Professional Scrum Master & Product Owner

DI Peter Tagesen

Seminarablauf

- 9:30 (9:00) bis ca. 12:30
- Mittagspause 1 Stunde
- Ca. 13:30 bis 17:00
- Vormittags und nachmittags jeweils eine Pause à 30 Minuten

- Falls Fragen auftauchen – einfach fragen
- Handout, Folienset und Fotoprotokoll wird nach dem Training versendet.

Inhalt des Seminars

- SCRUM-Framework verstehen und anwenden können
- Optimale Vorbereitung für die PSM I und PSPO I Zertifizierung
- Die Folien sind auf Englisch, um die Begriffe zu verwenden, die auch bei der Prüfung auftauchen (können)
- Die Tag-Clouds auf einigen Folien enthalten hilfreiche Schlüsselwörter

Zertifizierung PSM I und PSPO I

- Online Test bei scrum.org
- 80 Fragen (Multiple Choice, Multiple Answer und True/False)
- 60 Minuten
- Bestanden bei mehr als: 85%
- Nur in Englisch verfügbar!
- Hauptreferenz ist der Scrum Guide Version von 2020!
- Auf scrum.org gibt es Open assessments für die Vorbereitung mit 30 Fragen in 30 Minuten und einem reduzierten Fragen-Pool.
- Zertifizierung gilt lebenslang. Keine Rezertifizierungen nötig

Since when agile methods do exist?

1947	Kanban (Taiichi Ohno), Lean Management
1978	Organizational Learning (Chris Argyris, Donald Schön)
1986	The name Scrum is mentioned the first time
1990	Jeff Sutherland develops the role of a Scrum Master
2001	The agile manifesto is published

Manifesto for Agile Software Development

(https://agilemanifesto.org/iso/en/manifesto.html

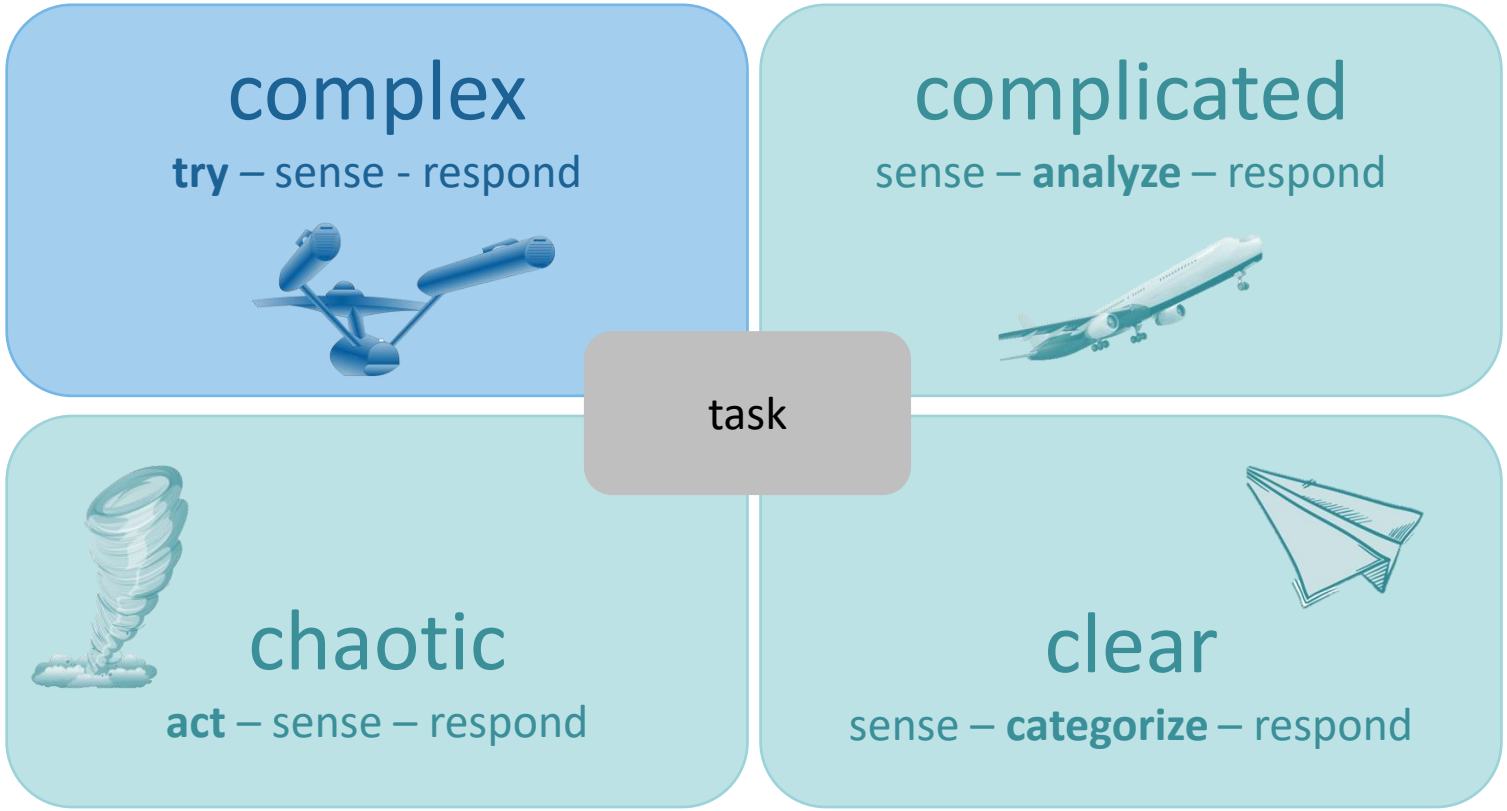
Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

