

# Project basics & team work, communication

Project course @ÅA

# Agenda

- Projects
  - Goals, success, mistakes
- Teams
  - Team work
  - Team building
- Communication
  - Team communication

# Reports from other universities



- “A software project course, without teaching project management, is a course in how to NOT do projects”

# What is a project?



- Limited lifetime
  - Defined goals
  - Limited resources
  - Defined project organization
  - Uses project systematics
- 
- First "modern" project: The Manhattan project?

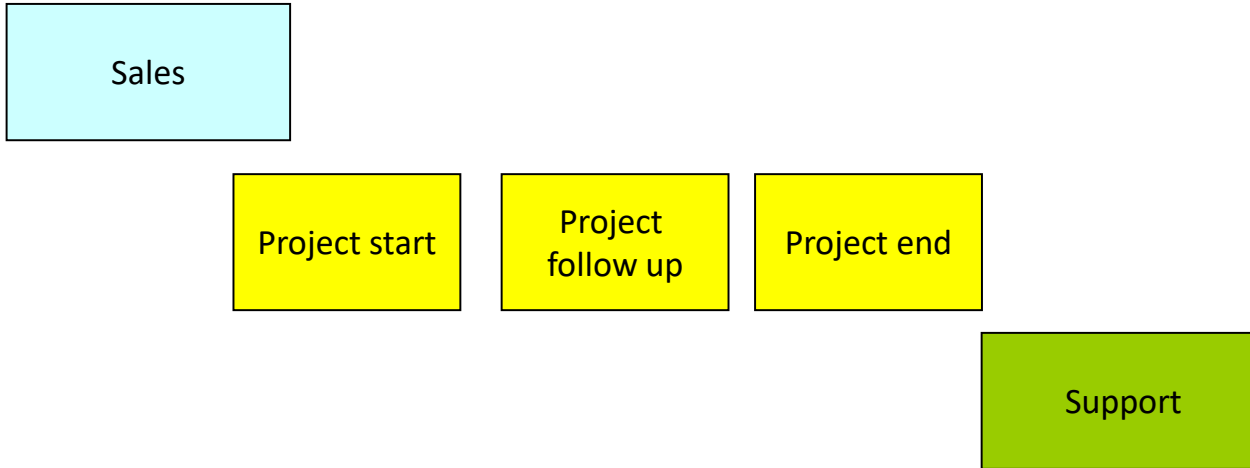
# Project systematics

- Project plan
- Clear responsibilities (roles)
- Checkpoints / milestones
- Defined phases
- Control, risk management
- Reporting

