



Aalto University  
School of Science

# How to be a Scrum Master in the Scrum LEGO Simulation

*Ville T. Heikkilä, Maria Paasivaara, Jari Vanhanen, Ferrix Hovi  
Towo Toivola*

Based on the "Scrum Simulation Compact  
Guide for Scrum Masters", 2017.

# Scrum Master Role in the Simulation (1/3)

- **Your main task is to get the team to**
    - work well together
    - learn how to use Scrum in a way that best benefits them
  - **You are a full-time Scrum Master, you coach the team**
    - You do not work with the system or otherwise as a team member.
  - **You are a process expert – not a technical expert**
    - You do not give your team instructions on how to “code” (build legos).
    - You give answers regarding the process
-

# Scrum Master Role in the Simulation (2/3)

- **Team needs to learn solve problems together - do not solve problems for them, but take care that the team gets the problems solved. However, you are not their manager.**
  - **Asks questions, for example**
    - Does your solution work together?
    - Are you satisfied with PO's input or do you need more clear priorities? Do you need more clarity?
    - How certain are you that you can deliver all you committed to?
    - Is there something you would need to do that should be added to the backlog?
    - Would you need to prepare some questions for the PO before he arrives?
-

# Scrum Master Role in the Simulation (3/3)

- **The simulation is identical to the one played at Aalto since 2014**
    - some of you have played it earlier
  - **Do not reveal too early what you learned last time**
    - Do not spoil the discovery and learning opportunity from anyone
  - **The simulation is not about the correct end result - but the process getting there**
-

# You and the team will constantly be under huge time pressure

..like in many real projects.



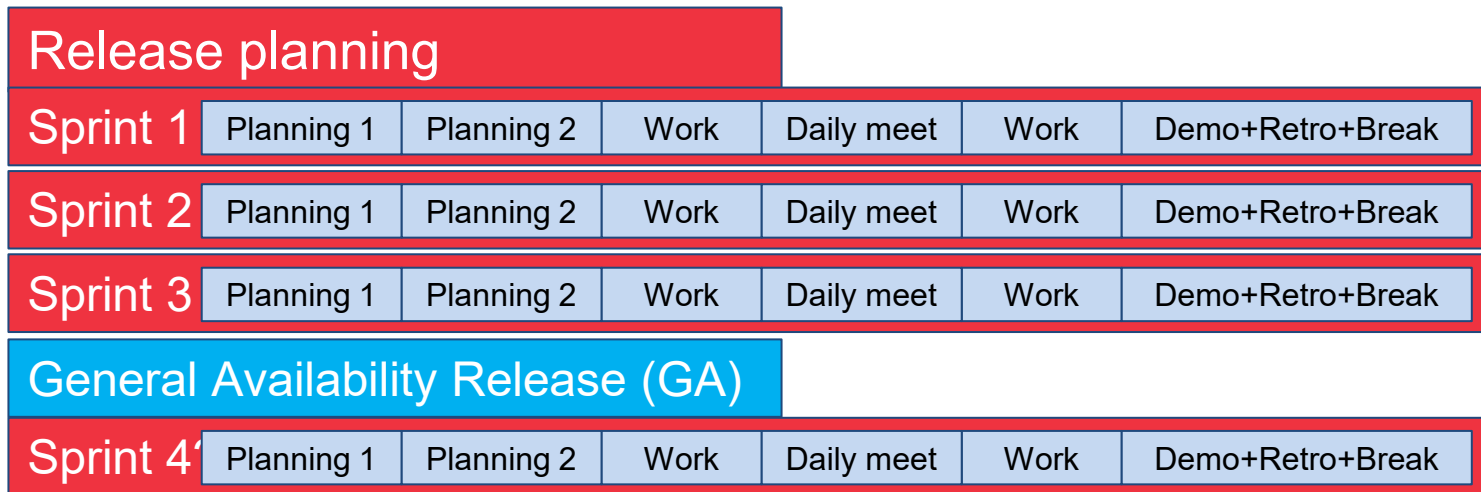
You will have a constant schedule of events with only minutes to get them done! For this reason, the ScrumMaster's #1 value is:

**“Relentless focusing of the team’s attention on the currently most important question”**

..this is so also in the real world of the industry. “What is the currently most important question”, you ask? Knowing that is the ScrumMaster’s professional skill.

---

# This is how it goes..



# The Scrum Boards



The Product Owner mostly cares about the Project Wall.

