Seminar 6: Project Management – Part 1
Semester 1, 2005

Seminar Objectives

At the end of this seminar you should:
- Understand the reasons for information system failures
- Describe a project
- Define project management
- Identify the phases of a project life cycle
- Describe the processes involved in the initiation and planning phases
- Understand the skills required for project management
Information System Failures

Despite new software systems and improved hardware the business world is still plagued by information system failures. Some projects are delayed, some exceed budget and some are cancelled completely. (Benson & Standing, 2005, Chapter 9, p.251)

Possible reasons for Information system failures?

Benson & Standing (2005) suggest that the cause may be related to system specifications being too complex or too vague; or that users are allowed to provide too much detail (technical or other) causing scope creep.

What other possible reasons could there be?

What is a Project?

- A temporary endeavour undertaken to create a unique product or service. (Martin, et al, 2005, p.740)

- It is a one time initiative that can be divided into multiple tasks, requiring multiple competencies, with a definite beginning and end. (Martin, et al, 2005, p.740)

  The end is reached when the project objectives have been achieved, or when it is clear that the objectives cannot be achieved and the project is terminated.

  (A guide to the Project Management Body of Knowledge (PMBOK) (3rd edn)
Definition of project management

- "Project Management is the application of knowledge, skills/competencies, tools, and techniques to meet project requirements"
- "...accomplished via processes such as:
  > Initiating
  > Planning
  > Executing
  > Controlling
  > Closing"
- The project manager is the person responsible for achieving the project objectives


Projects as organised activities

Projects are a means of organising activities that cannot be addressed in the normal organisational operations
Projects may occur as a result of:
- A market demand
- An organisational need
- Customer driven
- Technological advance
- Legal requirements
- A strategic initiative (PMBOK, 2000)

Successfully managed systems projects

Project managers often speak about triple constraints: (PMBOK)

- Time
- Budget
- Scope

Project quality is affected by how these three factors are managed

Successful projects deliver the project within scope, on time and within budget

Prepared by: Chris Gonsalvez
Phases of the project life cycle

Initiation (1) Planning (2) Executing (3) Controlling (4) Closing (5)

Initiation (1):
- Defining the project
- Authorising the project
- Project proposal is developed

Planning (2):
- Planning tools to develop timelines, critical path etc
- Project plan is developed

Executing (3):
- Implementation of the project plan
- Ensuring project targets are met

Controlling (4):
- Corrective action taken when necessary
- Any variances from the plan are managed

Closing (5):
- Project is formally closed
- Contractual issues are managed
- To capture learnings arising from the project

Initiation phase

Project Proposal is developed
- Contains detailed information about the project
- Justification for the project
- Defining the scope of the project

Feasibility analysis is conducted
- Economic feasibility
- Operational feasibility
- Technical feasibility

Potential Risk is assessed
- Project team is identified
Initiation Phase - Scope

Describes the business problem(s) addressed by the particular solution

- Outlines the background of the problem
- States the solution
  > Provide details of the hardware/software
  > Describes the improvements to business processes
- Outlines anticipated future growth of the system
- Limitations to the scope of the project

Initiation Phase - Risk assessment

Goal is to reduce the risk of failing to achieve the project objectives

- Identify the project risks eg
  - Scope creep
  - Budget blowout etc
- Assess the consequences of the risks
- Plan responses to minimise the risks and
- Plan how well the risks will be managed or impact reduced if they occur
  (Martin, 2005, Chapter 12, pp 432)

Project Management requires multiple competencies...

Managing a one time project requires multiple competencies:

1. Project scope
2. Project milestones (time lines)
3. Project cost (budget)
4. Human resources
5. Project communications
6. Contracts
7. Quality management
8. Risk management

The above four competencies are the traditional areas of project management

9. Change management

Project Management Institute (PMI) have included the above four additional competencies

Additional competencies added (Sue Foster)
Interpersonal skills required (PMBOK 2000) (Please refer to the PPT slides in week 5 seminar)

Interpersonal Skills

- Program areas
- Effective communication
- Leadership skills
- Motivation
- Negotiation and conflict resolution

Planning Phase

- Describes key deliverables
  - Major tasks
  - Sequence
  - Dates
  - Duration of tasks and project
  - Indicates how customers will be informed of project progress

Planning Phase – Project Planning tools

- MS Project 2004?
- Gantt Charts
- Program Evaluation and Review Technique Chart (PERT)
- Work Breakdown Structure (WBS)
- Critical Path Method (CPM)
  - We will not be covering this method
Project Planning tools - MS Project

- Microsoft Project provides the software capability of planning the project from the beginning through to the end
- MS Project is task driven
  - Tasks are divisions of work that need to be completed in a particular timeframe in order to accomplish the project goals or milestones
  - The scope of the project is the combination of all tasks and their goals completed on time and within budget – set at the Initiation Phase

Project Planning tools - MS Project

The most important part of planning is ensuring the tasks (goals) of the project are:
- manageable
- appropriate to the project
- attainable in the timeframe allocated
- assigned appropriate importance
  - Subtasks
  - Recurring tasks
  - Milestones
- scheduled in appropriate order to achieve the desired outcome

- Most important task

Project Planning Tools - GANTT Charts

- Graphically depict the estimated times for each task
- Graphically display a project schedule
- Track the progress of a set of tasks against the project plan
  - Tasks are presented in a logical (sequential order)
  - Bar graphs depict the estimated time and duration for each task against an appropriate linear calendar (minutes, hours days etc) for the number of months or years planned for the project

Yes some projects take years to complete ….. if ever!!
Example of the way tasks are presented through MS Project

[Table]

<table>
<thead>
<tr>
<th>Links</th>
<th>Code</th>
<th>Description</th>
<th>Gantt Chart View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish-Start</td>
<td>FG</td>
<td>Professor finishes and then other starts</td>
<td></td>
</tr>
<tr>
<td>Start-Finish</td>
<td>SF</td>
<td>Task begins at the same time as its predecessor</td>
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</tr>
<tr>
<td>Finish-Finish</td>
<td>FF</td>
<td>Both tasks finish at the same time</td>
<td></td>
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<tr>
<td>Start-Start</td>
<td>SS</td>
<td>Start of the predecessor domino when the other starts</td>
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Project Planning tools - PERT Charts

- **Graphically models the sequence of project tasks and their interrelationships using a flowchart diagram**
  - A critical Path method (CPM) is an alternative method that can be used
- **Critical path depicted by PERT chart**
  - A sequence of activities that will take the longest to complete
  - Delays in completion will result in task slippage

(Martin 2005, Chapter 12, pp429 – 431)

Planning tools – PERT Chart example

[Diagram]

Each major task is represented as a symbol, lines (arrows) are used to show predecessor and successor tasks. (Voss et al 2001) cited in Martin 2005, p430)
Planning tools – Work Breakdown Structures (WBS)

Is a basic management technique that systematically divides blocks the project into goals, objectives, activities, sub-activities, down to the level of detail at which the project will be controlled

(Martin, 2005, Chapter 12, pp426-427)

– Define project tasks
– Identify phases and sequence of tasks
– Estimate the time of completion for each task

Effective scheduling is critical to the project’s success

In Conclusion

• The overall goals of system projects should be clear from the outset that is providing a quality system that meets the needs of the stakeholders on time and on budget.

• Achieving these project goals requires not only good systems methodology but also effective project management interpersonal skills and competencies.

Terminology

• Project Milestone
  – A significant deliverable for a project and its assigned deadline date for completion

• Scope Creep
  – The scope of the project extends outside the original system specification and exceeds budget causing budget blow-outs
### References

