Lecture 16 – Project Initiation

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Objectives

- **To understand the role of "projects" in software engineering**

- **To understand the importance of project initiation activities**

- **(Not covered so well in Sommerville but large body of literature on Project Management)**

Projects

- **Most Software Engineering activity is organised into "projects"**
- **Most commercial & other organisational activity is either ongoing or repetitive**
- **This may cause friction**
  - **Projects dates are seen as "fixed" by project staff, "flexible" by rest of organisation**
  - **Organisation staff always have other, ongoing things to do, project work can wait**
  - **Organisations often "run to stand still" & cannot spare time for project, even if it will improve their lot**

Project Based Organisations

- **Consider software development organisations:**
  - **Software houses**
  - **Consultancies**
  - **Engineering companies**

- **Most are almost entirely project based**
  - **Projects are a way of life for staff**
  - **Expectation is to work on a project then move on**
  - **Good understanding of project needs**

- **Small amount of "ongoing" activities**
  - **Back office support, HR, admin**

Activity Based Organisations

- **Consider other types of organisation**
  - **Retailers**
  - **Manufacturers**
  - **Government departments**

- **Most are organised into ongoing activities**
  - **Supply chain management**
  - **Production line processes**
  - **Administration / enforcement**

- **Occasional "projects"**
  - **New products**
  - **Special promotions**

Doing the Right Projects!

- **Beware of projects that should not be done**
- **"Pet" projects**
  - **Someone important likes the idea of it**
- **Political projects**
  - **Projects that are being done to be seen**
- **"Bright Ideas"**
  - **That have not necessarily been tested**
- **The Emporer's new clothes**
  - **Bad ideas that no one dare mention**

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Deciding on Projects

1. **List all current projects, ideas & responsibilities**
2. **What is need or opportunity for each**
3. **Rough delivery dates & budgets**
4. **Judge overall feasibility**
5. **Risks associated with each**
6. **Review with boss + other key players**
7. **Eliminate risky / infeasible / inappropriate**
8. **Prioritise remainder**
9. **Get on with the most important!**

Project Stakeholders

- **The project manager**
- **Your management**
- **The customer**
- **The project team**
- **Service providers**
- **Regulatory agencies**
- **…….**

The Project Manager

- **The Project Manager will:**
  - Have a great deal of responsibility
  - Have a lot of expectations riding on them
  - Be responsible for project failure

- **They will not have much power or authority!!!**

The Customer

- **The customer will:**
  - Pay for the project
  - (For internal projects they will sign off the benefits)
  - Provide the requirements

- **Make sure you know who the customers are**
  - Management & end users may have different expectations

The Project Sponsor

- **This is a vital role**
- **Shares responsibility for success**
- **Should be senior manager in the <u>customer</u> organisation**
- **Their role is to provide the authority and support the project**
  - **Beating the drum**
  - **Banging heads together**

- **Without a good sponsor most projects will fail**

The Review and Approval Team

- **Sometimes known as "Project Board"**
- **Group of stakeholders who must agree on and approve**
  - **Project definition & scope**
  - **Budgets**
  - **Plans**
  - **Changes**

- **Should be kept small**
- **Should meet regularly**
  - **Monthly or quarterly**

The Core Project Team

- **You will need a team of advisors and leaders**
  - You
  - Two or three managers, team leaders
  - A small number of experts

- **Not usually signatory authority**
  - But make most of the decisions ("recommendations")
  - Should stick throughout the project
  - Provide plans, estimates and advice

Project Goals

- **3 "obvious" goals (often unstated)**
  - **To produce something**
  - **Within a specified budget**
  - **To a specified timetable**

- **But all projects need clear, primary goals**
  - **When taking over a project ask what the goals are**
  - **Beware of projects where you receive different answers**

Project Goal Criteria

- **Goals must be specific**
- **Goals must be realistic**
- **Goals must have a time component**
- **Goals must be measurable**
- **Goals must be agreed upon**
- **Responsibility for achieving the goals must be identified**

Establishing Goals

- **Make a list of everyone's ideas of goals**
- **Remove anything not directly bearing on project**
  - **i.e. pet ideas**
- **Remove things that are a "step on the road"**
- **Make sure each goal meets the criteria**

Project Scope

- **How much is to be achieved in the project?**
- **What is the length of the project "window"?**
- **What resources are required?**

- **Reduce scope by creating sub projects or associated projects**
- **Be aware of "scope creep" (be very aware!)**

The Statement of Work

- **Formal project management document**
- **Separate from a contract**
- **But often referred to from it**
  - **As the official list of "what is to be done"**
- **Audience is all stakeholders**

SOW Contents

- **The purpose statement**
- **The scope statement**
- **List of project deliverables**
- **Goals and objectives**
- **Cost and schedule estimates**
- **List of stakeholders**
- **Chain of command**
- **Assumptions and agreements**
- **Communication Plan**

Key points

- **Make sure you are doing the right projects**
- **Identify the stakeholders**
  - **Particularly the project sponsor**
- **Determine scope**
- **Determine goals**
- **Produce (and agree!) a statement of work**

- **Next week:**
  - **The work breakdown structure**