Starting a New System Development Project

Defining the project charter and scope?

Before we invest much effort in a project, we need to know:

- What is the problem (or opportunity) for which a new (or modified) application system might be a solution?
- What areas will be included? excluded?

This information can be expressed:

- in a concise paragraph or two, or
- by a diagram, or
- a combination of the above

Defining the project charter

Establishing project communications

Determining Business Objectives

Justifying the project

Problem vs. Opportunity

The project may be motivated by either

a. an ongoing difficulty or irritation
   - shortcomings of the current system
   - losing to the competition

b. or some new challenge
   - technological I.T. advance
   - complying with new laws, regulations, or society trends
   - supporting a new product

Top-level view of a system

Serves to orient the reader to the system's purpose and major functions.

Establishes the initial project charter.

Consists of either or both of these:

- A paragraph or two (rarely more than a page) of documentation.
- A context diagram showing the relationship between the proposed system and
  - Categories of user
  - Principal system outputs (reports, displays, other information) and inputs (transactions)
Establishing Communication

- Within the project team
- Between the project team and
  - the sponsoring organization
  - upper management

Communication within the project team

- The project workbook: a repository of everything members of the project team need to know.
  - Originally (~1970) distributed as a loose-leaf binder updated frequently
  - Now usually an internal web site (or wiki) updated continually, as needed.

What's in it?

Workbook Contents

- Charter
  - Scope
  - Client, sponsoring user organization
  - Justification
- Team composition
  - Roles & People
- Project Plan
  - Task network with current assignments and estimates
  - Current status
- Project-specific standards
- Completed phase deliverables

Orienting new team members

- The project workbook should contain sufficient information to orient a new team member to:
  - What the project is all about
  - What problem(s) it will solve
  - The current commitments (esp. target dates)
  - Who's who on the team
  - The rules

What's the impact on Brooks's law?
Convening meetings of the project team

- Purpose of meetings
  - to keep everyone informed
  - to solicit information from team members
    - problems, obstacles
    - current status and estimates
  - to maintain staff morale
  - so the team members know one another

How does a good project workbook influence the need for and frequency of meetings?

Convening meetings of the project team

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No! Never update your (the project manager's) own knowledge in a meeting

- Why not?
- Never ask: "Who's taking care of . . . ?
- Rarely ask: "Does anyone know about . . . ?

Frequency of project-team meetings

- Should they be on a regular schedule or ad hoc?
- If regular, what's the ideal frequency?
  - Some projects hold a daily meeting!
    - Usually brief (10-15 minutes)
    - Stand up Why?
  - Weekly is a common choice
    - Team members easily remember a fixed day and time
  - What if the team is not located together?

Communicating to the sponsor (client, user)

- Should the sponsor be encouraged permitted forbidden to see the project workbook?
- Should the sponsor attend team meetings?
- How long may we delay conveying bad news (such as schedule slippage)
  - to the sponsor/client?
  - to our own (I.T. / D.P.) management?
Justifying a project  
Part 1: non-numeric data
- A project is said to be justified if it has a positive benefit/cost ratio
  - also called return on investment (ROI)
  - That is the organization will gain more by doing the project than by not doing it.
- Risk: At the beginning, both the benefits and the costs are estimates
- If the estimates are wrong, the project could still, upon completion, be a success (according to our definition) but in hindsight not worth doing.

Why? How?

Benefits of having a new system
- Cost reduction and avoidance, increased revenue, higher profits, etc.
  - Tangible (easy to quantify) benefits (or savings)
    - Personnel reduction
    - Inventory reduction
    - Overhead elimination
    - .
  - Intangible (harder to quantify) benefits
    - Increased sales, market share
    - Improved accuracy
    - Customer good will
    - .

Costs of getting a new system
- Development cost
  - The project
- Operational cost
  - Equipment, utility usage, supplies, . . .

Justification may hinge upon when the benefits begin to be realized.
(more later in the course)

Non-discretionary project
- A project may be mandatory in order to comply with a law or to avoid some huge penalty.
  - In that case we often don't bother with assessing costs and benefits. We just do it!
  - But isn't there still a choice?
Auditing the justification
(post project)

- In the **Review Phase** (ph. 7 in our sample SDLC) or after a few months of operation, the organization should assess
  - The actual costs that were incurred.
  - Whether the benefits (both tangible and intangible) are being realized.

*What if it wasn’t really justified?*