Team decides how they use the Team Board (a.k.a. Sprint Backlog)

# Updating the Project Wall and the Team Board

- **The Project Wall is updated at least in Release Planning, Sprint Planning Part I and Sprint Review.**
    - i.e. when the PO is present in the team
    - Really it makes sense to keep it tidy and up to date at all times
  - **The team decides on when and how the Team Board is updated.**
    - Good practices
      - *The Team Board is always up-to-date in the end of the "day"*
      - *Every team member updates the board, making their understanding visible*
  - **While the team is working, you will have time to put the boards and graphs in order**
-



# Start of simulation: Release planning

- **Main objective**
    - Gain overall understanding of what the release is about and is likely to contain.
  - **Key points**
    - Discuss **main use-cases** for each Product Backlog item with the Product Owner. (“*What is use-case #1 for that feature?*”)
    - Estimate the Product Backlog items in some way.
    - *Obtain some priorities, at least which items can be sacrificed to manage risk, if that becomes necessary.*
    - Update project wall.
  - **This is not exact science, be fast and efficient.**
-

# Definition of Done (DoD)

- **In real Scrum projects, the team and PO decide DoD together.**
  - **In this game, DoD is "PO accepts the backlog item as Done".**
  - **A backlog item can be moved to the "Done" column of the Project Wall only after it fulfills the DoD.**
-

# What is a burn-up chart?

The **scope**, i.e. the sum of the estimates of all backlog items in the product backlog.

The **burn-up**, i.e. the sum of the estimates of all Done product backlog items.

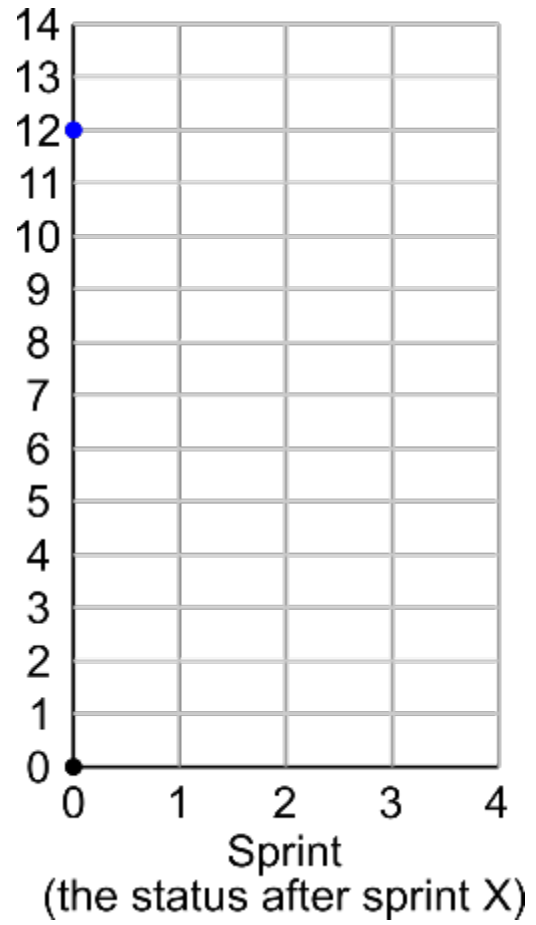
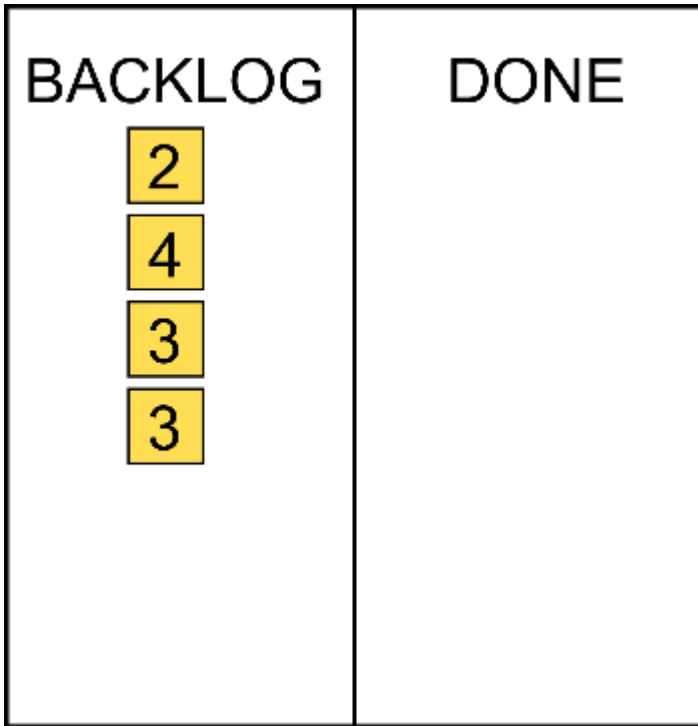


