Sprint planning

Chair of Process and Data Science
RWTH AACHEN UNIVERSITY

Scrum

- **What is Scrum?**
  - Scrum is an Agile Framework for developing, delivering and sustaining complex products.
  - Founded by Ken Schwaber and Jeff Sutherland in the 90s
  - It is:
    - Lightweight
    - Simple to understand
    - Difficult to master
  - Employs an iterative and incremental approach.

Scrum

- **What Scrum is not?**
  - A process
  - A technique
  - Definitive method for developing products.

Scrum

- It is used for:
  - Research and identify viable markets, technologies, and product capabilities;
  - Develop products and enhancements;
  - Release products and enhancements;
  - Develop and sustain Cloud and other operational environments for product use;
  - Sustain and renew products.

Scrum – Pillars

- Transparency
  - See and understand

- Inspection
  - Investigate

- Adaption
  - Improve

Chair of Process and Data Science

Why Scrum?

- Focus on the value returned to the client (ROI) on each increment of the product
- Ability to adapt
- Avoids waste
  - Only develop what is going to be used
  - Plan just the necessary
  - Only generates necessary and sufficient artifacts (e.g., Documentation)

Level of Detail

Chair of Process and Data Science

Scrum Team

- Product Owner
- Development Team
- Scrum Master

Chair of Process and Data Science

Product Owner (PO) - Attributions

- Responsible for
  - Guarantee and maximize ROI
    - Managing the product backlog
    - Managing the stakeholders
    - Managing the Product vision
    - Managing the releases of the product
- Participate actively in Sprints
  - Be available for the development team.
  - Be present on:
    - Sprint planning
    - Sprint review
    - and release planning

Chair of Process and Data Science

Product Owner(PO) - Attributions

- Accept or reject the work performed by the development team during the sprint
- Guarantee that there is enough budget for the project during its entire development.

Product Owner (PO) – Characteristics

- One person
  - Not a committee
- Available
  - To answer questions from the development team
  - To make decisions about the product
  - To contact the stakeholders and update the product backlog frequently
- Representative
  - Needs to have enough power and knowledge to make quick and correct decisions about the product
  - Has the final saying about the Product Backlog

Chair of Process and Data Science

Development Team - Attributions

- Work on delivering a potential increment of the product using the product backlog.
- Contact the product owner frequently
  - Ask questions about the product when needed
- Inform the Scrum Master of any impediment

Development Team - Characteristics

- Self-organized
- Cross-functional
  - Should possess all the skills (as a team) to create a product increment.
- There are no titles for the team members
- There are no sub-teams
- Motivated
- Focused on technical excellence
- Be committed to reaching the goals
- Sufficiently small: between 3 and 9 members

Chair of Process and Data Science

Scrum Master - Attributions

- Responsible for promoting and supporting Scrum
  - Helps everyone to understand Scrum theory, practices, rules and values
- Remove impediments to the development team's progress
- Coach the development team in self-organization and cross-functionality
- Facilitate Scrum events as requested or needed
- Align the needs of the Development team and the organization
- Can help to choose the Product Owner

Scrum Master - Attributions

- Guarantee that the Product Owner posses everything he/she needs to do his job

Scrum Master - Characteristics

- Soft skills:
  - Communication
  - Motivation
  - Problem-solving
  - Conflict managing
  - Facilitation
  - Etc.
- Courage
- Present during all the time while the development team is working.
- Impartiality

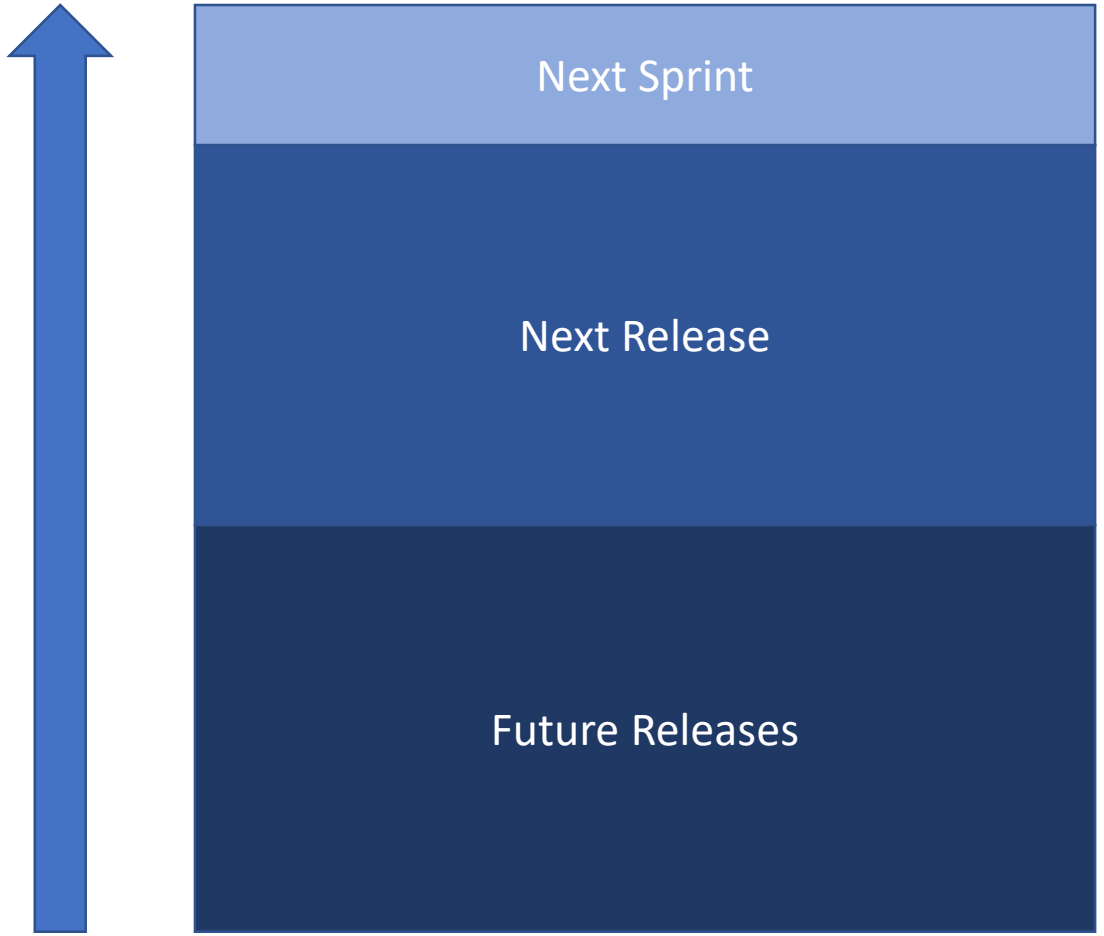
Chair of Process and Data Science

Product Backlog

- List of requirements of the product
- It is ordered by priority
- Estimable
- Incomplete and dynamic
  - Changed constantly

Product Backlog

Developed earlier
(higher priority and more detail)



