# Business Computing

Overview

- week 3 - in class assessment / week 6 - in class excel test / week 12 - multi choice test - 10% each

- Business report - week 8 20%

- Final exam 50%

Computing for Business Success

- **IS (Information Systems):** a combination of information technology, organisational infrastructure and trained people to collect, process, store and provide as output the information needed to complete one or more business processes

- **IT (Information Technology):** computer, communication hardware and software that make information systems possible

  - has changed the nature of labour- no longer need to be in one place, emails, etc

  - Just-in-time manufacturing: goods produced only once have been ordered

  - increased speed, quality & flexibility
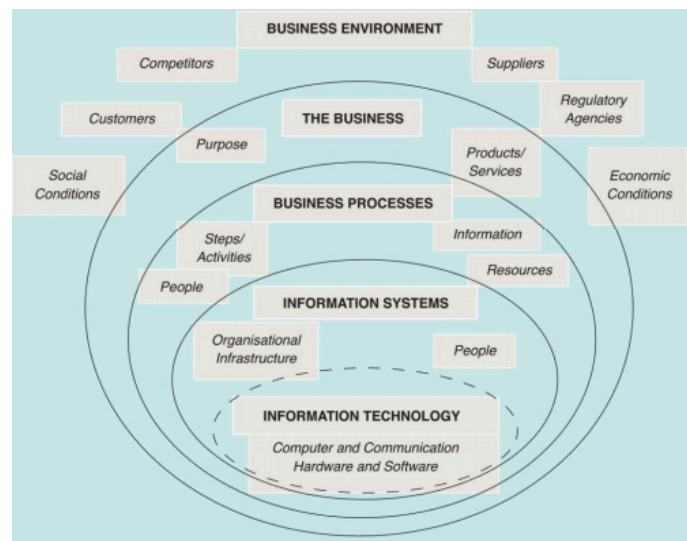
- **T.O.P framework:**

  - **Technology-** supports the performance of the diverse business tasks- capital

  - **Organisations-** embrace and exploit the technologies- use 'T' for meeting operations

  - **People-** complete the thinking, handle exceptions, provide services, communicate and solve problems

- work of the future - high tech, global integrated, increasingly freelance
- memo >250 characters
- text <250 characters

- **digital disruption:** the way new ideas and technologies could be deliberately employed to upset the status quo

  - to individual life practices - mobile disrupts work/life boundaries

  - to business practices- social media changes spread of information and induces shifts in power relationships

  - to work practices- distractions

  - to industry structures- disrupts traditional value chains of content production and delivery (Just-in-time manufacturing)

  - to societal systems- disrupts traditional practices of public opinion making

Systems Thinking

- **Data:** facts and figures without any real context or meaning (24,73,86)

- **Information:** facts and figures that has been made meaningful and helps someone understand something

- **Knowledge:** information that has been incorporated into someone's view of the world

- **Wisdom:** ability to increase effectiveness and add value, which requires judgement

- thinking approach of problem solving

  - use problem of opportunities

  - look as a whole, at different perspectives

  - nothing exists by itself

- **System:** A collection of interrelated components that function together to achieve some well-divined purposes

  - **natural system:** occurs naturally in the world (growth of grass)

  - **Designated Abstract System:** Constructed by humans, but not physically implemented. The program/code that helps something run (Computer coding inside device)

  - **Designed/Engineered technical system:** a man-made system that is physically implemented (toaster, car)

  - **Human Activity System:** where people who come together for some purpose (accounting department, sports club)

- System Characteristics

  - **Inputs:** whatever a system takes from its environment in order to fulfil its purpose

    - students needing to learn about systems thinking

  - **Outputs:** whatever a system returns to its environment in order to fulfil its purpose

    - students knowing about economics

  - **Component:** a part, or aggregation of parts, of a system, commonly referred to as a subsystem

    - research the content, prepare lecture content, plan delivery, deliver content, assess with feedback on whether transformation achieved

  - **Interrelated Components:** the dependency of one subsystem on one or more other subsystems. Subsystems are related usually interact with each other in order to achieve their pre-declared objectives, within their environment

    - cannot deliver content without research and preparation

  - **Boundary:** the line that distinguishes the inside from the outside of a system and so distinguishes the system from its environment;

    - this class on systems thinking within context of the business computing course

  - **Environment:** everything external to a system that interacts with the system;

    - the business computing course in current semester

- **Interfaces:** points of contact where a system meets its environment or where subsystems meet each other;

    –interfaces with the degree, timetabling and enrolment systems

- **Constraints:** limits or conditions within which a system can accomplish its objectives;

    - delivered in 1 hour in a lecture room

- **Stakeholders:** person(s) or organization(s) that have a direct interest in the system.

    - you, lecturer, admin, course co-ordinator, program co-ordinator, ...

- Problems

  - **Nice Problems:** well defined structure comprised of parts and relationships - systematic reduction of the whole problem (to fix a light fuse)

  - **Messy 'Wicked' Problems:** real world problems, ill-structured, necessary actions not obvious (transport delay - people on train)

  - Problem solving:

    - **soft systems thinking:** seeks to find the most appropriate solution for the situation

    - **Hard systems thinking:** seeks to find the most efficient solution for the situation

- Rich pictures

  - for soft systems thinking - Soft Systems Methodology (SSM)

- Big Data

  - data that cant be processed or analysed using traditional processes or tools.

  - volume (vast amounts generated every sec) velocity (generated at unimaginable speeds), variety (of many types, text/ images/ voice

Rich Picture Example