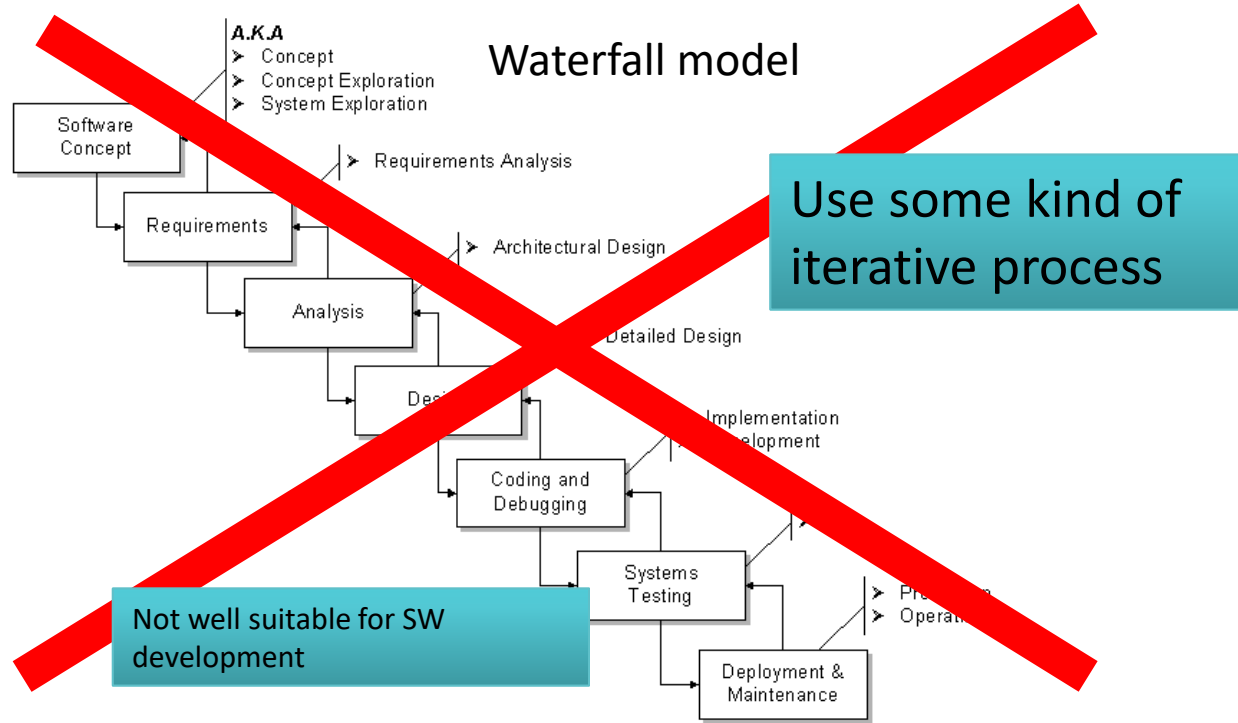
# Terminology

- Processes
  - defined ways of working
- Projects
  - well defined isolated things to do
- Teams
  - a group of people with a specific task / project
    - usually within organizational units
- Units/functions
  - structure in the organization

# Project lifecycle - high level



# Project phases





# Project goals

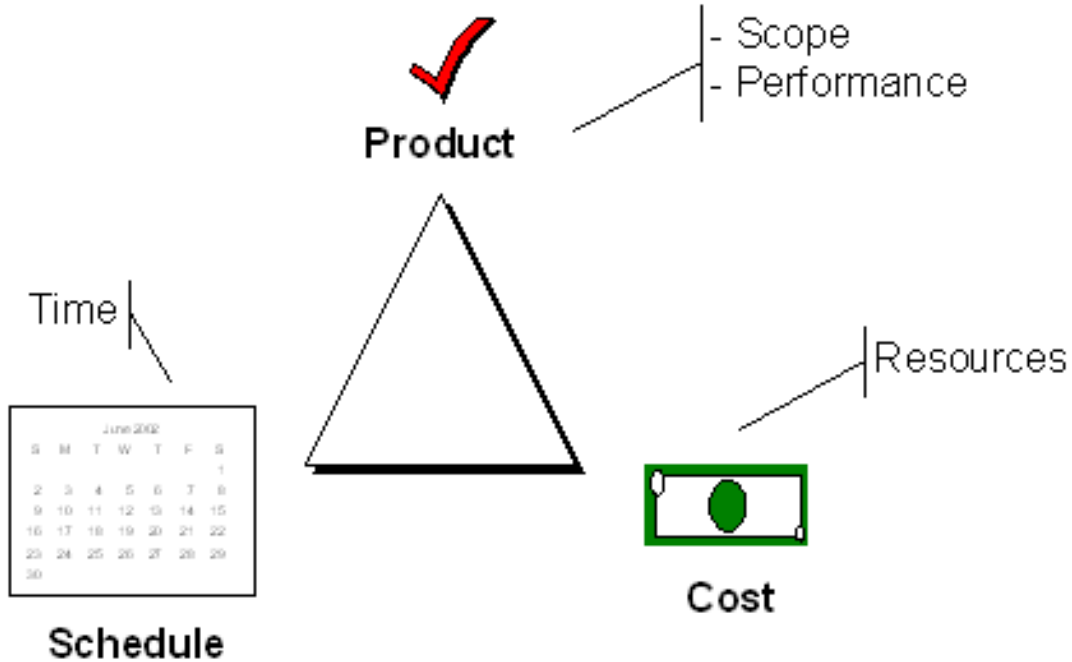
- Two types of goals
  - Visionary – that is what we would like to have
  - Realistic – goals that you know you can achieve using your present project organization
- Stepwise feature introduction
- “Baby-steps to the top”