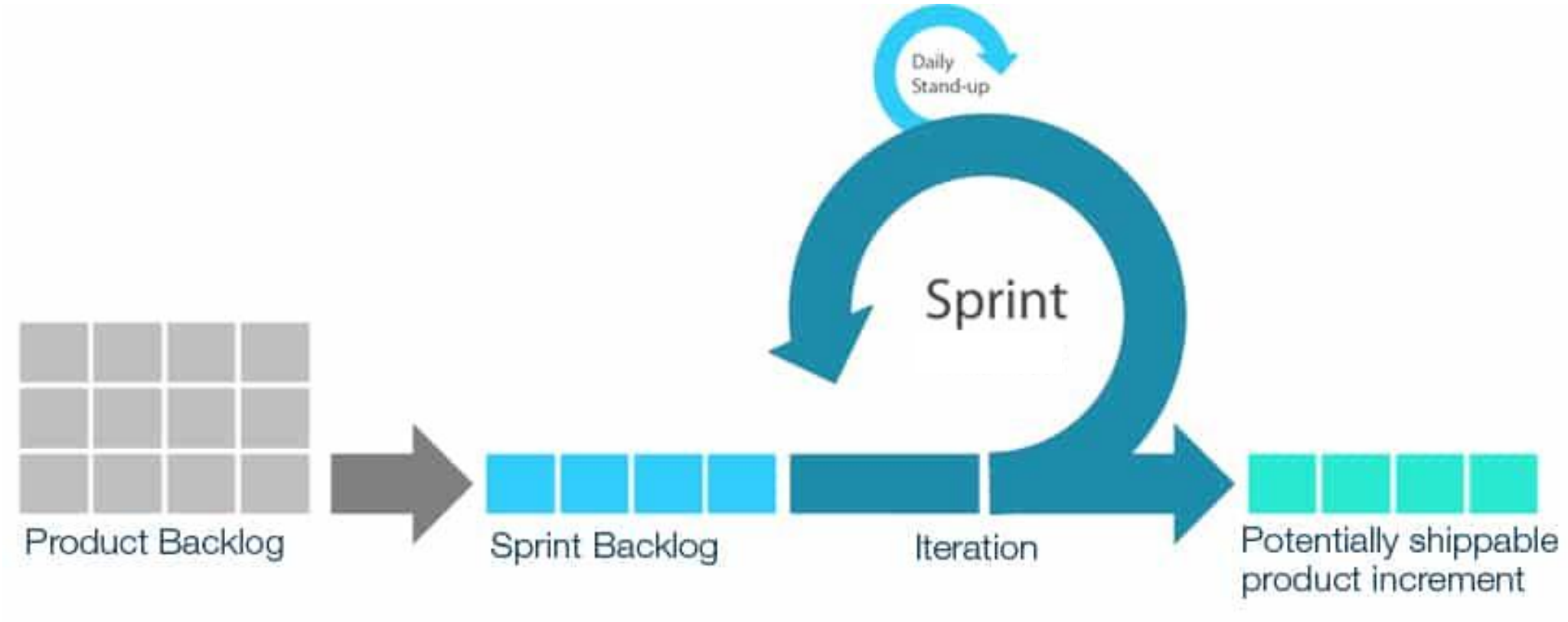
Developed later
(lower priority and less detail)

Chair of Process and Data Science

Definition of Done (DoD)

- What it means to work to be complete.
- It is like a contract between the development team and Product Owner.
- Unique for each project
- Example:
  - Coding complete
  - Unit tests and Acceptance tests updated
  - Manual or documentation updated

Scrum cycle - Sprint



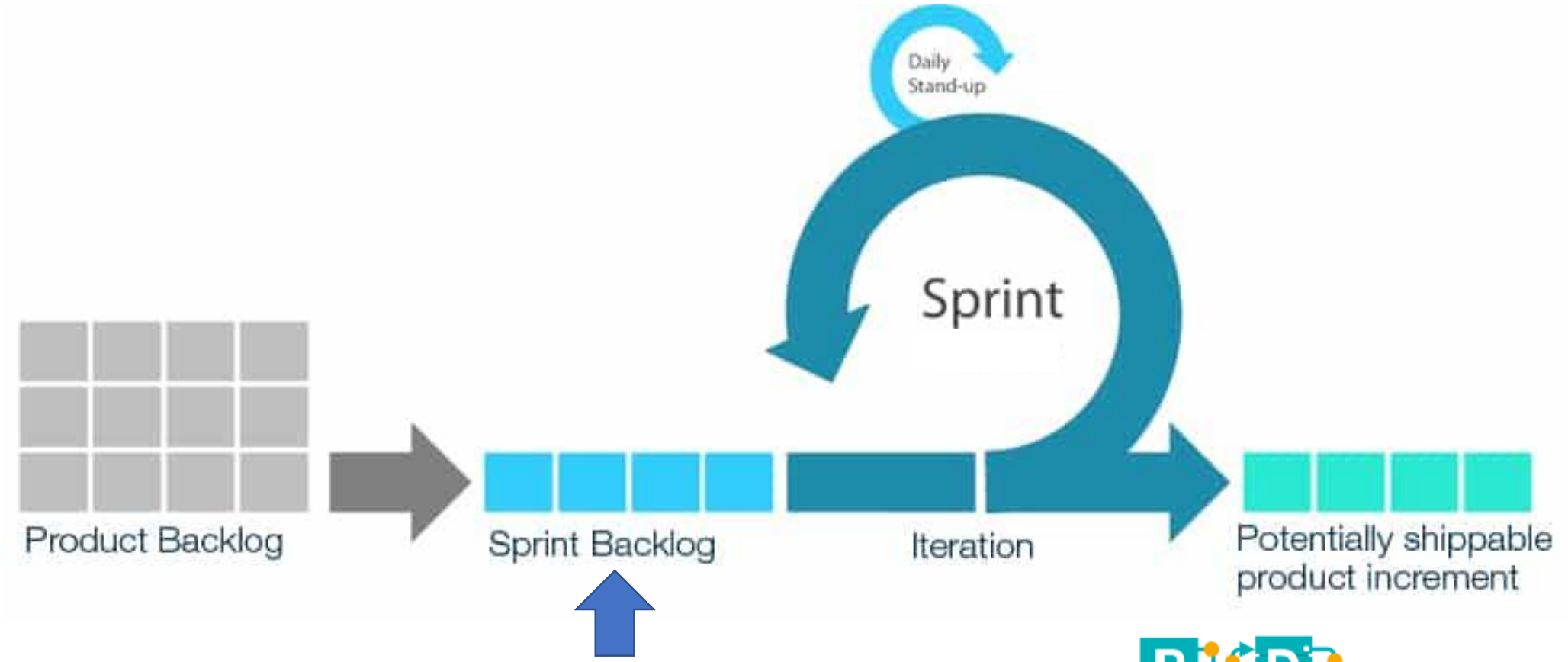
Chair of Process and Data Science

Sprint

- The iteration(cycle) itself
  - Sprint planning
  - Development
  - Daily Scrum
  - Sprint Review
  - Sprint Retrospective
- Each Sprint:
  - Has a goal
    - Example: eCommerce application
      - Sprint Goal: Implement basic shopping cart functionality including add, remove, and update quantities.
  - Delivers an increment according to this goal