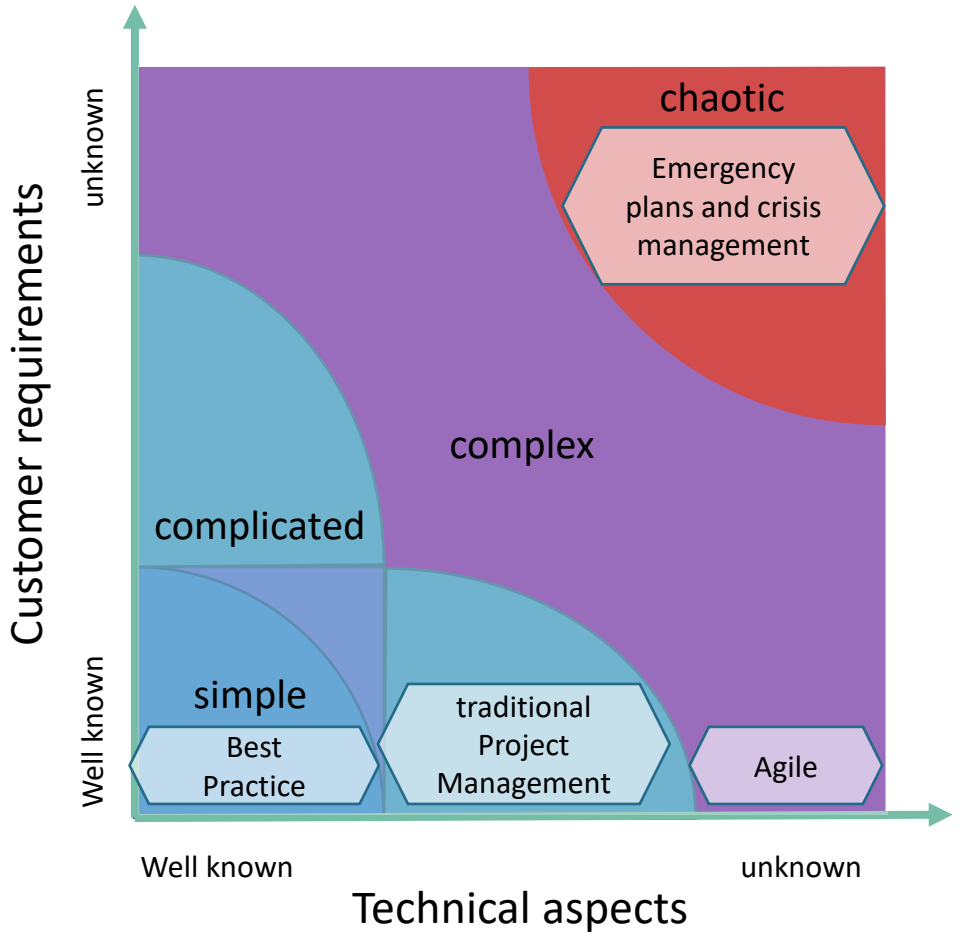
Responding to change over following a plan

Is Agile the best solution for all tasks?

