ISYS2110 REVISION NOTES

Lecture 2 Investigating System Requirement

The concept of a business case and how it affects system project

Business case: justification for a **proposal**, aligned to organizational **missions**, **objectives** and **IT needs**

Why business case?

1. Any relation between "Systems projects and business/organization"
2. Where the organization is at present, where they want to be? Current as well as the future
3. A business case should
   o Be **comprehensive** and easy to **understand**
   o Describe the project **clearly**, provide the **justification** to proceed (profit), and **estimate** the project's financial impact
     Description, justification, estimation

Question answered by a business case reason, time, cost, risk, measurement, alternatives exis

1. **Why** are we doing this project
2. **How much** will it cost and **how long** will it take
3. Are there any **risks** involved
4. How will we **measure success?**
5. What **alternatives** exits (for failure)

Systems requests and the role of the systems review committee
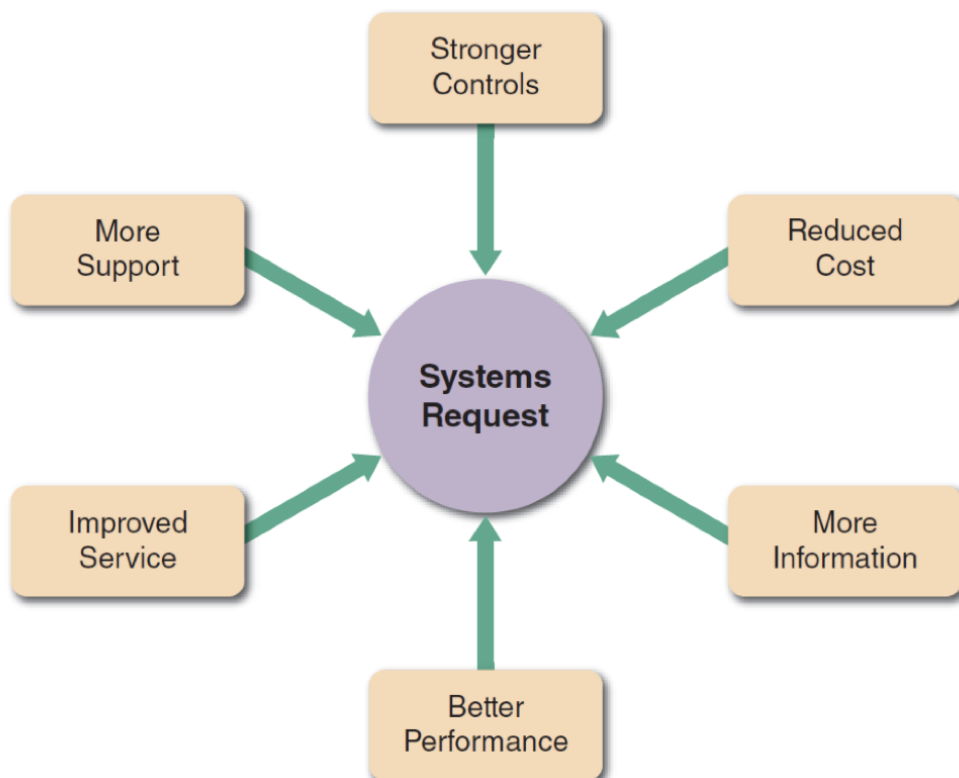
Why investigating requirements

System requirements:

1. Functional

a. The activity the system **must perfo**rm (shown as use cases)
   2. Non-functional
      a. **Other system characteristics** (constraints and performance goals)

FURPS requirements Acronym
   1. **F**unctional requirements: **business rules and processes**

-----------the four below are all **non-functional req**uirements

   2. **U**sability requirements: **user interface**, ease of use
   3. **R**eliability requirements: **failure r**ate, recovery methods
   4. **P**erformance requirements: **Response time**, throughout
   5. **S**ecurity requirements: **Access controls**, encryption

Design constraints
   Specific restrictions for hardware and software
Implementation requirements
   Specific languages, tools, protocols, etc.
Interface requirements
   Interface links to other systems
Physical requirements
   Physical facilities and equipment constraints
Supportability requirements
   Automatic updates and enhancement methods

Evaluation of system requirements

System requests are evaluated by a system review committee or a computer resource committee before become a requirement

Systems request forms
   1. Streamline the request process
   2. Ensure consistency
   3. Easy to understand
   4. Include clear instructions
   5. Indicate the required supporting documents
   6. Submitted electronically

System review committee
   A broader viewpoint enables a committee to establish priorities **more effectively than an individual**
   Disadvantages:
      a. Action on requests must **wait** until the committee meets
      b. Members might favor projects requested by their **own departments**
      c. **Internal political differences** could delay important decisions

Operational, technical, economic, and schedule of feasibility
(for evaluate the request)
Feasibility studies can be simple or exhaustive
   Depend on the nature of the request
Initial Fact-finding
   1. Studying organization charts
   2. Performing interviews
   3. Reviewing current documentation
   4. Observing operations

5. Surveying users

Operational feasibility
1. Used effectively after it has been developed
2. Affected by organizational culture
3. Cannot be accurately measured but requires **careful study**
4. Questions that can help predict a system's operational feasibility
    a. Is the project supported by management and users?
    b. Will the new system result in a workflow reduction?
    c. Do legal or ethical issues need to be considered?

Economic feasibility
Projected benefits of a proposed system out-weight total cost of ownership (TCO)
Cost analysis of:
1. People, including IT staff and users
2. Hardware and equipment
3. Software
4. Formal and informal training
5. Licenses and fees
6. Consulting expenses
7. Facility costs

Tangible costs
Intangible costs cannot be measure in dollars
Tangible benefits
Intangible benefits

Technical feasibility
Technical resources required to acquire and use the system
Q: