SWE30010
Development Project 2: Design, Planning and Management

Lecture 10c

Team Building
[Traditional Software Project]

Lecture Overview

- Team Building

- Management Strategies

Principal References

- Scott Berkun, *The Art of Project Management*, O' Reilly, 2005, Chapters 9 to 11.

- Bob Hughes, Mike Cotterell, *Software Project Management* (5th Edition), Addison-Wesley, 2009, Chapter 11.

- Robert K. Wysocki, *Effective Project Management* (5th Edition), Wiley, 2009, Chapter 9.

- Ian Sommerville, *Software Engineering* (8th Edition), Addison-Wesley, 2007, Chapter 25.

Project Success or Failure?

- Projects rarely fail due to purely technical issues

    □ Often failure is due to non-technical, *human interaction* problems

- Pressure to complete to a tight schedule often causes a team to

    □ Take shortcuts

    □ Use poor methods

    □ Gamble on new languages, tools or techniques that promise "The World"!

- Pressure from management can also have a detrimental effect

☞ *So - How do we organize and manage individuals and teams to get the "best" possible outcome?*

Roadmap

■ **Team Building**

■ Management Strategies
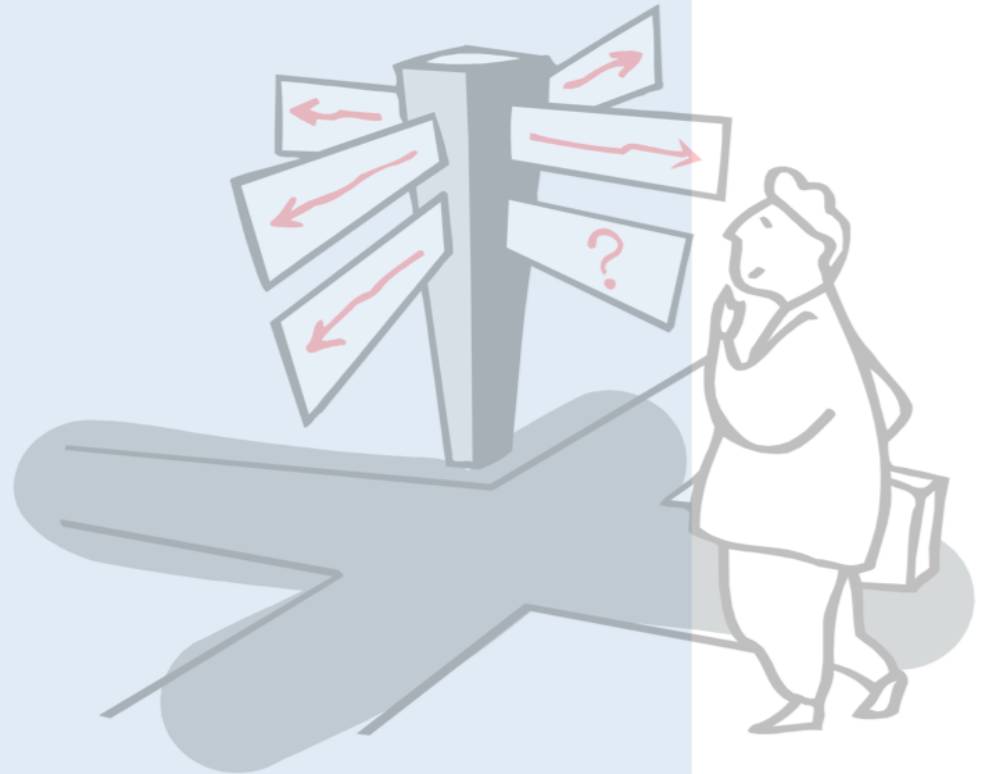
Team Building and Development

- Main goal:
  - ☐ To help people work together as a team more effectively to improve the project performance
  - ☞ *A good team is more productive than the sum of its individuals!*

- This may involve
  - ☐ Training
    - ☐ Purpose: to help individual growth
    - ☐ Areas: technical skills or personal skills
  - ☐ Team building activities
    - ☐ Purpose: to help team members learn about themselves, each other, and how to work as a team more effectively
    - ☐ Common ways: physical challenges, mental challenges, and psychological preference indicator tools

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Team Building Process

Tuckman's (very famous) 5-stage model:

- Forming:
  - ☐ Get to know each other; set up basic ground rules about behaviour

- Storming:
  - ☐ Conflicts (about leadership etc.) arise; establish methods of operation

- Norming:
  - ☐ Conflicts are settled; team identity/spirit emerges

- Performing:
  - ☐ Team works on task(s) at hand

- Adjourning:
  - ☐ After work is done, team disbands

At some risk,
I suggest that
you "google it"!