Chair of Process and Data Science

Sprint Planning



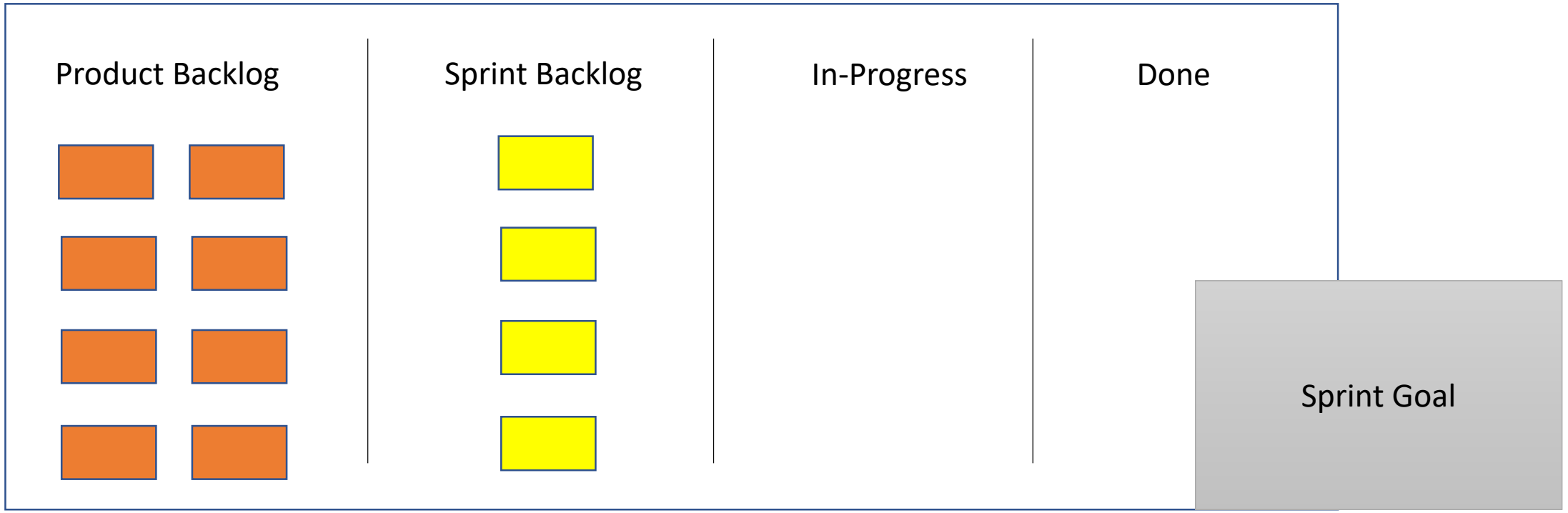
Chair of Process and Data Science

Sprint Planning

- It is the iteration planning
- Development team and Product Owner define:
  - The items to be developed during the sprint taking account the priority of the product backlog
  - Sprint Goal
- Development team estimate the items regarding complexity and/or time

Sprint Planning

Result: Initial Sprint Backlog + Sprint Goal

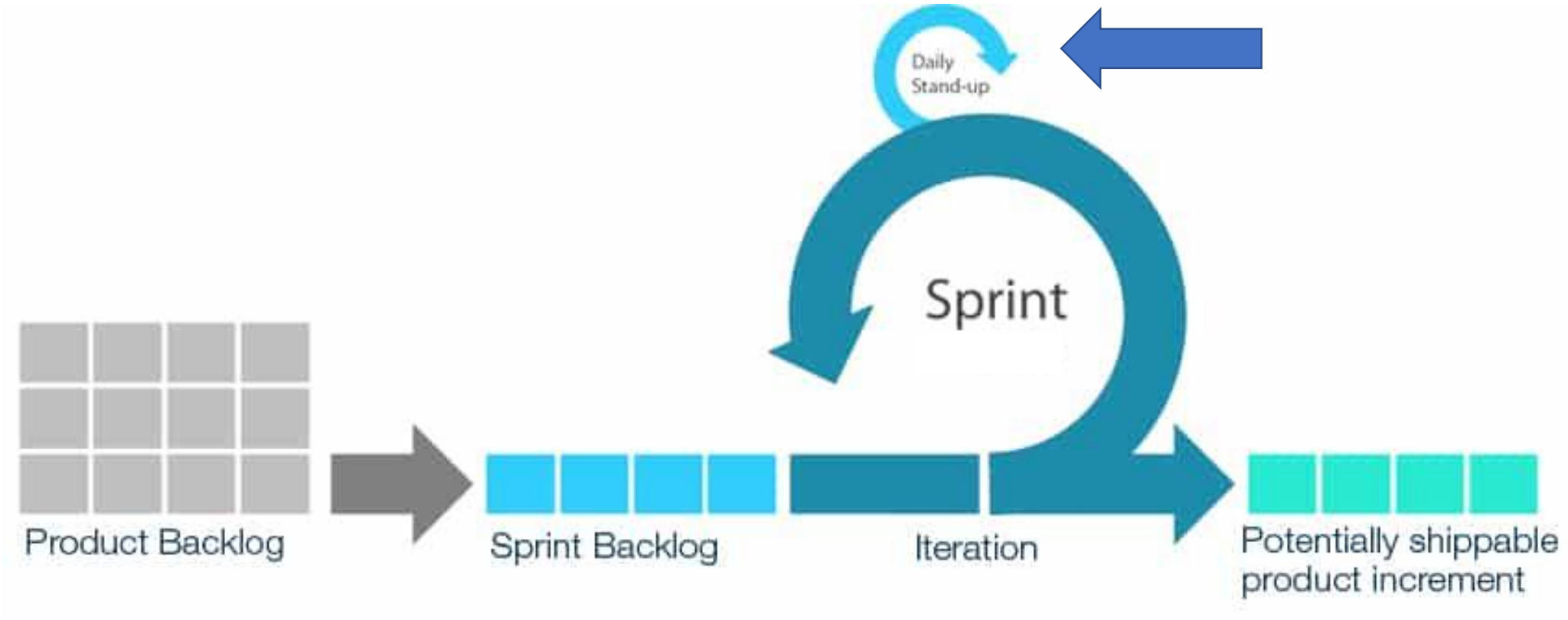


Chair of Process and Data Science

Sprint Backlog

- The items from the product backlog to be developed during the Sprint
- Can be modified during the Sprint
  - Estimates can be updated
  - Tasks can be added to existing items
- Needs to be visible for everyone
- Belongs to the Development Team