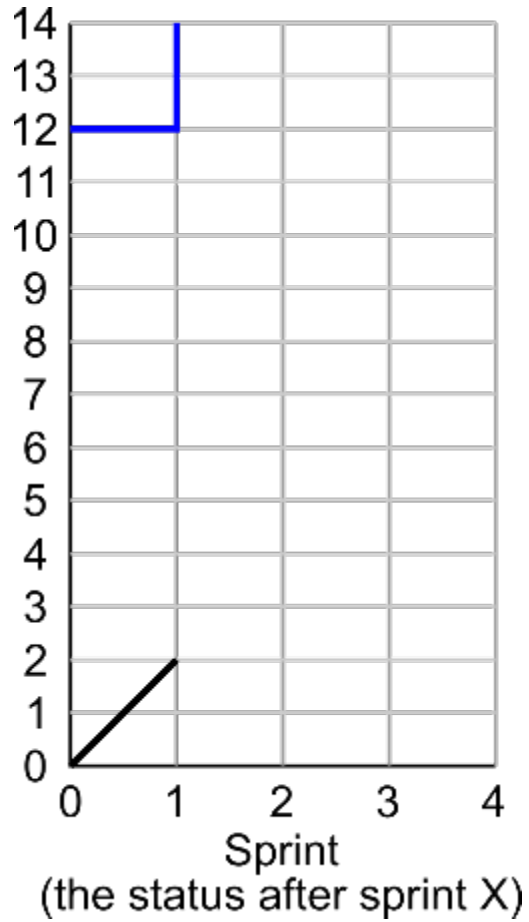
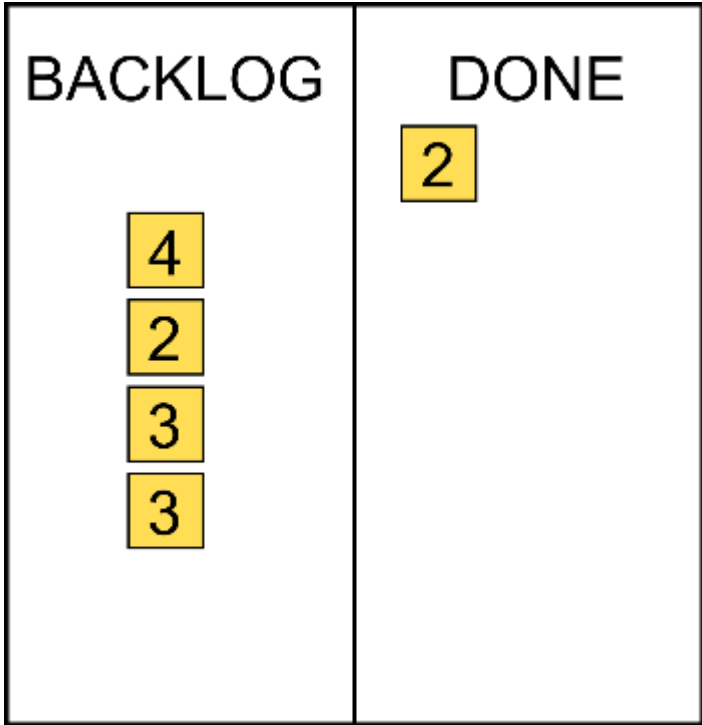
The scope goes down if backlog items are removed from the project scope or re-estimated smaller.