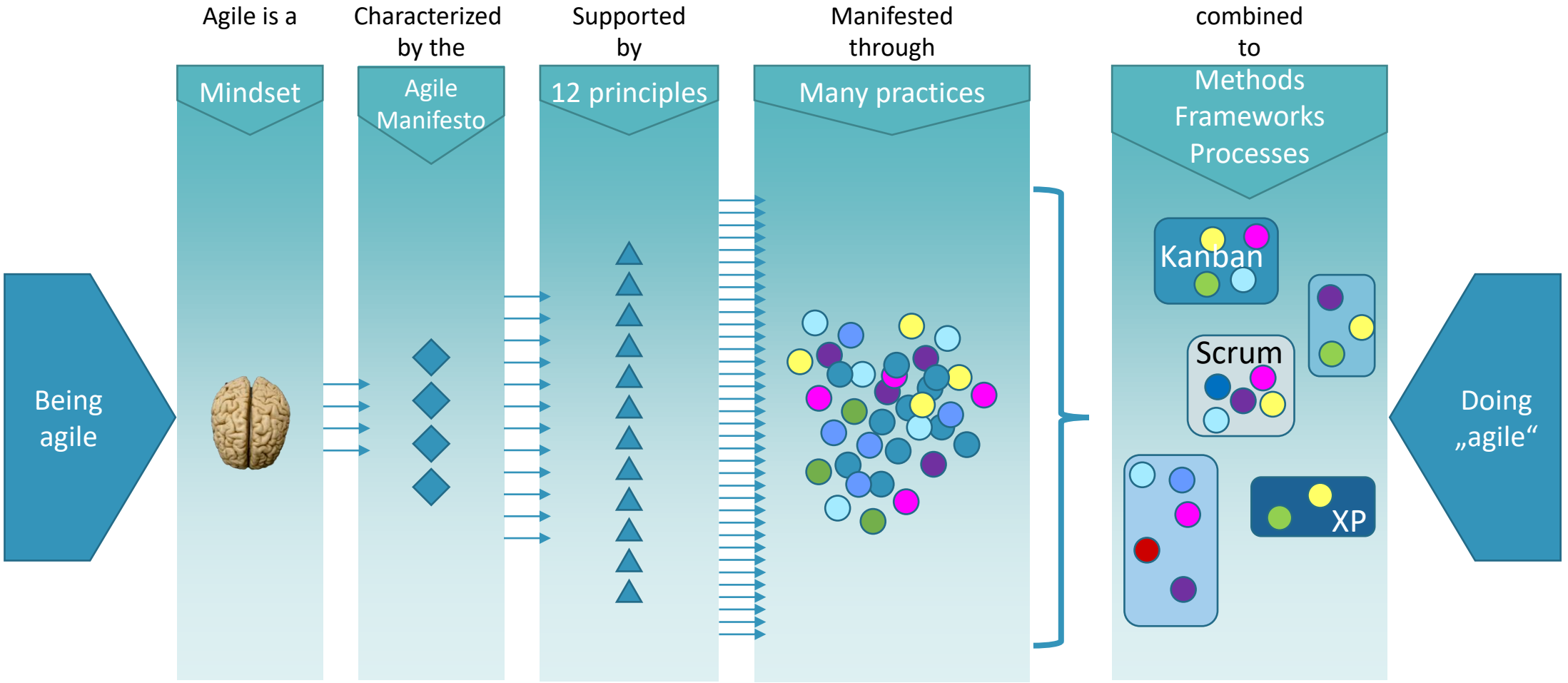


Cynefin-Modell (Dave Snowden)

Ralph Stacey Matrix



What is the essence of Agile?



https://agilemanifesto.org/iso/de/principles.html)