Daily Scrum

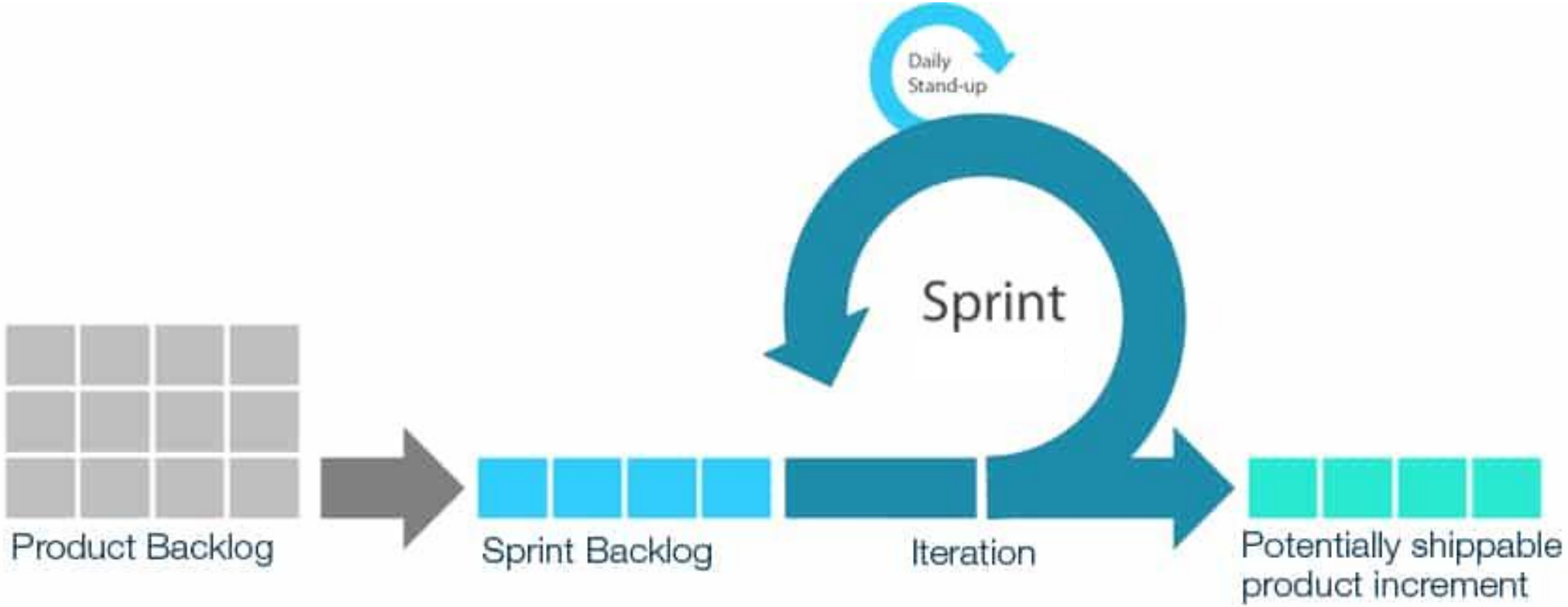


Chair of Process and Data Science

Daily Scrum

- 15 minutes meeting that should occur every day
- Each member of the development team reports:
  - What has been done since the last Daily Scrum
  - What will be done until the next Daily Scrum
  - Any impediments that prevents the work to be done
- Promotes:
  - Visibility
  - Communication
  - Quick decisions

Sprint Review

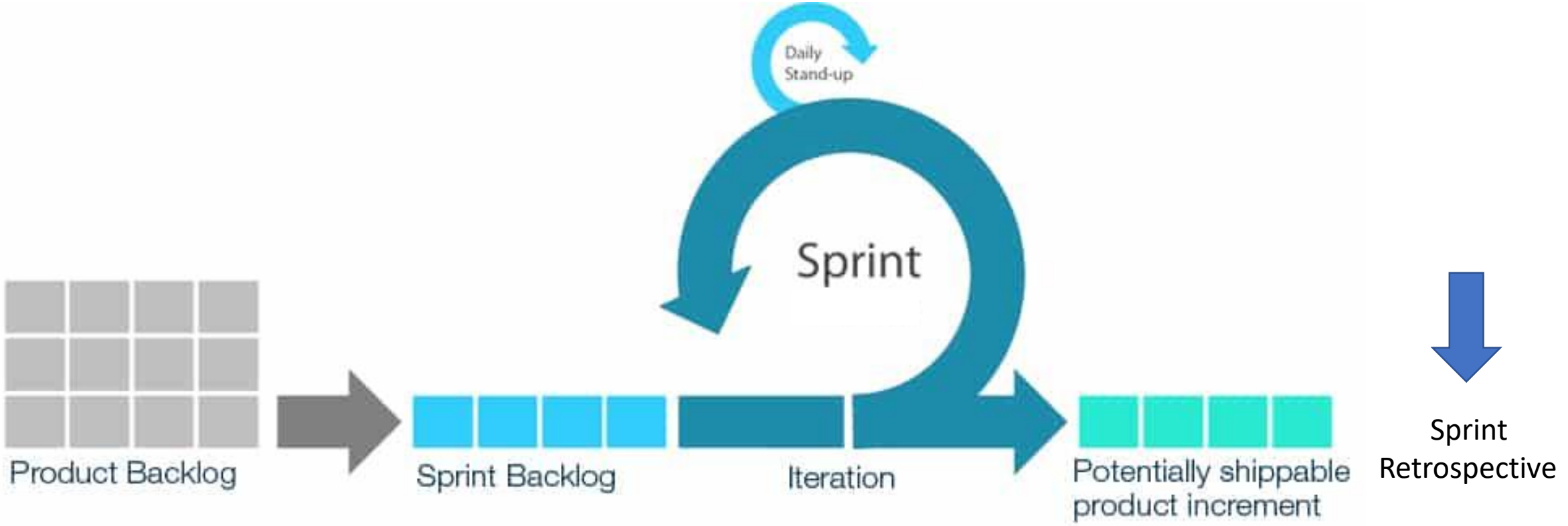


Sprint Review

Sprint Review

- Development team
  - Shows the Product owner and Stakeholders what has been done in the Sprint
  - Answer questions about the product increment
- Product Owner
  - Checks what is done and what is not(according to the DoD) and says if the Goal was achieved
- If anything needs to be changed
  - An item is included on the product backlog