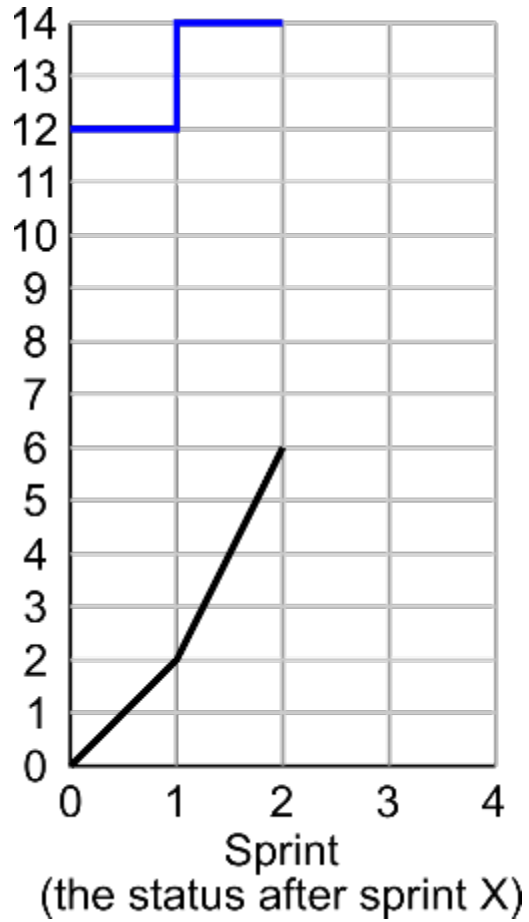
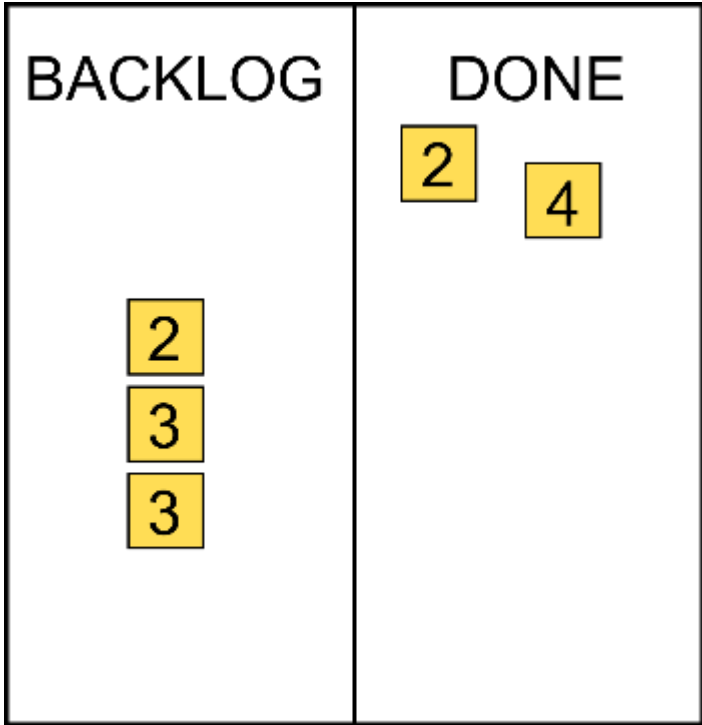
The scope goes up if a new backlog item is added or an existing one is re-estimated bigger (not shown).

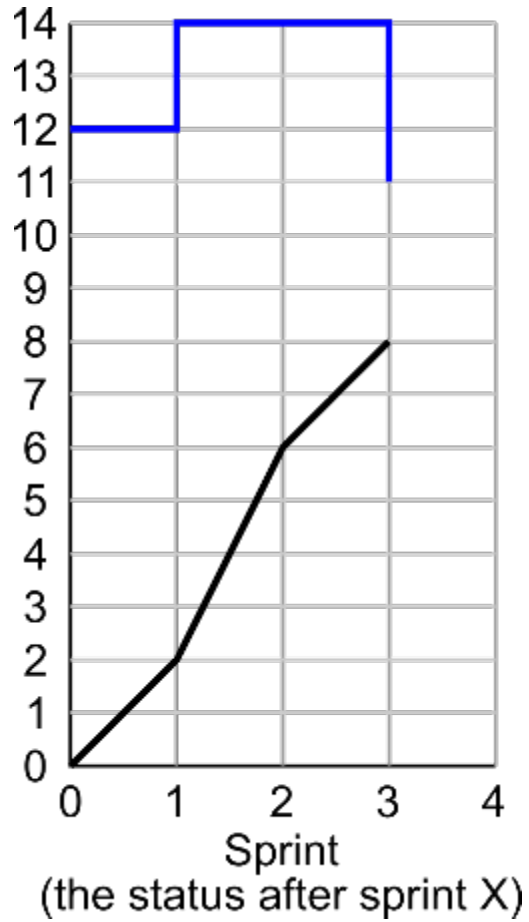
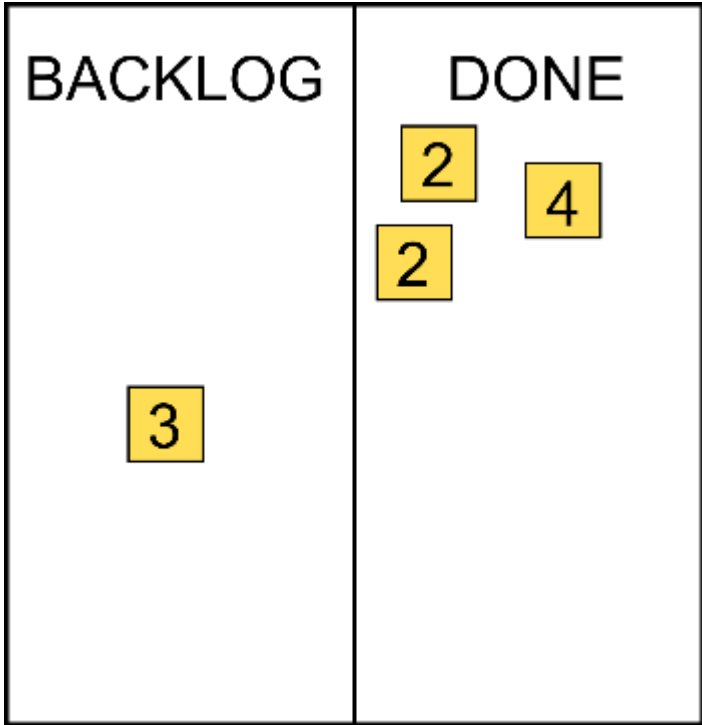
---