Definition of Scrum

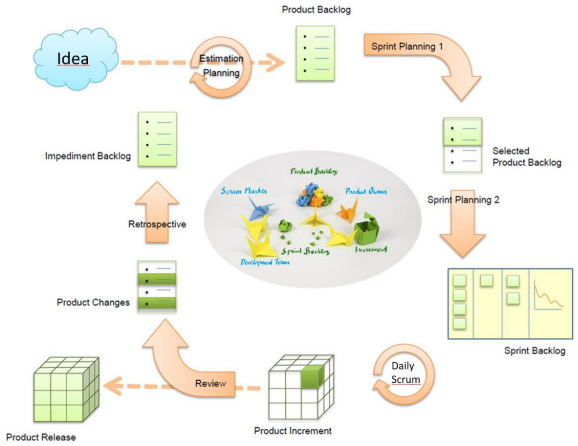
- Scrum is not a ~~process~~, ~~technique~~, or ~~definitive method~~!
- Scrum is a lightweight framework that helps people, teams and organizations generate value through adaptive solutions for complex problems.
- Various processes, techniques and methods can be employed within the framework.
- Scrum makes clear the relative efficacy of your product management and work techniques so that you can continuously improve the product, the team, and the working environment.

Definition of Scrum

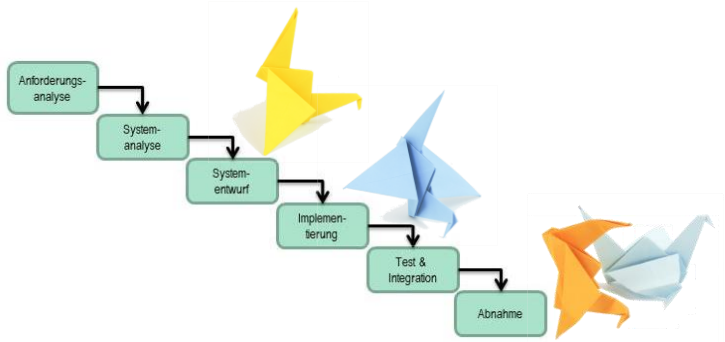
- The Scrum framework is purposefully incomplete.
- Scrum is built upon by the collective intelligence of the people using it.