# SMART Goals

- Specific
  - well defined, clear to anyone who has basic knowledge of the project
- Measurable
  - to know is the goal is reachable and how far away from completion we are
- Agreed upon
  - agreement between users and project team on goals
- Realistic
  - in relation to resources, knowledge and time
- Time-framed
  - how much time is needed to accomplish the goal

# Trade-off Triangle

"Select two out of three"



# Project success

- In groups
  1. When is a project successful?
  2. What is important?
    - Schedule / budget / features
  3. What is required to be successful?

# Project success

- Project must meet customer requirements
- Project must be under budget
- Project must be on time



# Project success

## Critical Success Factors and Their Importance for System Implementation (Listed in decreasing order of correlation)

[Pinto (1986), See Smith (2000), p. 60]

1. **Project mission.** Initial clearly defined goals and general directions.
2. **Top management support.** Willingness of top management to provide the necessary resources and authority/power for implementation success.
3. **Schedule plans.** A detailed specification of the individual action steps for system implementation.
4. **Client consultation.** Communication, consultation, and active listening to all parties impacted by the proposed project.
5. **Personnel.** Recruitment, selection, and training of the necessary personnel for the implantation project team.
6. **Technical tasks.** Availability of the required technology and expertise to accomplish the specific technical action steps to bring the project on-line.
7. **Client acceptance.** The act of "selling" final product to its ultimate intended users.
8. **Monitoring and feedback.** Timely provision of comprehensive control information at each stage in the implementation process.
9. **Communication.** The provision of an appropriate network and necessary data to all key actors in the project implementation process.
10. **Troubleshooting.** Ability to handle unexpected crises and deviations from plan.

# Why top management support?

- Top management can help to:
  - Secure adequate resources
  - Get approval for unique project needs in a timely manner
  - Receive cooperation from people throughout the organization
  - Provide leadership guidance

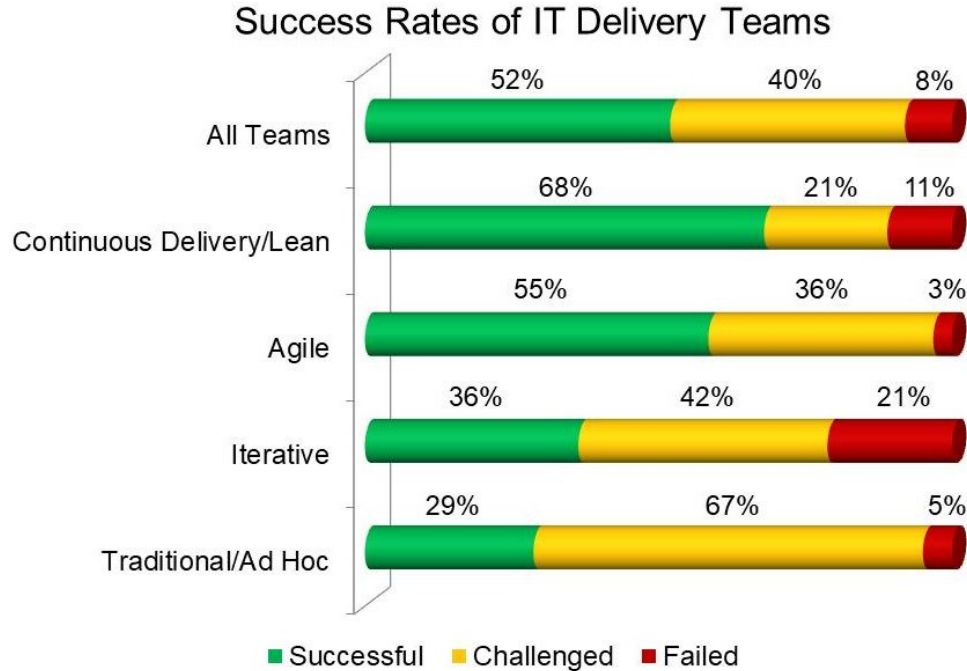
# Project success rate

(Lewis, 2000, p. 109)