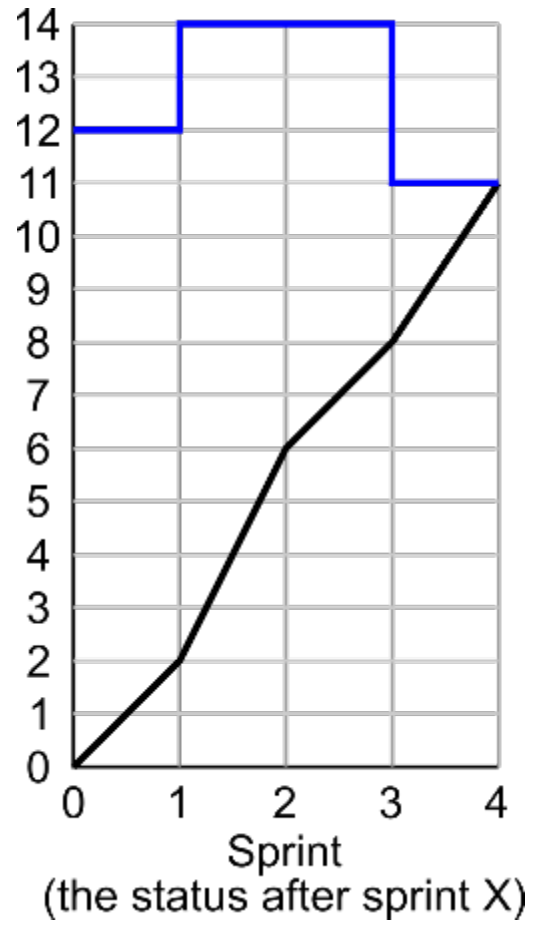
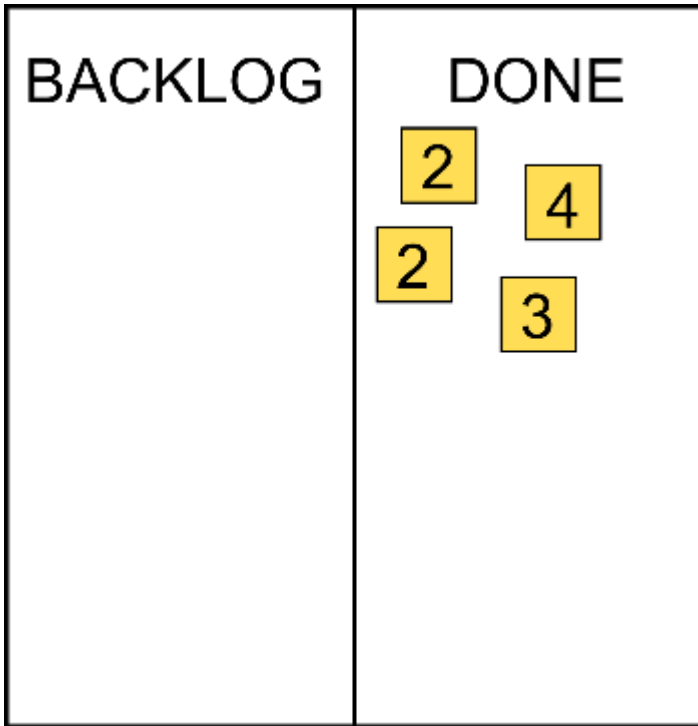
-burn-up value updated after Sprint 1 Review  
-scope value updated after Sprint 2 Planning