Effective Teams

- In an *effective* team, the output of the whole team is greater than the total of the output from each of the parts. *(De Marco and Lister)*

- Right kinds of tasks and working conditions are very important. What helps?

  - ☐ Team cohesion ("11 Freunde müsst ihr sein" - *Sepp Herrberger*)

  - ☐ Focus on "*good communication*"

  - ☐ Challenging (and rewarding!) goals

  - ☐ Goal tracking and feedback

  - ☐ Common working framework

- Conflict, confusion, and disagreement are all part of the team-building process. The act of working through issues together helps to create *team spirit*.

Common Team Problems

Most common problems for software teams

- Leadership

- Cooperation

- Participation

- Lack of Trust

- Quality

- Function creep (bells and whistles)

☞ *Projects are more likely to succeed when sufficient consideration is given to these aspects*

Reflect on these *vis a vis* the SCRUM process.

Roadmap

- Team Building

- **Management Strategies**

Team Management

- **What is team management?**

  - It is about managing the *effective use* of people who work in a project.

- **Why do we need team management?**

  - Project success depends on how effective the team members work together

  - People are the most important assets of an organization

  - Qualified IT people are often hard to find and keep!

- ☞ *What kind of management strategies exist?*

McGregor's Theory X and Y

Theory X

■ Average human has an innate dislike of work

■ People dislike responsibility

☞ *There is a need for direction and control*

Theory Y

■ Work is as natural as rest and play

■ Average human accepts and seeks further responsibilities

☞ *External control and coercion is not necessary*

Leadership Strategies

- Directive Autocrat

  □ Leader decides everything alone, close monitoring

- Permissive Autocrat

  □ Decisions by leader, some freedom for implementation

- Directive Democrat

  □ Decisions are made participatively, leader has final say

- Permissive Democrat

  □ All decisions are made in collaboration with team

Think of the consequences (good & bad) of each type!

"You can take a horse to the water,
but you cannot make it drink!"

Guidelines for Good Management

- Gain visibility *without* micromanagement

  □ Delegate responsibilities, trust decisions made by others

- Review processes and products, *not* people

- Coordinate, do *not* manipulate

- Use your knowledge, not your position of power
  (as a team manager)

- Channel people, do not put dams in front of them

  □ Act as an *enabler*, not disabler

- Focus on project and people needs,
  not your authority as a manager

Source: J. Henry, *Software Project Management*, Addison Wesley, 2004.

Effective Self-Management

■ Be responsible

■ Strive for defined goals

■ Live by sound principles

■ Your opinion matters

   ☐ Of yourself

   ☐ Of others

■ Commitment to excellence

Source: S. Covey, *The seven habits of highly effective people: Powerful lessons in personal change*, Simon and Schuster, 1990

Basic Model of Communication

"Good communication centers around highly developed individual awareness and differentiation. A good communicator is aware of both internal process in themselves and external processes in others."

John Bradshaw

- Transmission
- Reception
  - □ what is received not always what transmitter thought was transmitted!!!
- Understanding
  - □ What is received is not always understood!!!
- Agreement
  - □ Seek REAL agreement – not just mutual nodding of heads without comprehension!
- (Useful) action

Common Communication Problems

- Assumption
  - □ *"Assumption is the mother of all f….."* (Under Siege 2)

- Lack of clarity/noise
  - □ Too much irrelevant information disguises a message!

- Problem mismatch
  - □ Communication partners talk about different issues

- Not listening

- Dictation
  - □ Software is rarely developed in "army-style" hierarchies

- Personal Attacks, Blame

Successful Teams

Successful teamwork relies on

- **Agreed** team goals

- Established team-member roles

- A supportive environment in which to work

- A common teamwork process that facilitates work

- A plan for the work

- A mutual team commitment to the goals, roles and plan

- Open / free communication among all team members

- The mutual respect and support of all team members