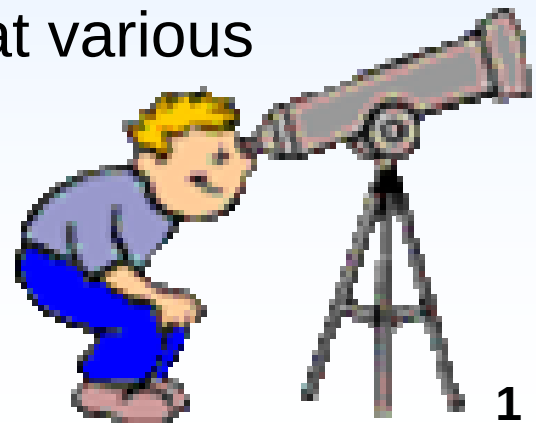
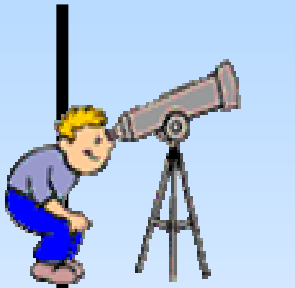
Feasibility Study

- **Feasibility**
  - The measure of how beneficial / practical an information system will be to an organization
  - Should be measured through out the life-cycle

- **Feasibility Analysis**
  - The process by which the feasibility is measured
  - An ongoing evaluation of feasibility at various checkpoints in the life cycle

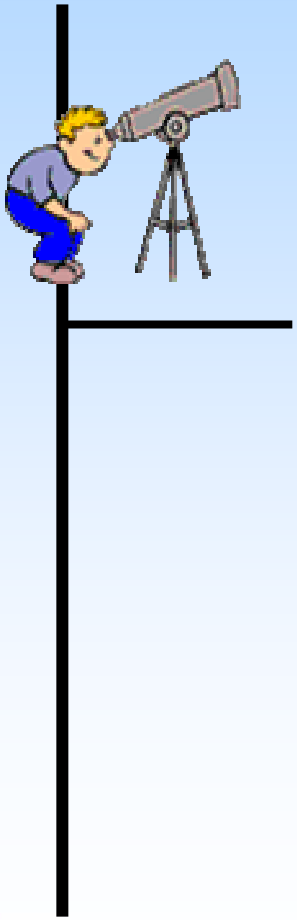


Feasibility Checkpoints in the Software Development Life Cycle



- Feasibility of a project can be changed during the system development.
- For reevaluate feasibility, there are different checkpoints in the development.
- A project may be canceled, revised or continued at any checkpoint, despite whatever resources have been spent.

Feasibility Checkpoints



- Systems Analysis – Scope Definition Checkpoint
- Systems Analysis – Problem Analysis Checkpoint
- Systems Design – Decision Analysis Checkpoint

Scope Definition Checkpoint

- Measure of the urgency of the problem.
- Find the first-cut estimate of development costs.
- Answer the question,
  - Do the problems warrant the cost of a detailed study & analysis of the current system?

Problem Analysis Checkpoint

- Occurs after a more detailed study and problem analysis of the current system
- Can make a better estimate of the development cost and benefits

Minimum Value of solving a problem = cost of problem

Decision Analysis Checkpoint

- Represent major feasibility analysis activities
- Charts one of many possible implementations as the target
- Alternate solutions are defined in terms of,
  - Input/Output methods
  - Data storage methods
  - Hardware requirements
  - Software requirements
  - Processing methods
  - People implications