Sprint Retrospective

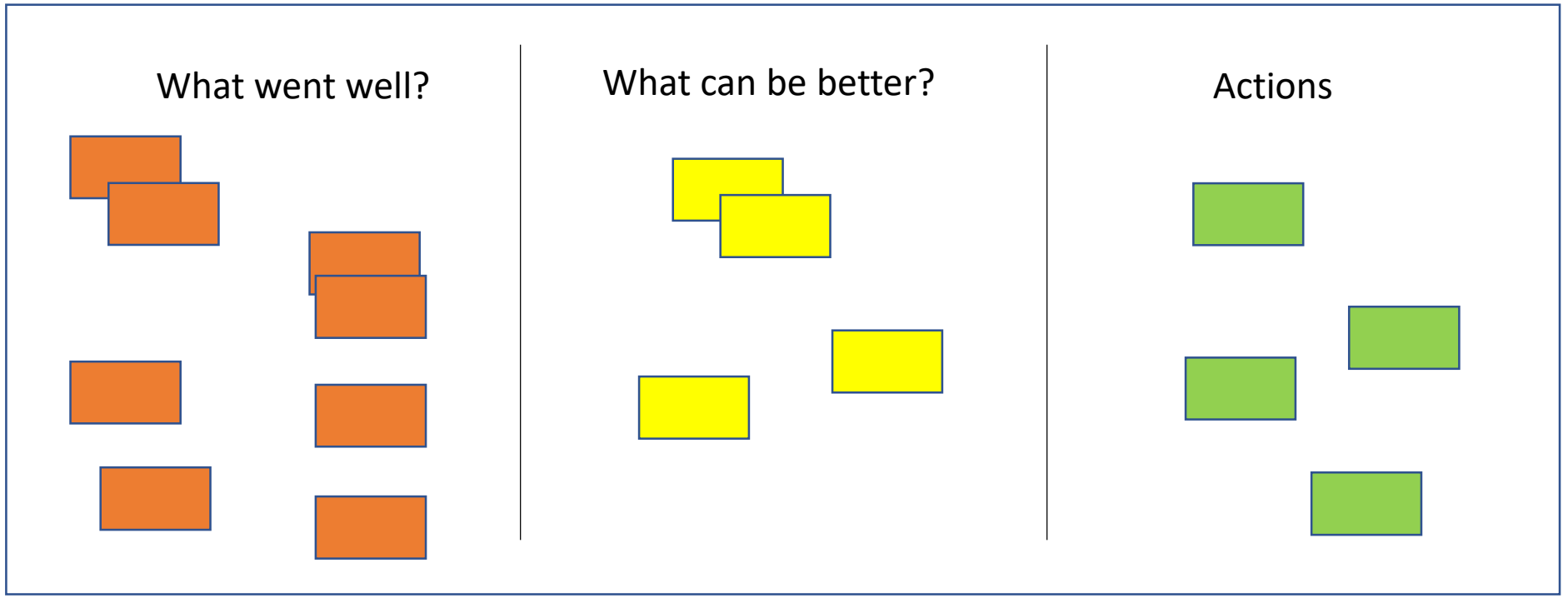


Chair of Process and Data Science

Sprint Retrospective

- Meeting to inspect how was the Sprint
  - What went well?
  - What can be better?
  - Actions to improve - adaption
- Should be present:
  - Development team and Product Owner

