Software Project Management

Lecture 7

Stakeholder Analysis

- This involves
  - Identification of Stakeholders
  - Stakeholders' Interests
  - Their comparative and relevant importance to the project
  - The ability of any particular stakeholder to influence other stakeholders' interest
- Groups of two or more people are political entities

Stakeholders Analysis

- Freeman's (1984) stakeholder analytical framework
- Freeman's concepts have been durable over the years, so that ''the whole stakeholder theory is reducible to this one idea of Freeman's''.
- The framework comprises two stages: identification and evaluation.
- Freeman's classical definition "A stakeholder is any group or individual who can affect or is affected by the achievement of the organization's objectives"
- There are different kinds of stakeholders, such as the people as well as groups inside and outside an organization.

Checklist Approach

- The first approach is using checklists specified to the generic types of stakeholders, such as ‘customers, suppliers, competitors, users, managers, and developers’
- Such checklists can be adapted to make them more suitable for particular industries, e.g. doctors, patients, pharmacies, pharmaceutical companies.
- They can then be used to determine which specific groups of stakeholders are important in relation to the system.

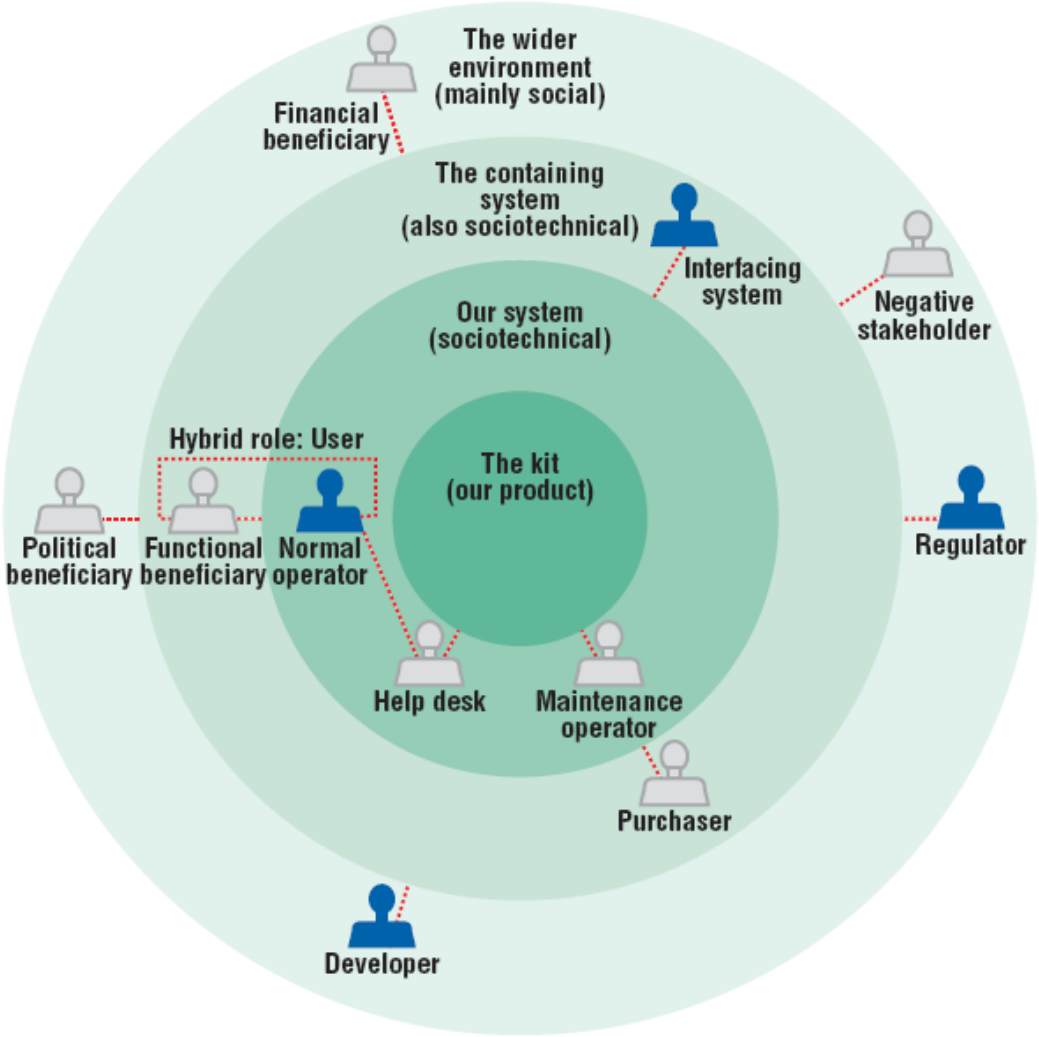
Question-based Approach

- A second approach is posing questions concerning the system and its nature.
- Relevant questions that help identify relevant groups and individuals:
  - Who are the initiators of the system?
  - Who are the sponsors of the system?
  - Who have to adopt the system and make it work?
  - Who are the intended users?
  - Who will receive the output of the System?
  - Who are the intended developers and operators of the System?
  - Who will be impacted and affected by the system?
  - Who will win or lose by using the System?