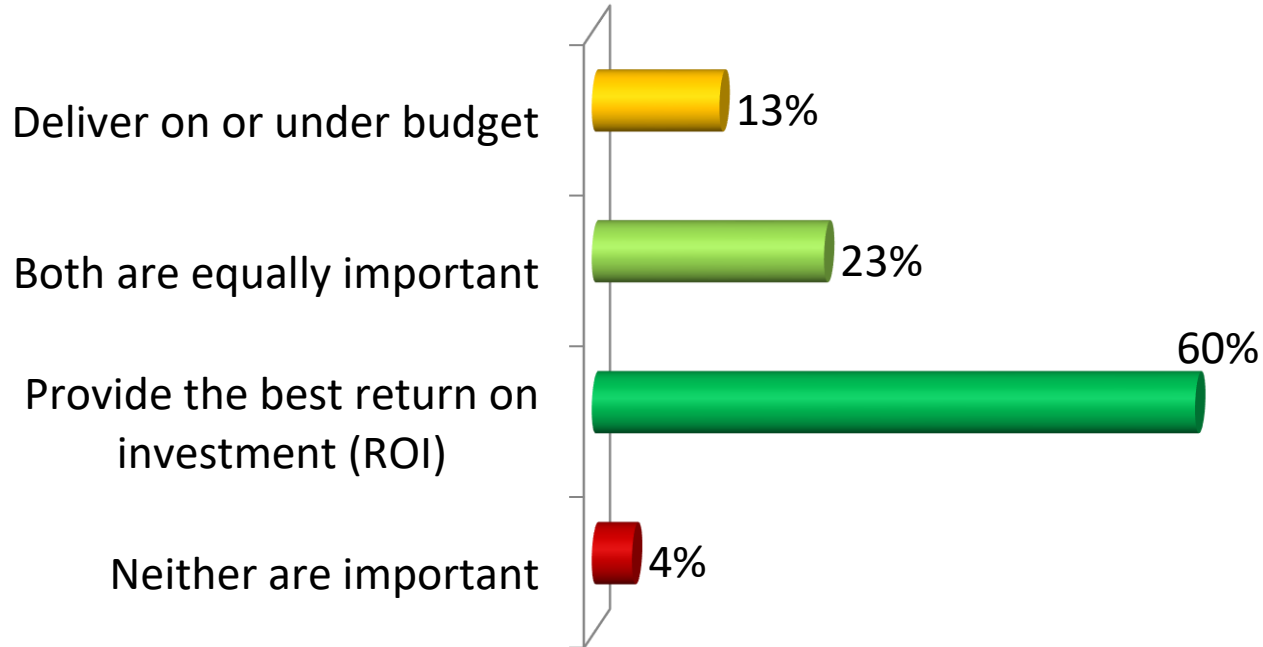
- 17% succeeded
- 50% revised
- 33% failed (never finished)
- 10% finished on time



