

INFS1602: Information systems in business

Week 1: Course intro and Info systems and IS Professionals in Global Business

Business objectives for IS

- Business firms invest heavily in info systems to achieve six strategic business objectives:
 - **Operational excellence:** improving efficiency of operations to achieve higher profitability
 - **New products, services and business models:**
 - Business model: how a company produces, delivers and sells a product or service to create wealth
 - **Customer and supplier intimacy:** when businesses know its customers, they generally respond by returning and purchasing more – raises revenues and profits. Also with suppliers, the more a business engages its suppliers, the better they can provide vital inputs.
 - **Improved decision-making:** IS and tech has made it possible for managers to use real-time data from the marketplace when making decisions.
 - **Competitive advantage**
 - **Survival:** become necessities for doing business – driven by industry-level changes. Eg ATMs
- Competitive adv is not enough if it is not sustainable
- Growing interdependence between firm's ability to use information technology and its ability to implement corporate strategies and achieve corporate goals.

The information and knowledge economy

- Firms seek to create **core competencies** – skills and abilities that can be utilized in value-creation activities
- The meaning of 'skilled work' is constantly being redefined:
 - If a job seems routine and does not lead to new insight, it is in danger of being redefined as low skilled work
- **Info and knowledge** are central wealth creation resource (as opposed to traditional perspective of hoarding resources)
 - Where the skilled work is located
- **Innovation** is the key in the new business environment to creating sustainable competitive advantage

Potential sources of innovations?

- Difficult these days for technologies alone to create value beyond staying competitive and for survival
- **However technologies are the means by which we can manage large amount of info and knowledge**
- Investing in info tech does not guarantee good returns
- Considerable variation in the returns firms receive from technology investments
- Factors:
 - Adopting the **right business model**
 - Investing in **complementary assets** (organisational and management capital)
- Value is not created when social and human behaviours are not understood by technology providers

What do MIS professionals believe in?

- **Innovations are most likely to be created when humans interact meaningfully with technology**

How info systems are transforming businesses

- Increase in wireless ness
- Cell phones, iphones, email and online conferencing over internet have become essential tools of business
- Business sought to sense and respond to rapidly changing customer demand, reduce inventories to the lowest levels, and achieve higher levels of operational efficiency.
- Supply chains become more fast-paced, with companies of all sizes depending on just-in-time inventory to reduce their overhead costs and get to market faster
- Despite recession of newspaper readership, e-commerce and internet advertising continue to expand.
- The emergence of the internet into a full blown international communications system has drastically reduced the costs of operating and transacting on a global scale.

What's new in management information systems?

- In the technology area there are 3 interrelated changes
 1. The emerging **mobile digital platform**
 2. The growth of **online software as a service**
 3. The growth in '**cloud computing**' where more and more business software runs over the internet.
- Managers use "web 2.0" technologies like social networking, collaboration tools and wikis to make better, faster decisions.
 - By connecting employees working on teams na projects, the social network is where work gets done, plans are executed and where mangers manage.
- Strength of cloud computing and growth of the mobile digital platform allow orgs to rely more on telework, remote work and distributed decision making
 - This same platform means firms can outsource more work, and reply on markets to build value
 - Firms can collaborate with suppliers and customers to create new products or make existing products more efficiently.

The emerging digital firm

- A digital firm is one in which nearly all of the org's significant business rels with customers, suppliers and employees are digitally enabled and mediated.
- Core business processes are accomplished through digital networks spanning the entire organisation or linking multiple orgs
- Business processes refer to the set of logically related tasks and behaviours that orgs develop over time to produce specific business results and the unique manner in which these activities are organised and coordinated.
- Key corporate assets – intellectual property, core competencies and financial and human assets – are managed through digital means.
- Digital firms sense and respond to their environments far more rapidly than traditional firms – flexibility to survive in turbulent times.
- In digital firms, both time shifting and space shifting are the norm
 - Time shifting – business being conducted continuously 24/7 rather than in narrow work day time bands of 9-5.
 - Space shifting – work takes place in a global workshop as well as within national boundaries.

Perspectives of IS

- **Information technology (IT) consists of all the hardware and software that a firm needs to use in order to achieve its business objective.**

What is an information system?

- **An info system can be defined as a set of interrelated components that collect (or retrieve), process, store and distribute info to support decision making and control in an org. Also aid managers and workers to analyse problems, visualize complex subjects and create new products.**
- Contain info about significant people, places, and things within the org or in the environment surround it
- Information – data that has been shaped into a form that is meaningful and useful to human beings.
- Data – streams of raw facts representing events occurring in orgs or the physical environment before they have been organised and arranged into a form that people can understand and use.
- 3 activities in an info system produce the info that orgs need to make decisions, control operations, analyse problems and create new products or services:
 - Input: captures or collects raw data from within org or its ext envir.
 - Processing: converts raw input into a meaningful form
 - Output: transfers the processed info to the people who will use it or to the activities for which it will be used.
 - Feedback: output that is returned to appropriate members of the org to help them evaluate or correct the input stage.

Dimensions of information systems

- Information system literacy: broader understanding of info sys which encompasses an understanding of the management and organisational dimensions of systems as well as the technical dimensions of systems
- Field of management info systs (MIS) tries to achieve this
 - Deals with behavioral issues as well as technical issues surrounding the development, use and impact of info sys used by managers and employees in the firm.
- Three parts: organisations, technology and management

Organisations

- Senior management makes long-range strategic decisions about products and services as well as ensures financial performance of the firm.
- Middle management carries out the programs and plans of senior management
- Operational management is resp for monitoring the daily activities of the business
- Knowledge workers – eg engineers, scientists or architects, design products or services and create new knowledge for the firm. Often work with middle managers.
- Data workers - eg. Secretaries or clerks, assist with scheduling and communications at all levels of the firm
- Production or service workers actually produce the product and deliver the service.
- Major business functions or specialized tasks performed by business orgs consist of sales and marketing, manufacturing and production, finance and accounting, and human resources.
- Each org has a unique culture or fundamental set of assumptions, values and ways of doing things, that has been accepted by most if its members.