Network Approach

- A third approach that complements the other ones is the network approach.
- It focuses on the network of relations among organizations.
- Analyzing these dynamic networks of interactions and activities may help identify stakeholders and their roles
- Network theory also emphasizes the dynamic, flexible and contextual nature of organizational relations.
- This implies that stakeholders may influence each other, and therefore they cannot be viewed in isolation.
- Perceived interests and power of stakeholders are interactive and they may change over time.
- When stakeholders are identified, the results of this analysis can be visualized in a stakeholder map (also called a stakeholder web)
- Map shows and categorizes stakeholders and their mutual relations.

An onion model of stakeholder relationships



- Alexander, I. and S. Robertson, "Understanding Project Sociology by Modeling Stakeholders", January/February 2004, IEEE SOFTWARE

Stakeholders contribution

- Project Manager
  - Leads the project
- Sponsor
  - Provides authority for project to proceed
- Development Team
  - Provides skills, expertise, and effort to perform the tasks defined for the project
- Customer
  - Establishes the requirements for the project and provides funding
- Functional Managers
  - Establish company policy and provide resources

Stakeholders: Role and authority

Stakeholder	Roles	Approvals
Project Manager: Abdur Rehman	Defines, plans, controls, monitors, and leads the project	Makes recommendations for approval; signature authority for any purchase under Rs.50,000
Sponsor: Mohammed Waseem	Authority for most operational project decisions; helps guide the project; assists project manager with planning and approvals by other stakeholders	Approves personnel requests and hiring decisions; signs off on SOW and project plan before submitting to the customer; signature authority for any purchase under Rs.100,000
Customer: Experts Rashid Ali Sameena Sheikh	Experts who help define the project and develop product specifications	Works with project manager and team; make recommendations; no formal signature authorities

Defining Goals

- Every project has three primary goals
  - To create something, to complete within budget, and within agreed schedule
- Most project have multiple goals
- What seems obvious software project goal may not be seen the same way by everyone
  - Web-based timesheet data entry system
    - An training exercise by the recently hired programmers
    - A requirement before starting a new software development project for an external customer by the GM
    - A marketing tool to demonstrate the capabilities of the development team by the sales staff
  - Each of these views implies a different level of robustness, ease of use, and maintainability for the final end-product software deliverable

Goals

- Build a timesheet data entry system ✗
- Build and successfully deploy a web-based timesheet data application entry system for the engineering department's internal use before the beginning of the next major external software product development project ✓

Defining Objectives

- Most objectives tell what; the best ones also imply why

- Specific
  - Do you and your sponsor/customer both agree on the results needed for each of your project's objectives?
- Measurable
  - How will you know that you are achieving results?
- Achievable
  - Are objectives attainable? Why OR why not?
- Realistic
  - Do objectives address customer's requirements and real needs
- Time bound
  - Are there specific dates by which the objectives should be achieved?
  - Is there a clearly understood reason for each of the dates?