Sprint Retrospective



Chair of Process and Data Science

Scrum cycle - Summary

Chair of Process and Data Science

Scrum cycle - Summary

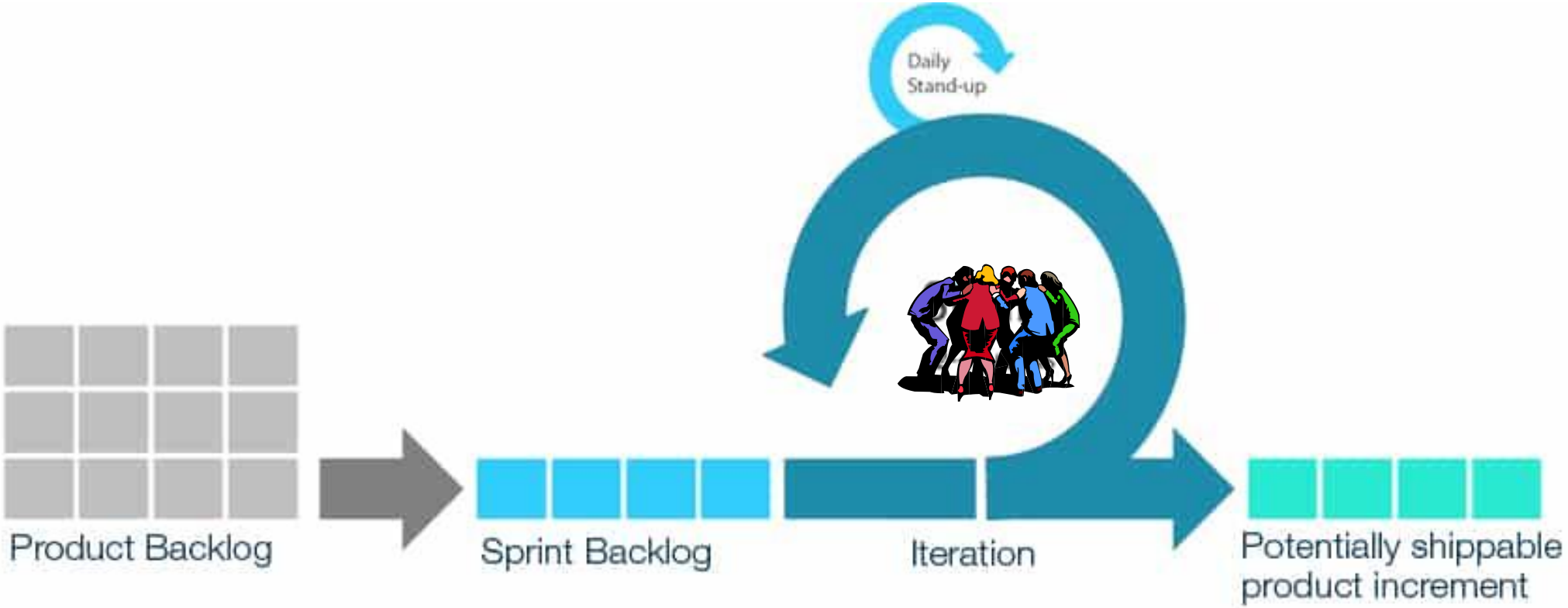
Chair of Process and Data Science

Sprint - Summary

Sprint Planning

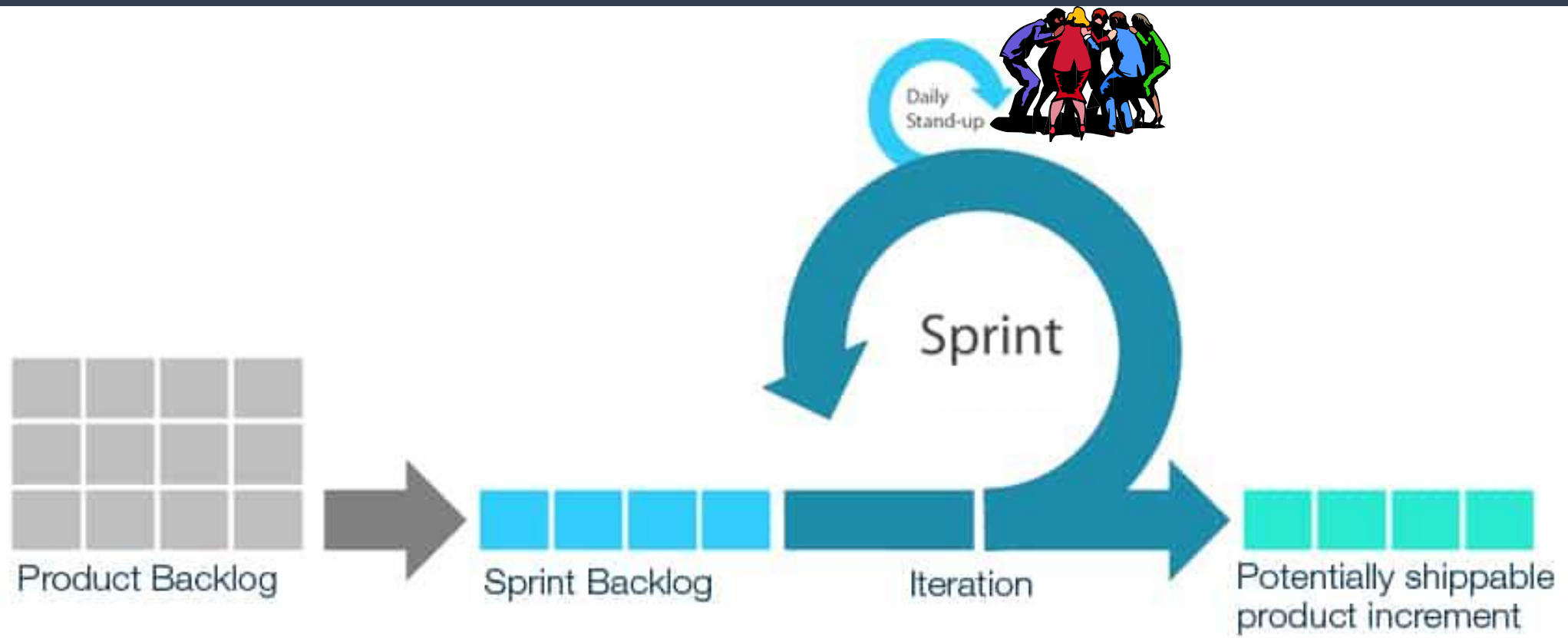
Chair of Process and Data Science

Sprint - Summary



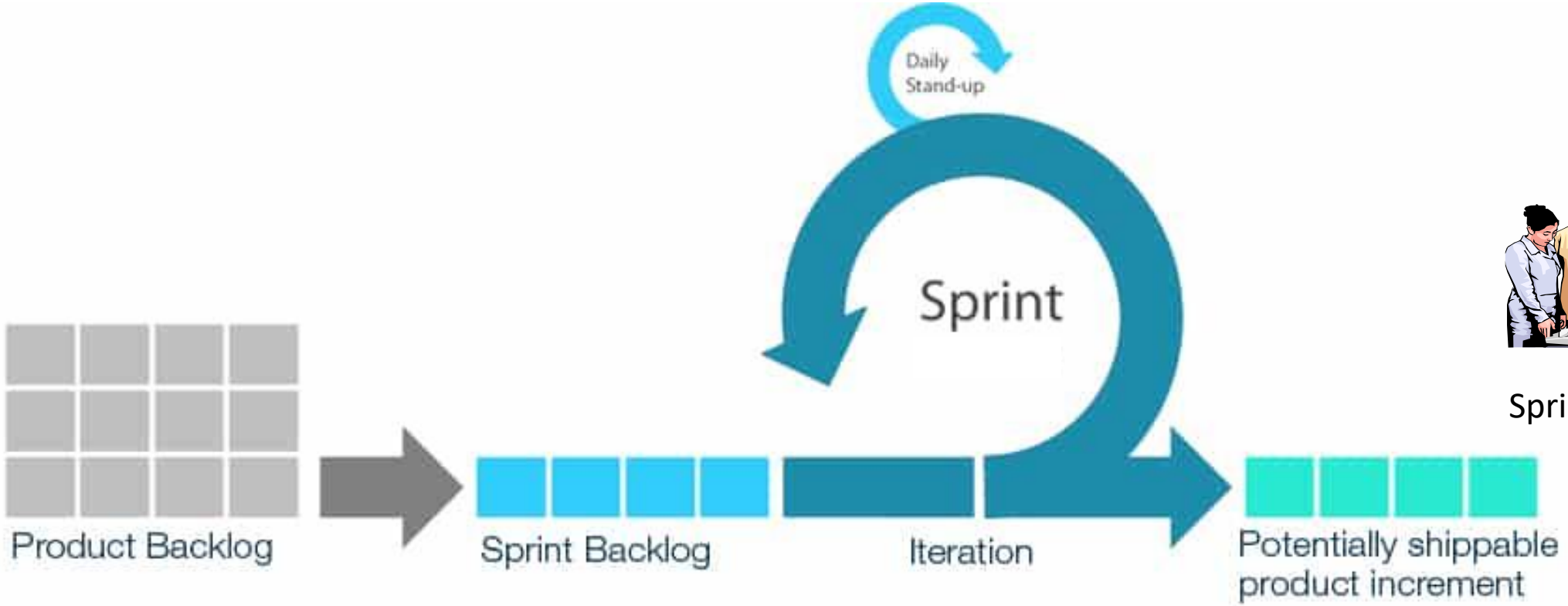
Chair of Process and Data Science

Sprint - Summary



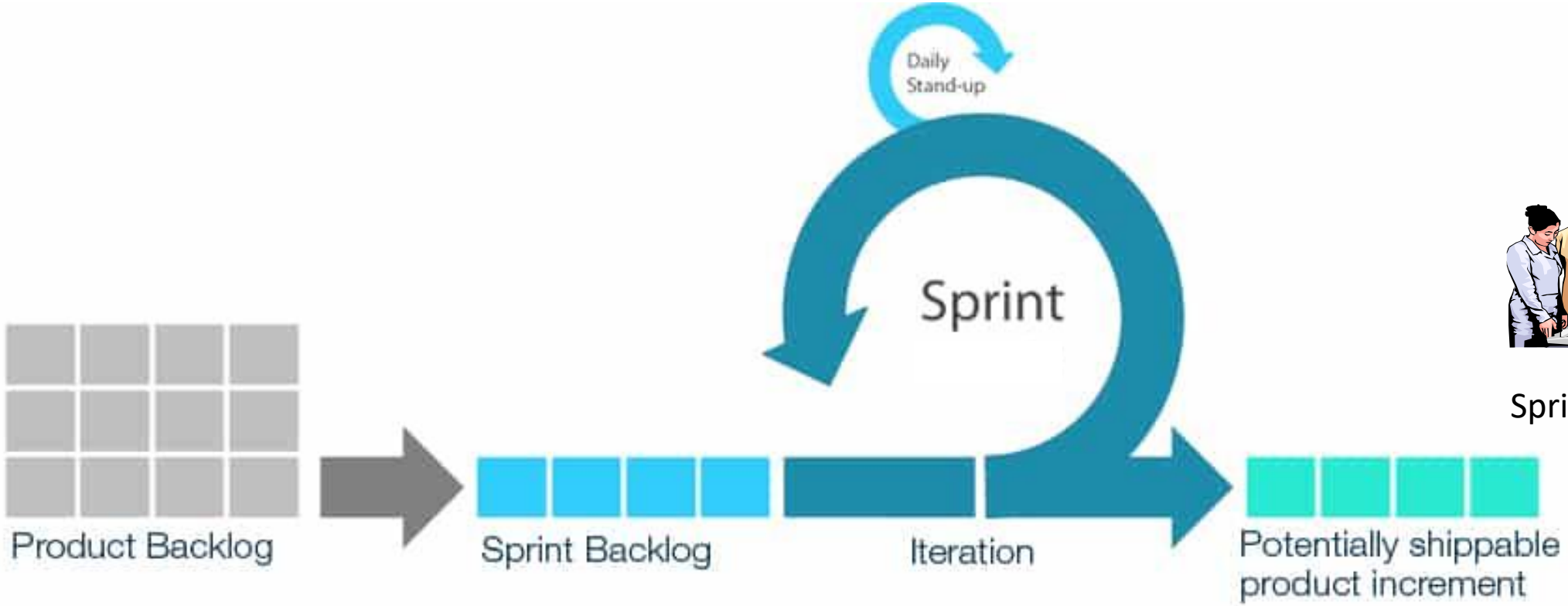
Chair of Process and Data Science

Sprint - Summary



Sprint Review

Sprint - Summary



Sprint Retrospective

Team composition

- 1 Scrum Master
- 1 Product Owner
- 2 or 3 Development Team

Product Backlog construction and DoD

- Stories/requirements
  - Try to break big stories/requirements into smaller ones (avoid epics)
  - Prioritize the stories/requirements
  - Order them according to the given priority
- Stablish the definition of done:
  - Example
    - Code implemented
    - Unit tests updated
    - Tutorial/manual updated

