Strategic IT Project Management

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Objectives

- Definitions
- Identifying the project
- Organizing, planning, and implementing the project
- PM techniques
- PM evaluation

What is a Project?

- Application of knowledge, skills, tools, and techniques to project activities to meet or exceed stakeholder needs and expectations.
How to Recognize a Project

- Constrained by limited resources to help you achieve objectives and realize benefits
- Uses a prescribed methodology
- Planned, executed, and controlled
- Performed by people
- Has a beginning and an end

Project Management Defined

- The application of the systems approach to the management of technologically complex tasks or projects whose objectives are explicitly stated in terms of the time, cost, and performance parameters.
  
  - Cleland and King, 1988

Newsflash!!

- Establishing a committee is not project management.
- Just about everything that characterizes committees is oriented toward recommendations.
- A project is oriented to results ... Appointing a project manager is not, by itself, establishing a project.
  - Martin (1976)
Characteristics of PM

- Defined goals
- Designated resources
- Organizationally specific
- Prescribed methodology

Stages of PM

DEFINE

PLAN

IMPLEMENT

MONITOR

ADJUST

EVALUATE

CELEBRATE

Project Management Skills

- Motivation
- Communication
- Delegation
- Supervision
- Negotiating

- Conflict management
- Problem solving
- Team building
Project Definition

Identifying a Specific Project

• Define objective
• Scope the project
• Identify constraints
• Prepare initial plan
• Prepare business case
• Get approval

The Plan

• Who does what?
• Role of the project manager?
• Role of each team member?
• Reporting and tracking methods?
Objectives of Planning

- Specific
- Measurable
- Attainable with difficulty
- Time frame

Planning Steps

- Needs assessment
- Problem identification
- Goal setting
- Implementation
  - Task analysis
  - Staging
  - Scheduling
- Evaluation

Project Plan

- Group members
  - Define role of each member
- Clear picture of product
  - Description and scope
  - Statement of assumptions
  - Statement of outcomes
- Tools and techniques
- Plan for quality management
- Timeline
Project Group Members

• Define role of each group member
• Make use of task allocation chart

<table>
<thead>
<tr>
<th>TASK #</th>
<th>TASK DESCRIPTION</th>
<th>DURATION</th>
<th>NAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Decide on purpose of needs analysis</td>
<td>2 Days</td>
<td>Fred, Rosa</td>
</tr>
<tr>
<td>2</td>
<td>Design survey</td>
<td>5 Days</td>
<td>Fred, Mary</td>
</tr>
<tr>
<td>3</td>
<td>Select recipients</td>
<td>5 Days</td>
<td>Janet, Mike</td>
</tr>
<tr>
<td>4</td>
<td>Test survey</td>
<td>5 Days</td>
<td>Mike</td>
</tr>
<tr>
<td>5</td>
<td>Send out survey</td>
<td>1 Day</td>
<td>Mike</td>
</tr>
<tr>
<td>6</td>
<td>Wait for replies</td>
<td>20 Days</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Chase non-respondents</td>
<td>5 Days</td>
<td>Fred</td>
</tr>
<tr>
<td>8</td>
<td>Analyze the results</td>
<td>10 Days</td>
<td>Suzanne</td>
</tr>
<tr>
<td>9</td>
<td>Write report</td>
<td>3 Days</td>
<td>Fred</td>
</tr>
<tr>
<td>10</td>
<td>Present conclusions</td>
<td>1 Day</td>
<td>Fred</td>
</tr>
</tbody>
</table>

Product Description and Scope Statement

• Deliverables and format
• Project objectives with quantifiable criteria to be met for project success
• Constraints and assumptions
• Quality management

Tools and Techniques

• Charts
  – GANTT
  – PERT
  – Critical path method (CPM)
• Risk analysis
• Project Management Software
Gantt Chart

- Gantt charts are a project planning tool used to represent the timing of project tasks.
- Simple to understand and easy to construct.
  - Each task takes up one row.
  - Dates run along the top in increments of days, weeks or months.
  - The expected time for each task is represented by a horizontal bar.
  - Tasks may run sequentially, in parallel or overlapping.
- To mark “milestone” events and mark them with a special symbol.

PERT and CPM

- PERT
  - Program evaluation and Review technique
  - Depict task, duration, and dependency information.
- CPM
  - Critical Path Method
  - Critical Path Method (CPM) charts are similar to PERT charts and are sometimes known as PERT/CPM.
  - The critical path consists that set of dependent tasks (each dependent on the preceding one).
CPM

<table>
<thead>
<tr>
<th>Task</th>
<th>Possible Length</th>
<th>Type</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. High-level analysis</td>
<td>week 1</td>
<td>day</td>
<td>sequential 1</td>
</tr>
<tr>
<td>2. Selection of hardware platform</td>
<td>week 1</td>
<td>day</td>
<td>sequential 1</td>
</tr>
<tr>
<td>3. Installation and commissioning</td>
<td>week 2</td>
<td>week</td>
<td>parallel 2</td>
</tr>
<tr>
<td>4. Detailed analysis of core modules</td>
<td>week 1</td>
<td>2 weeks</td>
<td>sequential 1</td>
</tr>
<tr>
<td>5. Detailed analysis of support utilities</td>
<td>week 1</td>
<td>2 weeks</td>
<td>sequential 1</td>
</tr>
<tr>
<td>6. Programming of core modules</td>
<td>week 4</td>
<td>3 weeks</td>
<td>sequential 4</td>
</tr>
<tr>
<td>7. Programming of support</td>
<td>week 1</td>
<td>week</td>
<td>sequential 5</td>
</tr>
<tr>
<td>8. Quality assurance of core modules</td>
<td>week 6</td>
<td>week</td>
<td>sequential 6</td>
</tr>
<tr>
<td>9. Quality assurance of support utilities</td>
<td>week 6</td>
<td>week</td>
<td>sequential 6</td>
</tr>
<tr>
<td>10. Core module testing</td>
<td>week 7</td>
<td>day</td>
<td>parallel 6</td>
</tr>
</tbody>
</table>

Project Management Software

- Microsoft Project
- Visio
- Inspiration
- Literally hundreds of choices
  - Start simple!!

Quality Management

- Identify quality standards and how to satisfy them
- Determine how to evaluate overall project performance on a regular basis
- Outline quality control measures
Tips from the Experts

• Establish common means of communication
• Develop clear timeline for project development
• Keep eye
  – on the big picture
  – on the product
  – on the time
• Base decisions on facts

Criteria for Evaluation

• Goal relatedness
• Feasibility
• Efficiency
• Effectiveness

Reasons Why Projects Fail?

• People skills of project manager
• Poorly organized
• Lack of responsibility or accountability for outcome
• Money
• Unrealistic goals
• Buy-in
Summary

- Defined a project and project management
- Identified characteristics of a project
- Explored how to organize, plan, and implement the project
- PM techniques
- PM evaluation

Sites Cited

- Brief tutorial on Gantt Charts
  - http://www.me.umn.edu/courses/me4054/assignments/gantt.html
- Pert, CPM, and Gantt
  - http://studentweb.tulane.edu/~mtrull/dev-part.html
- Mindtools
- PM Software
  - http://www.infogral.com/pmc/pmcuser.htm
- Project Management Center
  - http://www.infogral.com/pmc/pmcindex.htm
- Project Management Institute
  - http://www.pmi.org