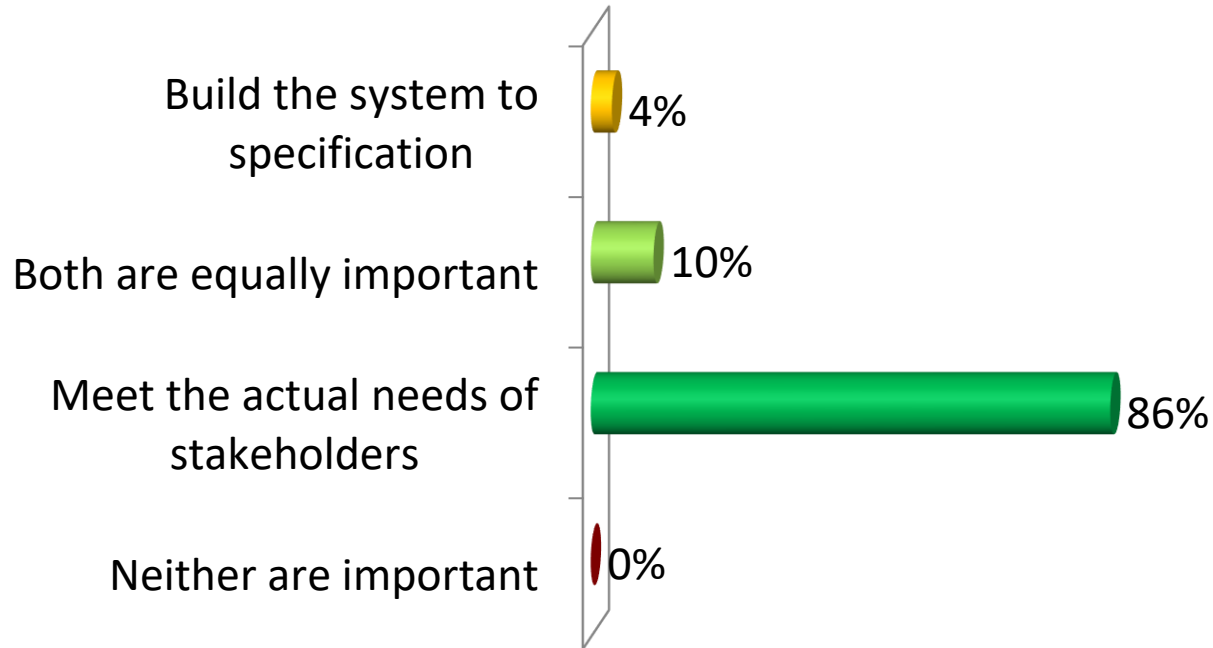
# Comparing Software Development Paradigms: 2018



# Budget/ROI: Which is more important?



# Stakeholder Value: Which is more important?



# Project failures



- What causes failures?

# Project mistakes – people related

- Undermined motivation
- Weak personnel
  - Weak vs. Junior
- Uncontrolled problem employees
- Heroics
- Adding people to a late project
- Noisy, crowded offices
- Customer-Developer friction
- Unrealistic expectations
- Politics over substance
- Wishful thinking
- Lack of effective project sponsorship
- Lack of stakeholder buy-in
- Lack of user input

# Project mistakes – process related

- Optimistic schedules
- Insufficient risk management
- Contractor failure
- Insufficient planning
- Abandonment of plan under pressure
- Wasted time during fuzzy front end
- Shortchanged upstream activities
- Inadequate design
- Shortchanged quality assurance
- Insufficient management controls
- Frequent convergence
- Omitting necessary tasks from estimates
- Planning to catch-up later
- Code-like-hell programming

# Project mistakes – product related

- **Requirements gold-plating**
  - Further requirement enhancement without a real need
- **Feature creep**
- **Developer gold-plating**
  - Beware the pet project
- **Push-me, pull-me negotiation**
  - New tasks are added to an already late project
- **Research-oriented development**
  - Are you doing research, or are you developing a product?

# Project mistakes – technology related

- Silver-bullet syndrome
- Overestimated savings from new tools and methods
- Switching tools in mid-project
- Lack of automated source-code control



# Team work & Communication

# Why work in teams?

- Bring together complementary skills
- Problems are solved more quickly
- Provides a social framework for working
- Creates a fun atmosphere



# Team forming

- Some physical exercise ;)
- Get yourself into a team that...