Decision Analysis Checkpoint

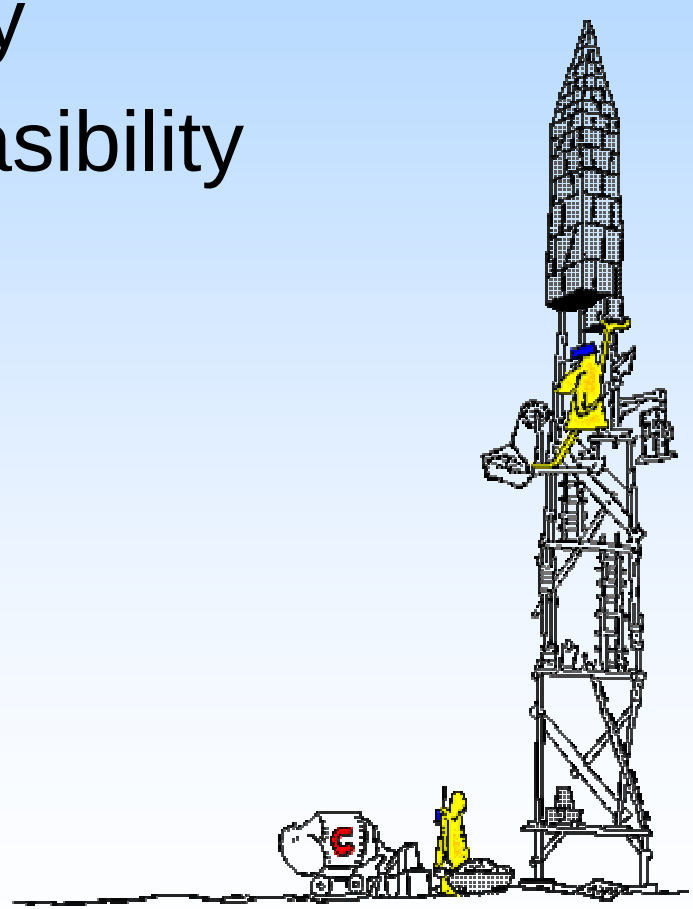
Range of options – Evaluated by the analyst

- Leave current system alone
- Re-engineer the manual process
- Enhance existing computer processes
- Purchase packaged software
- Design and construct a new computer-based system

After defining these options, each option should be analyzed.

Tests for Feasibility

- Operational Feasibility
- Cultural / Political Feasibility
- Technical Feasibility
- Schedule Feasibility
- Economic Feasibility
- Legal Feasibility



Operational feasibility.

- A measure of how well a solution meets the identified system requirements to solve the problem.

- Take advantage of the opportunities identified during the scope definition and problem analysis phases.

  - Will the solution fulfill the users' requirements? To what degree?
  - How will the solution change the users' work environment?
  - How do users feel about such a solution?

Cultural (or Political) Feasibility

- A measure of how well the solution will be accepted in a given organizational climate
- Deals with how the end users feel about the proposed system.
- Evaluates whether a system will work in a given organizational climate.

Technical feasibility.

- A measure of the
  - Practicality of a technical solution
  - Availability of technical recourses and expertise

- Addresses three major issues
  - Is the proposed technology or solution practical?
  - Do we currently possess the necessary technology (Hardware/Personnel) ?
  - Do we possess the necessary technical expertise?

Schedule feasibility

- A measure of how reasonable a project time table is.
  - Can the solution be designed and implemented within an acceptable time period?
  - how much time is available to build the new system?
  - when it can be built ?

- Mandatory / Desirable deadlines.

Economic feasibility.

- a measure of the cost-effectiveness of a project
  - Is the solution cost-effective?
  - Whether the solution will pay for itself?
  - How profitable the solution is?

- Once the specific requirements and solutions have been identified
  - Weight the costs and benefits of each alternative (Cost benefit Analysis)

e.g. Personnel cost, Computer cost, Training, Software, Tangible and Intangible benefits

Legal Feasibility

- A measure of how well a solution can be implemented within existing legal and contractual obligations.

- understand potential legal and contractual ramifications of the system
  * copyright law
  * non-disclosure clauses and non-compete clauses
  * code ownership (if developed with outside assistance) -- be VERY specific
  * labor laws
  * foreign trade, and labor regulations
  * Financial & Accounting standards
  * governmental constraints, and pending legislation