Chair of Process and Data Science

Sprint - Summary

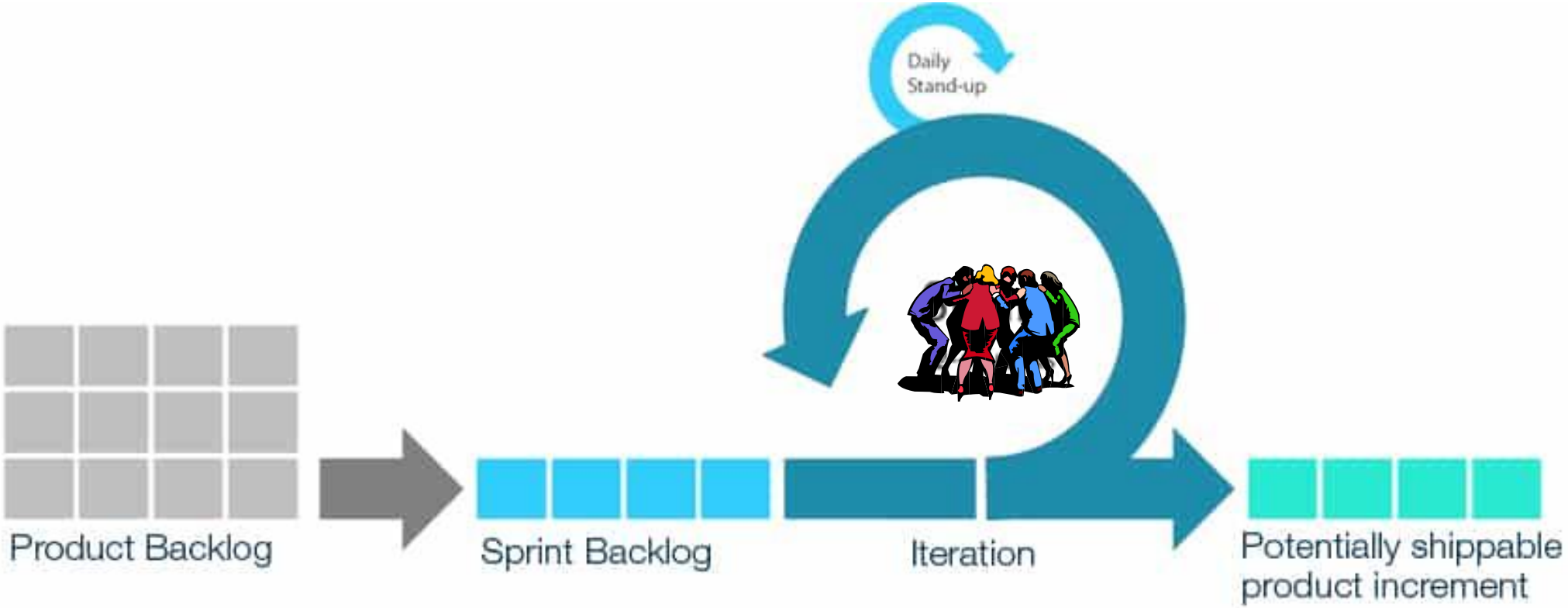
Sprint Planning

Chair of Process and Data Science

Sprint planning

- Define the items from the product backlog to be implemented during the sprint
- Estimate them (Planning poker)
- Result:
  - Sprint Backlog
  - The goal of the Sprint

