Agile Development and Scrum

TDT4290 Customer Driven Project

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Kahoot game pin: 941815

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Overview

1. What do you know about Agile Development and Scrum? Quiz
2. Scrum
3. The Customer Role
4. Teamwork in Agile Development
1. Agile Development and Scrum - Quiz
Discussion in small groups

Discuss in groups of 2-3:

- In what ways will this project be different than previous projects?
- What consequences will that have for the development method?
- What do you see as the main challenges with respect to development method?
2. Scrum
Product backlog
As a developer of a small city, I would like a school to attract families.

Estimate: 5  Actual:
Sprint planning

Product backlog

```
As a developer of a small city, I would like a school to attract families
estimate: 5 actual:
```

Iteration backlog ("sprint")

```
Develop school architecture
estimate: 2

Build school gym facilities
estimate:

Build classroom module 1
estimate: 3

Build classroom module 2
estimate: 2

Build classroom module 9
estimate: 2
```
Exercise; Effort estimation

Form groups of three to four persons.

Raise your hands when you have formed a group.
Estimation; Planning poker
Exercise; Effort estimation

Assume that “noodles” has a value of “2”, estimate the work involved making the following dishes using planning poker:

- Pizza
- Spaghetti Bolognese
- Fish soup

Planning poker:
1. Distribute a deck of cards to each group member.
2. Make an **individual** estimate; identify the closest card.
3. Everyone shows their cards.
4. If you agree, record estimate, if not:
5. Ask for arguments for the **highest** and **lowest** estimate.
6. Goto 2
Scrum

Product Backlog → Sprint Planning → Sprint Backlog → Daily Scrum → Sprint Retrospective → Sprint Review → Increment

Source: www.scrum.org
Daily meetings

1. What did I do yesterday that helped the development team meet the sprint goal?

2. What will I do today to help the development team meet the sprint goal?

3. Do I see any impediment that prevents me or the development team from meeting the sprint goal?
Team board
Sprint burndown
Scrum

Product Backlog -> Sprint Planning -> Sprint Backlog -> 1 Scrum Team

Daily Scrum -> Sprint Retrospective

Sprint Review -> Increment

Source: www.scrum.org
Sprint review: Demonstrating product
Scrum

- Product Backlog
- Sprint Planning
- Sprint Backlog
- 1 Scrum Team
- Daily Scrum
- Sprint Retrospective
- Sprint Review
- Increment

Source: www.scrum.org
3. The Customer Role
Exercise

Watch the video “The expert”. Form groups of 2-3 and discuss:

Which roles are present in this meeting?
What kind of project is this?
What are the main problems in this meeting?
How would you have mitigated these problems?
4. Teamwork in Agile Development
Agenda: Focus group

- Exercise 1:
  - Brainstorm:
    - What fosters effective teamwork (green stickers)?
    - What hinders effective teamwork (yellow stickers)?

- Lightning talk: A team performance model

- Exercise 2:
  - Presentation of topics from exercise 1
  - Group the stickers on flip-over in categories
Salas et al. Team Performance Model

Team leadership
Mutual performance monitoring
Team orientation
Back-up behaviour
Adaptability
Closed-loop communication
Shared mental models
Mutual trust

What fosters or hinders team performance?

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<tr>
<th>Teamwork component</th>
<th>Foster</th>
<th>Hinder</th>
<th>Total</th>
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Team leadership

Foster team performance

Hinder team performance

From Bent Hamer, the movie “Kitchen stories”, 2003.
In Theory: Team Leadership

**Definition:**
- Direct and coordinate the activities of other team members
- Assess team performance
- Assign tasks
- Develop team knowledge, skills, and abilities
- Motivate team members
- Plan, organize, and establish a positive atmosphere

**The Scrum team:**
- Planning
- Scheduling
- Assigning tasks to members
- Making decisions

**The Scrum master:**
- Removes impediments of the process
- Facilitates meetings

In Practice: Team Leadership

“We classified tasks as finished before they were completed, and we knew there was still work to be done. It seems that the scrum master wants to show progress and make us look a little better than we really are”

– developer

“The daily meetings are mostly about reporting to the Scrum master. When he is not there, the meetings are better because then we communicate with each other”

– developer
In Theory: Backup Behaviour

Definition:
- Anticipate other team members' needs through accurate knowledge about their responsibilities
- Includes the ability to shift workload among members to achieve balance during high periods of workload or pressure

Scrum:
- The team is seen as multifunctional
- Self-organizing

In Practice: Backup Behaviour

«Let the person that knows most about the task solve it! We cannot afford several people doing the same thing in this project. We need to continue working like we have done before» – scrum master

«We are having problems in one of the modules, but other developers do not want to fix the problem. They want to wait for the developer who created the module» – scrum master

«This was a shock to us. The end-users could not start testing, and we had to spend a lot of time trying to fix this. It took almost a month to locate the problems» - developer

«It's chaotic now. We work long hours, but I do not do too much. I have done what I was supposed to, and I cannot help them. I do not know anything about what they are doing, so it does not help if I try» – developer

Team leadership
Mutual performance monitoring
Team orientation
Back-up behaviour
Adaptability
Mutual trust
Shared mental models
Closed-loop communication
Follow the “Agile 2.0” project

https://www.researchgate.net/project/Agile-20