# What is (Sprint) Velocity?

- **Velocity is the amount of work completed during a Sprint**
    - i.e. the sum of the estimates of the product backlog items Done during that Sprint.
  - **If your Sprint velocity is relatively stable, you can use the average velocity of the previous Sprints to estimate Sprint capacity in Sprint Planning Part I.**
-

# Step 2

## Sprint planning part I

- **Main objective**
    - Ensure that team and PO understand the top items in Product Backlog in the same way. Agree on what will be delivered after the Sprint.
  - **Key points**
    - Verify priority of top items compared to the rest of Product Backlog.
    - Verify team understands the purpose ('what' and 'why', use case #1) of the Product Backlog items.
    - Ensure that the team feels confident in achieving their Sprint commitment, and that the confidence seems reasonable compared to past performance.
-

# Splitting product backlog items

- Any backlog item that does NOT fit into a single sprint MUST be split into smaller parts that individually do fit.
- Try to do vertical slices of completed functionality that produce business value instead of horizontal slices.



**A horizontal slice**



**A vertical slice**

# Step 3

## Sprint planning part II

- **Main objective**
    - Create the team's plan for reaching the Sprint commitment.
  - **Key points**
    - The Product Backlog items selected for the Sprint are called the “Sprint Backlog”
    - Break them down into smaller tasks or “Actions”. The team uses these to plan and coordinate teamwork.
    - Agree on who will start with what initially, but leave enough room for changes later on.
    - Do not forget supporting roles, such as tools engineering (arranging pieces) and system testing (verifying the quality and interoperability of items developed).
-

# Sprint Daily Meeting

- **Main objective**
  - Agree on actions to ensure completing Sprint commitment as well as possible.
- **Key points**
  - Gain situational awareness.
  - Make decisions.

**You are free to change the practice the way you see fit, but try to do it in the following way at least once:**

**Go through your Sprint objectives** (the Product Backlog items you took into the Sprint) **one by one, and discuss “Will we get this Done by the end of the Sprint?”**

- If “Yes” with confidence, then no further discussion is necessary
  - If team is unsure, have them figure out what can they do to ensure best possible end result for the Sprint
-

# Sprint Demo

- **Main objective**
    - Demonstrate completed functionality from business perspective to PO to gain feedback for future work.
  - **Key points**
    - Show what you have done, tell what is not completely done.
    - Make notes on defects, CR:s, and things to be addressed in the retrospective - write them down!
    - Update project wall.
-

# Sprint retrospective

- **Main objective**
    - Step back from the work and look at how to improve the team's work process.
  - **Key points**
    - Identify problems and decide on improvements aimed at solving them.
    - Agree on strong points of teams' process to ensure they are upheld.
-

# Sprint retrospective – An example

- **There are many ways to conduct a sprint retrospective. Here is an example:**
    - Ask everyone to write what went well and what went badly on sticky notes.
    - Gather the sticky notes and read them out loud.
    - Ask everyone to write improvement suggestions on sticky notes.
    - Read the improvement suggestions out loud one by one and discuss them, if needed.
    - Ask everyone to vote by raising their hand if they want to take that improvement suggestion into use.
-



# Breaks

- **Main objective**
    - Let the team lower intensity for a while and take care of themselves, so that they can maintain a sustainable pace over sprints.
  - **Key points**
    - Biological needs, humor, rest.
-

# Please remember this is a simulation

- **This is not the optimal way to build Legos.**
    - *If you have attended the simulation before, respect the learning of others*
  - **Overhead to work ratio is absurd, that's ok.**
  - **Do not touch the code outside Sprint time.**
  - **In the first Sprint, do not talk while coding and testing**
    - Scrum Masters are to enforce
  - **Product Owner is not exemplary, but rather stereotypical, serving the simulation needs and your learning**
    - *Stereotypical PO does not know Scrum..*
-



Aalto University  
School of Science

**If nothing else, remember this:**

**1) Scrum Simulation Compact Guide for Scrum Masters is your dear friend**

**2) Keep your walls clear**

**3) You don't have time! Relentlessly focus the team's attention on the most important question right now**

*Ville T. Heikkilä, Maria Paasivaara, Jari Vanhanen,  
Towo Toivola, Ferrix Hovi*