Sprint

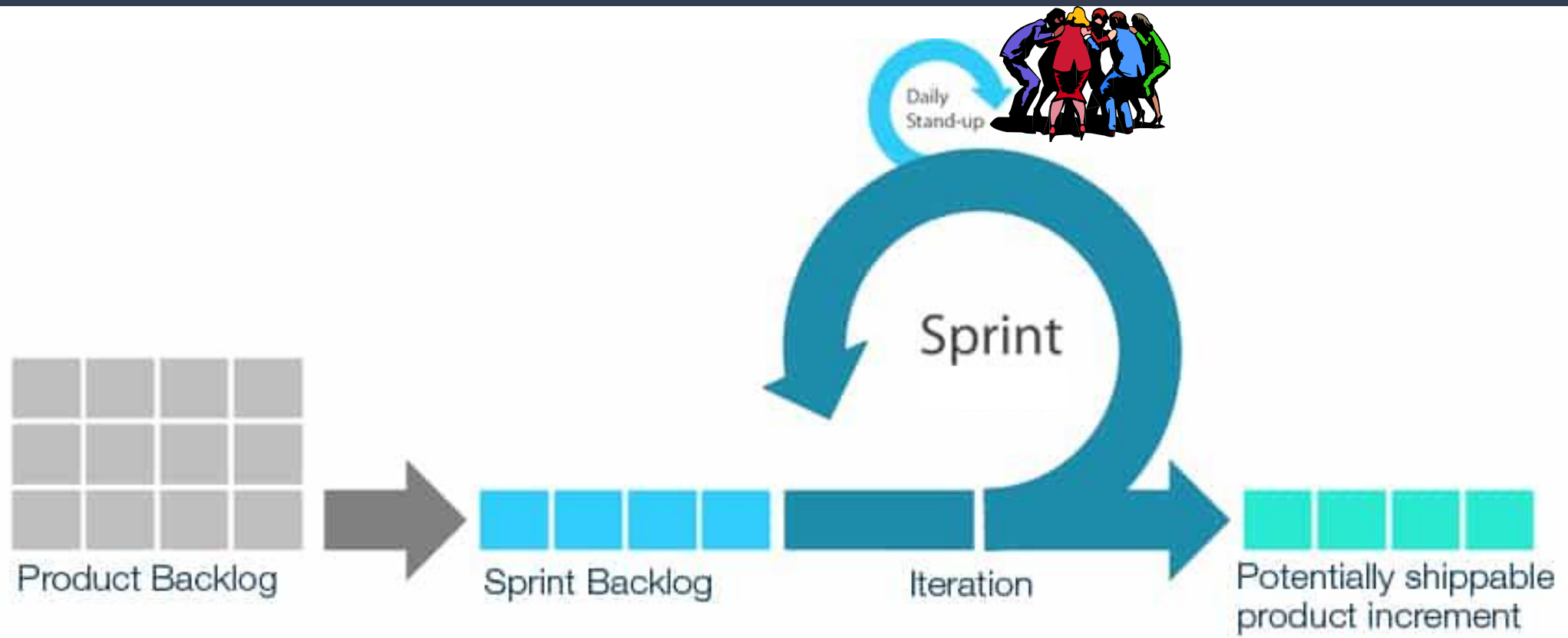


Chair of Process and Data Science

Development

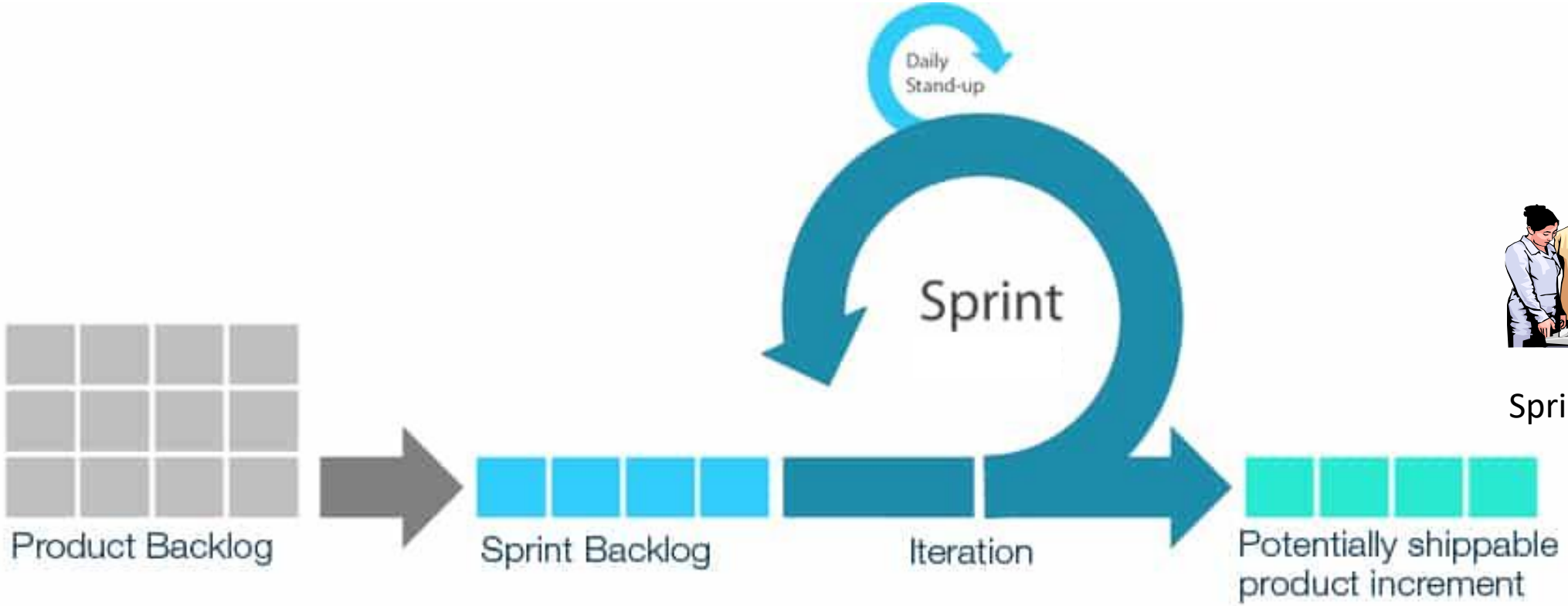
- Do not allocate 100% of your time on the implementation of items
  - Leave some space for correcting bugs dealing with problems.
- Try to leave the third sprint only for issue solving, refactoring and finishing things you shall have finished in the first two sprints.
- Tasks for refactoring an existing implementation or Issue solving should be included in the future Sprints when they are necessary.

Sprint



Chair of Process and Data Science

Sprint - Summary

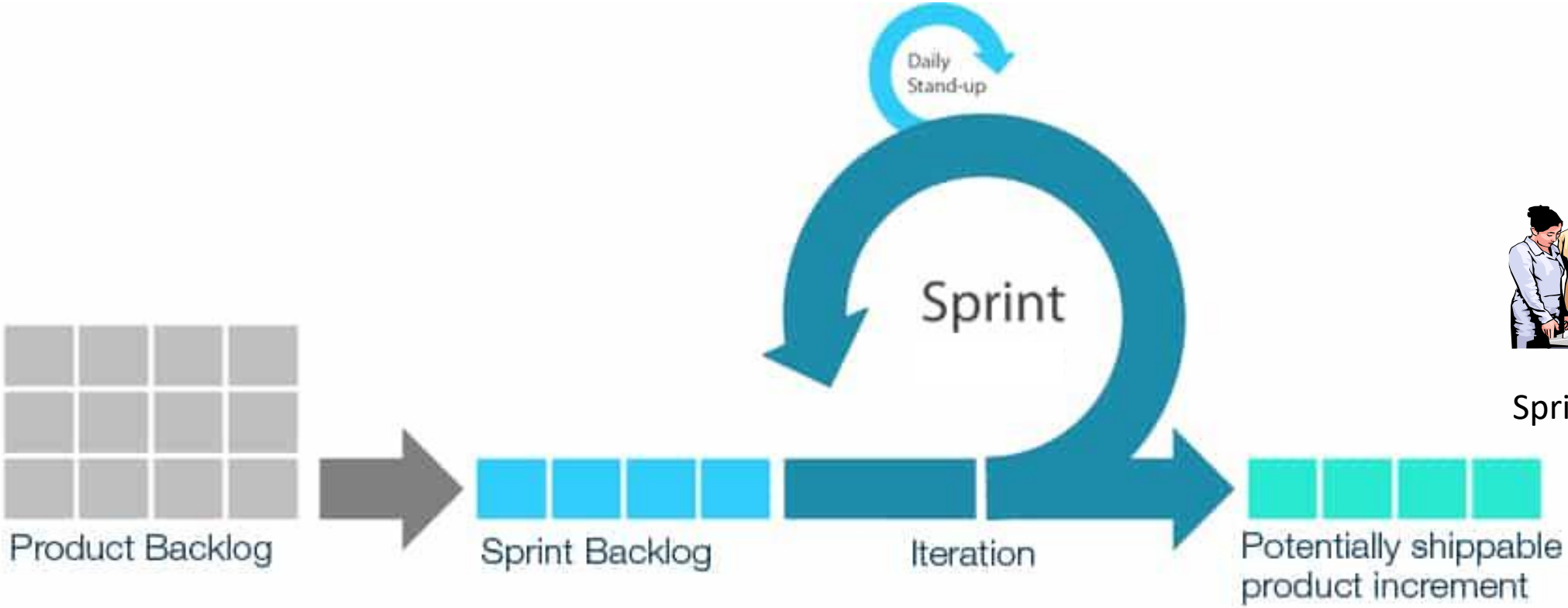


Sprint Review

Sprint review

- No need to demo to us
  - It can be done between the members of the team.
  - Try to use it to assert that the goal of the sprint is achieved
- Provide a document with some screenshots and a test script/tutorial to test the implementation.

Sprint - Summary



Sprint Retrospective

Chair of Process and Data Science

Sprint retrospective

- Discuss about:
  - what went well?
  - what should be better?
- Propose actions
  - Be objective!

Deliverables

- Product Backlog:
  - Ordered and prioritized
- At the beginning of each Sprint:
  - Sprint backlog
    - Estimated!!!
  - The goal of the Sprint
- At the end of each Sprint:
  - Increment of product
  - Tutorial/test script
  - Phase review document

What will be evaluated

- Ability to execute what is planned or most of it in the estimated time
- Ability to manage the repository.
- Ability to manage the backlogs (product and sprint)
  - Trello or Gitlab.
- Planned documentation and tests for the tasks are done.
- «Sprint review» and «Sprint retrospective» are done.

References

- Scrum Guide
- Agile Estimating and Planning: Planning Poker - Mike Cohn