Strategies to acquire IS:

- **Purchase a pre-written application:** if updates then it needs to updated which is an issue
- **Custom develop:**
- Lease: rent a systen
- Using open source systems: issue is copyright

Consequences of success/failure of IS:

- Increase/decrease in revenue
- Repair/damage brand reputation
- Prevent/incur liabilities
- Increase/damage productivity

Reasons for failure

- Skipping sdlc stages
- Changing technology: so older technology to new
- Cost of finding errors

- SDLC: **Software development life cycle**- is the processes of developing information systems (to solve problem, opportunity to exploit or directive). There are four stages:

- **Planning:** establishing the reasons for the system characteristics:
    - A new system usually a solution to a problem the organisation identities with.
    - Defining the problem and its causes
    - Working out the goals for the system and setting up project

- **Defining:** determining the stakeholder's needs and requirements for the system
    - The business requirements are the detailed set of features in which the systems must support
    - This stage also performs: requirement analysis

- **Designing:** describes how the system will fulfil the objectives. We know functionality and objective.
    - This stage is the overall plan or model of the system
    - Gives the system form and structure
    - What is going to be built brought and leased and where.
- **Developing:**
    - Translate the solution specification determined in the define and design phases into a fully functional information system.
    - Programmers will check if the system meets all business requirements, which help ensure the success of the system
- **Delivering:**
    - When the system installed it begins operational life. It must be **maintained** throughout time to
        - Correct errors
        - Meet changing requirements

- ▪ Improve processing efficiency.
  - o Generally, maintenance problems are reduced if the requirements are captured well (ie good job at defining phase.)

- Approaches to IS development are what methodology, technology, structure, framework to make information system.

- **Waterfall: (hard system):** This is sequential development process. Once each phase (define phase, development phase etc) is completed the developer will move to the next step and is usually not allowed to go back a step. Characteristics:
  - o Activity based with rigid adherence to sequence (ie need to do planning phase before developing stage)
  - o Stress documentation (so follows rules of the buyer)
  - o Inflexible
  - o Flaws will flow onwards cos no mechanism to go back to phases usually.
  - o **+** Clients give an idea of estimated cost, business requirement, time and size and the developer must fulfil it.

- **Objective orientated development:**
  - o Based on identifying objects required to satisfy the requirements of a system.
  - o The properties of the objects are discussed in detail (so libraries in java and how it is flexible with other programs)
  - o O-o development allows and encourages the reuse of software component. Common characteristics (ie objects).
  - o So a tree is an object and it can be used as a base code for other trees like palm tree.

- **Agile development:** focuses on short term development iterations.
  - o Addresses the issues of waterfall being developing information systems taking too long to develop
  - o Provides the client request in iterations (so ios 1 then 2 then 3) with the first iteration addressing the bare minimum/core requirements of the request. This is provided in a very short period of time.
  - o Then the client feedback will be used to help determine the priority for the next module being developed
  - o Because the initial project doesn't have a definitive plan the final product may be very different than what was originally intended.

- System thinking:
  - o Determines which approach (agile, waterfall etc) to take by viewing problem as part of an overall system
  - o A set if practises where the belief is that the components of system can be understood in context of relationships with each other rather and other systems than isolated (so look at the system as a whole and the interaction)

- There are two different types of development approaches you can take. These two determine how we are going to go about developing an information system.

- **Hard system approach: (waterfall, operation research)**
  - Well defined problem to solve
  - One correct solution
  - Technical factors importance most important (so what does the system do)
  - Scientific approach (since we look at one correct solution)

- **Soft system approach (softsystem): (multiple alternatives and different ways to solve. IE parking issues)**
  - Organisation poorly defined are messy
  - Stakeholder may interept problem differently
  - Human factor important

- **Project managers:** offer a framework for the coordinating the activities required to aquire information system. They work with
  - Project deliverables: any measurable outcomes produced as part of the project eg scripts, documents
  - Project milestones: key dates when groups of activities must be performed eg: planning phase etc
  - They look at cost management, schedule management, scope (what can we do?)

- Improvement of project performance by making sure their IT projects deliver the expected value on time and within budget
  - Focuses on management strategy and stakeholders
  - Having right people who can master the technology and project content
  - Building an effective team whom work with overall goals of project
  - Excel at core quality checks and project management practises

*SYSTEM PROCUREMENT STILL NEED TO ADD!!!