (ES) for the organisation. Furthermore, whether a FIS or BoB approach, the ES is seen as a bundle of resources which include people, technology, processes and culture which may be configured in a manner to enable organisational strategy and provide a sustainable, hard to imitate, competitive advantage (see the RBV). For the international organisation among the many advantages to an ES is the ability to 'tie' together organisational parts, regardless of geographical location, thus providing benefits associated with an integrated organisation. Among such benefits is the ability to support time based competitive advantage and integrate the supply chain through interorganizational linkages.

Small, global organisations or those in pursuit of a cost advantage are more likely to adopt a FIS. The transnational, larger organisation or organisation, pursuing a differentiation strategy, is more likely to adopt a BoB approach. This latter approach will enable the company to make the system fit the existing organisation. The FIS approach requires the organisation to embark on a BPR programme and make both structural and cultural changes so that the organization fits the system. In many cases, the smaller multinational corporation is likely to adopt an ES to avoid competitive disadvantage. Whereas the FIS may be simpler to use, the BoB will be better aligned with the organisation and its strategy.

Key Terms

ENTERPRISE SYSTEM

An information system that integrates information from all functional areas of an organization with the goal of providing a more whole or complete information resource for the organization

SYSTEMS INTEGRATION

the interfacing of systems together so they can pass information across a complex technology landscape

BUSINESS INFORMATION SYSTEM

specific information system used to support business

FUNCTIONAL BUSINESS SYSTEM

a system designed to support a specific primary activity of the organization

INFORMATION SYSTEMS ACQUISITION.

Acquisition describes the method of obtaining an information system for a business. The main choices are off-the-shelf (packaged), bespoke applications developed by an in-house IT department or a software house, and end-user developed systems.

SYSTEMS DEVELOPMENT

the activities that go into producing an information systems solution to an organizational problem or opportunity

ERP

a method for the effective planning and controlling of all the resources needed to take, make, ship and account for customer orders in a manufacturing, distribution or service company (the American Production and Inventory Control Society (APICS)).