# Team building

- High level of interdependence among team members
- Team leader has good people skills and is committed to team approach
- Each team member is willing to contribute
- Team develops a relaxed climate for communication
- Team members develop a mutual trust
- Team and individuals are prepared to take risks
- Team is clear about goals and establishes targets
- Team member roles are defined
- Team members know how to examine team and individual errors without personal attacks
- Team has capacity to create new ideas
- Each team member knows he can influence the team agenda



# The Apollo syndrome

(Meredith Belbin, 1981)

- **Team of people with sharp, analytical minds and high mental ability not managing to perform well**
  - spend time in abortive or destructive debate, trying to get other to adopt their view
  - difficulties in decision making
  - act along their own favorite lines
  - sometimes team notice what is happening, but react by over compensating – avoid confrontation



# Team dynamics roles

- Task
  - Summarizer
  - Path-finder
  - Gatekeeper
  - Encourager
- Relationship
  - Harmonizer
  - Analyzer
  - Fact seeker
  - Initiator

Best friends do not necessarily make the best team.  
Sometimes this can even worsen the team work.

# Team practical roles

- **Team leader (=project manager)**
- **Product owner**
- Development
- Planning / Design
- Process
- Support
- Testing manager
- Documentation

# Most important comm. Skill?

- What are the communication skills needed in a project?
- What is the most important communication skill a person involved / manager should have?



# About communication

- verbal communication
  - language, quality of spoken lang. , tempo rhythm, pitch articulation
- nonverbal communication
  - appearance, facial expressions
- written
  - books, journals, daily papers, memos etc, emails

# Communication & Projects

- Group of experts
- Limited time resources
- Often problem solving situation
- Strong goal orientation
- Responsibilities for other parties

# Small group communication

- Groupthink – we do work together
- Norms – we have some rules
- Agenda setting – we are organized
- Roles (information giver, information seeker, elaborator, initiator, administrator)
- Leadership (authoritarian, consultative, participative, laissez-faire, shared etc.)

# Team communication tools

- E-mail
  - e-mail lists?, who is responsible, moderator?
- Phone / Skype
  - fast problems solving
  - no "automatic" documentation
    - no memos to the rest of the team
- Chats / WhatsApp / etc.
  - history stored?, visible to all in team?
- Computerized project management system (AHA, Trac, Trello, MS Excel?, Google Docs, OneDrive, Dropbox....)

# Types of communication

- **Formal, impersonal approaches**
  - Documents
  - Project milestones
  - Error tracking reports
  - Source code
  - Repository data
  - Project control tools
- **Formal, interpersonal procedures**
  - Design reviews
  - Requirements reviews
  - Status reviews
  - Code inspections
- **Informal interpersonal procedures**
  - Group meetings
- **Electronic communication**
  - Electronic mail
  - Project bulletins
- **Interpersonal network**
  - Discussions with peers

# Effective team meetings

- Use an AGENDA, distributed in advance
  - People should know what is to be discussed
- Use team meeting for
  - Analyzing, reporting what has been done
  - Plan what should be done next
  - Making decisions
  - NOT FOR DOING THE WORK
    - Exception: "brain-storming activities", hackathons, team learning

# Simple AGENDA

GROUP A MEETING, DC 3101 Nov 7. at 10.15

Present: NN, NN, NN, NN

AGENDA:

- \* Code status (dev manager)
- \* Decision on testing tools (testing manager)
- \* The documentation templates (process manager)
- \* Test plan (testing manager)
- \* Next meeting

Agenda distributed 1-10 days before meeting

Or send a calendar invitation !

Weekly team meeting - Meeting

File Meeting Scheduling Assistant Insert Format Text Review Help Tell me what you want to do

Teams Meeting Busy 15 minutes Add a Zoom Meeting

**i** You haven't sent this meeting invitation yet.  
This appointment conflicts with another one on your calendar.

**Send**

Title **Weekly team meeting**

**Required** amit, kalle, prashani, johan

**Optional**

**Start time** Fri 13/10/2023 8.30 Helsinki, Kyiv, Riga, Sofia  All day  Time zones

**End time** Fri 13/10/2023 10.00 Juba [Make Recurring](#)

**Location** Agora room simon 3rd floor [Room Finder](#)

**Agenda:**

1. Code status (Amit)
2. Feedback from customer (Kalle)
3. Decision on testing tools (Prashani)
4. Documentation templates (Johan)
5. Next meeting

In Shared Folder Kalender