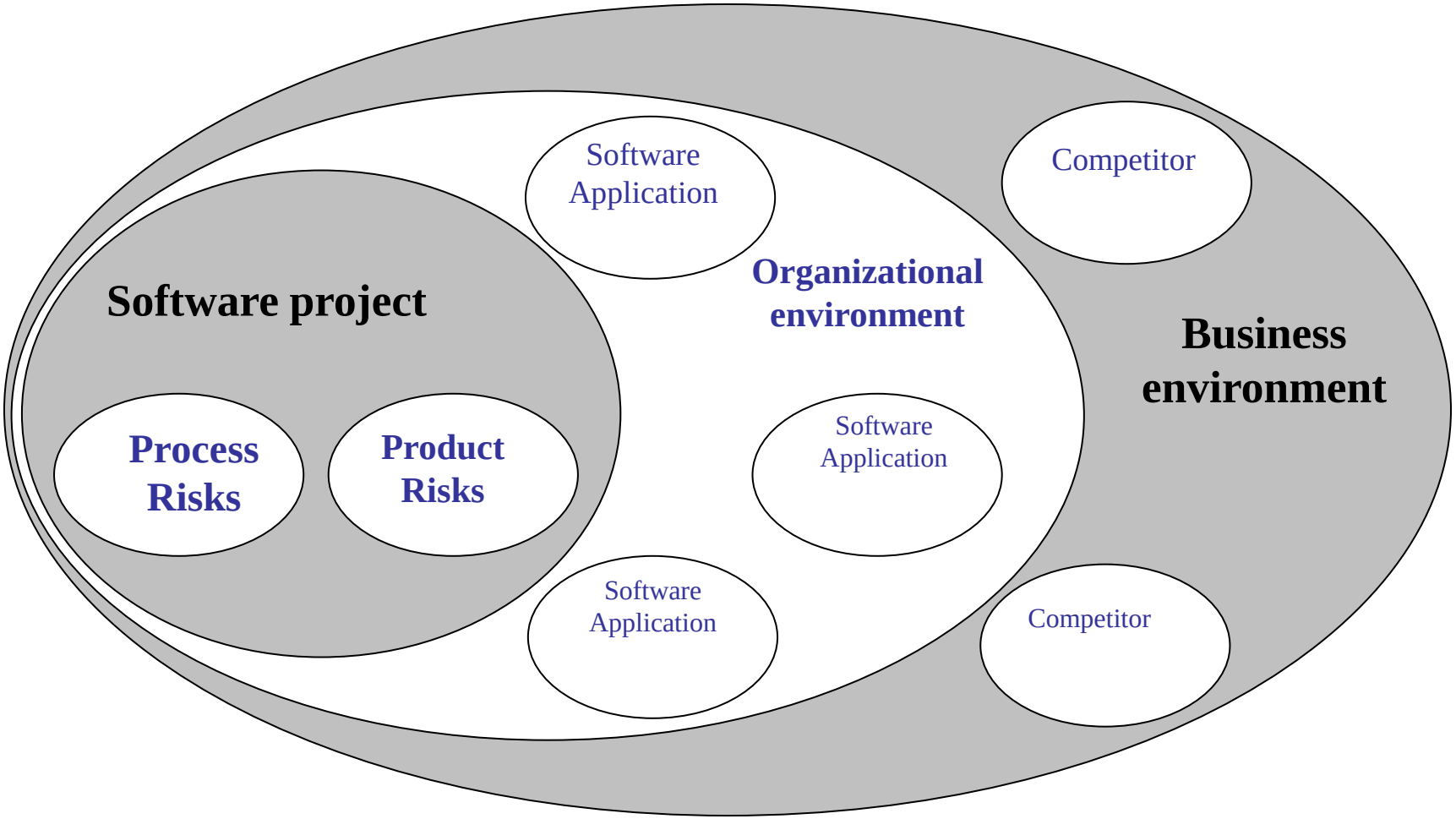
Project Scope

- The scope is the size of project
  - What is in? and what is out?
- It defines the assumptions for making all cost, schedule, and resource projects
- Puts boundaries on the planning process and the deliverables
- Separates outcomes or deliverables of the project from activities and deliverables outside the project scope
- Scope must be specified and agreed upon by the stakeholders
- Watch scope creep

Constraints and Risks

- Constraints are the real-world limits on the possibilities for your project
  - Rs.50,000 to buy a server
- Dictionary Definition of risk
  - the possibility of loss or injury
- Risk theorists
  - the potential for realization of unwanted, negative consequences of an event.
- Risk involves the likelihood that an undesirable event will occur as well as the severity of the consequences of the event should it occur

Types of Risk



Constraints to consider

- The budget
- The schedule
- The people
- The real world
- Facilities and equipment

Statement of Work (SOW)

- A formal project definition document
- A description of the work required for the project
- Sets the “boundary conditions”
- Typically developed after Project charter
  - Sometimes terms SOW and Project charter is used interchangeable
- Typically done after approval (after “Go”)
- It provides basis for the rest of the formal detailed project plan

SOW

- It contains
  - The purpose of statement
  - The scope statement
  - The project deliverables
  - The goals and objectives
  - The cost and schedule estimates
  - List of stakeholders
  - The chain of command
  - Assumptions and agreements
  - The communication plan

SOW Template (example)

- Scope of Work
  - Describe the work to be done to detail. Specify the hardware and software involved and the exact nature of the work.
- Location of Work
  - Describe where the work must be performed. Specify the location of hardware and software and where the people must perform the work
- Period of Performance
  - Specify when the work is expected to start and end, working hours, number of hours that can be billed per week, where the work must be performed, and related schedule information. Optional compensation section

- Deliverables Schedule
  - List specific deliverables, describe them in detail, and specify when they are due.
- Applicable Standards
  - Specify any company or industry-specific standards that are relevant to performing the work. Often an Assumptions section as well.
- Acceptance Criteria
  - Describe how the buyer organization will determine if the work is acceptable
- Special Requirements
  - Specify any special requirements such as hardware or software certifications, minimum degree or experience level of personnel, travel, requirements, documentation, testing, support, and so on.

Reading

- Alexander, I. and S. Robertson, “Understanding Project Sociology by Modeling Stakeholders”, January/February 2004, IEEE SOFTWARE

Q&A