Scrum vs. traditional PM

Empirical process control

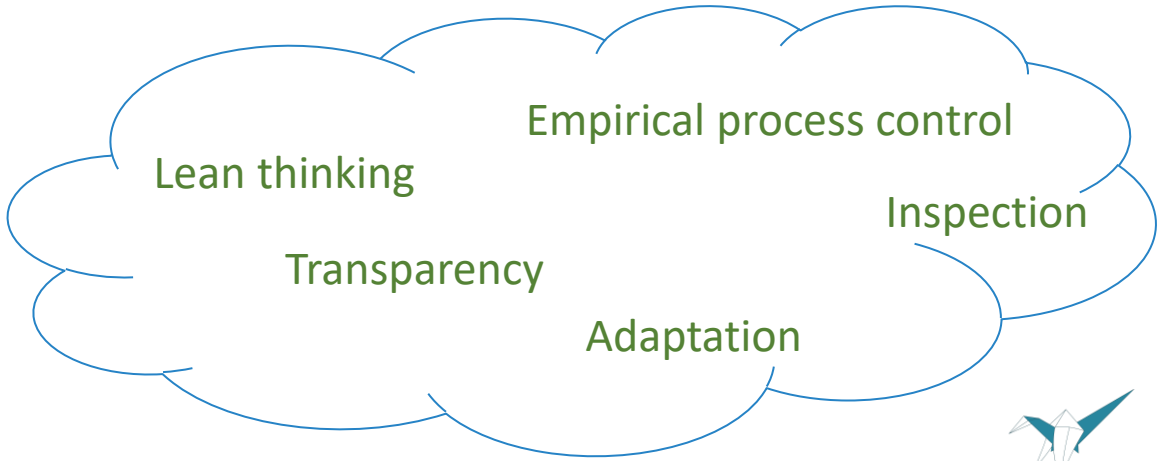


Predictive Processes – sequential design



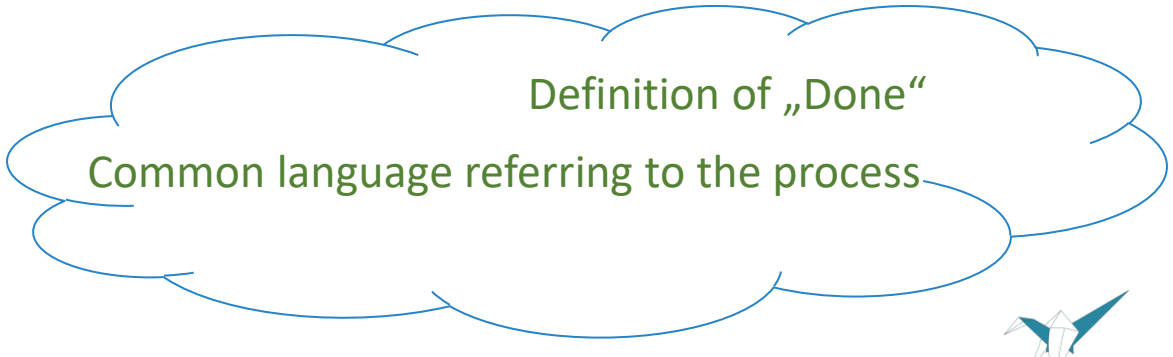
3 Pillars of empirical approach:

- Transparency
- Inspection
- Adaptation



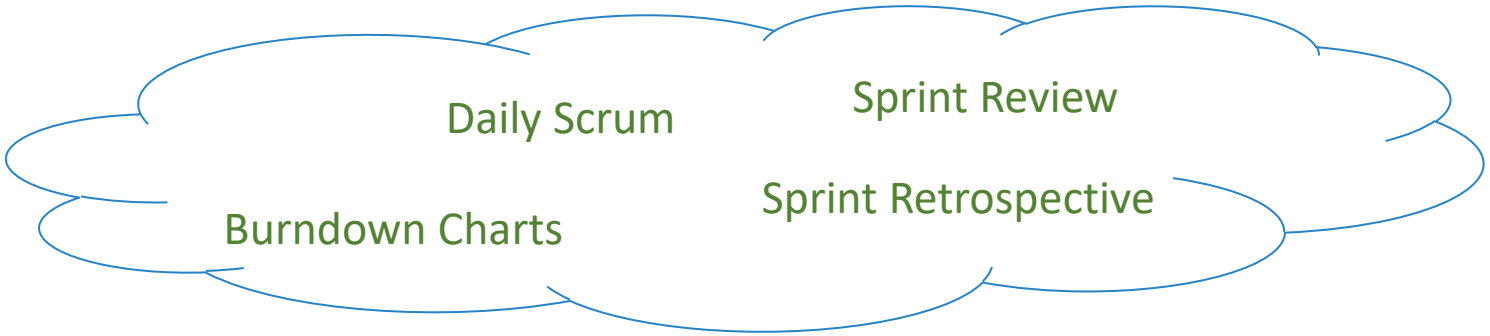
Transparency

- Significant aspects of the process must be visible to those performing the work as well as those receiving the work.
- Important decisions are based on the perceived state of its 3 formal artifacts.
- Transparency requires those aspects be defined by a common standard
- Create a common understanding!



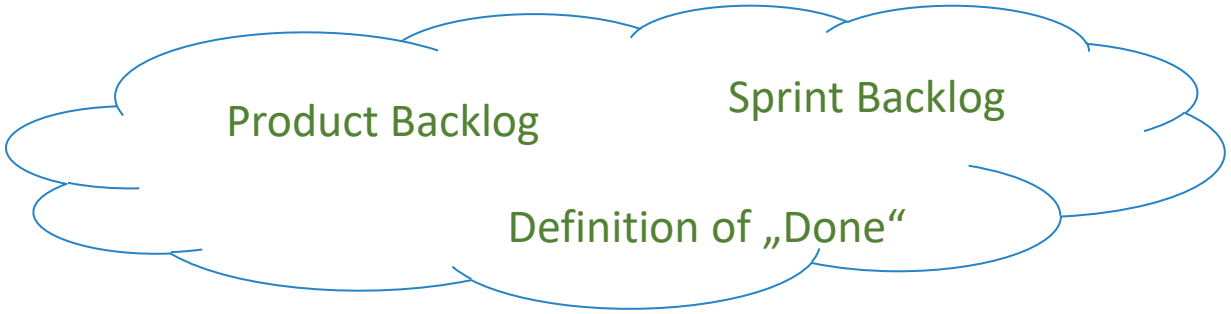
Inspection

- Scrum users must frequently inspect Scrum artifacts and progress toward a Sprint Goal to detect undesirable variances.
- Their inspection should not be so frequent that inspection gets in the way of the work.
- Transparency is necessary to be able to inspect!

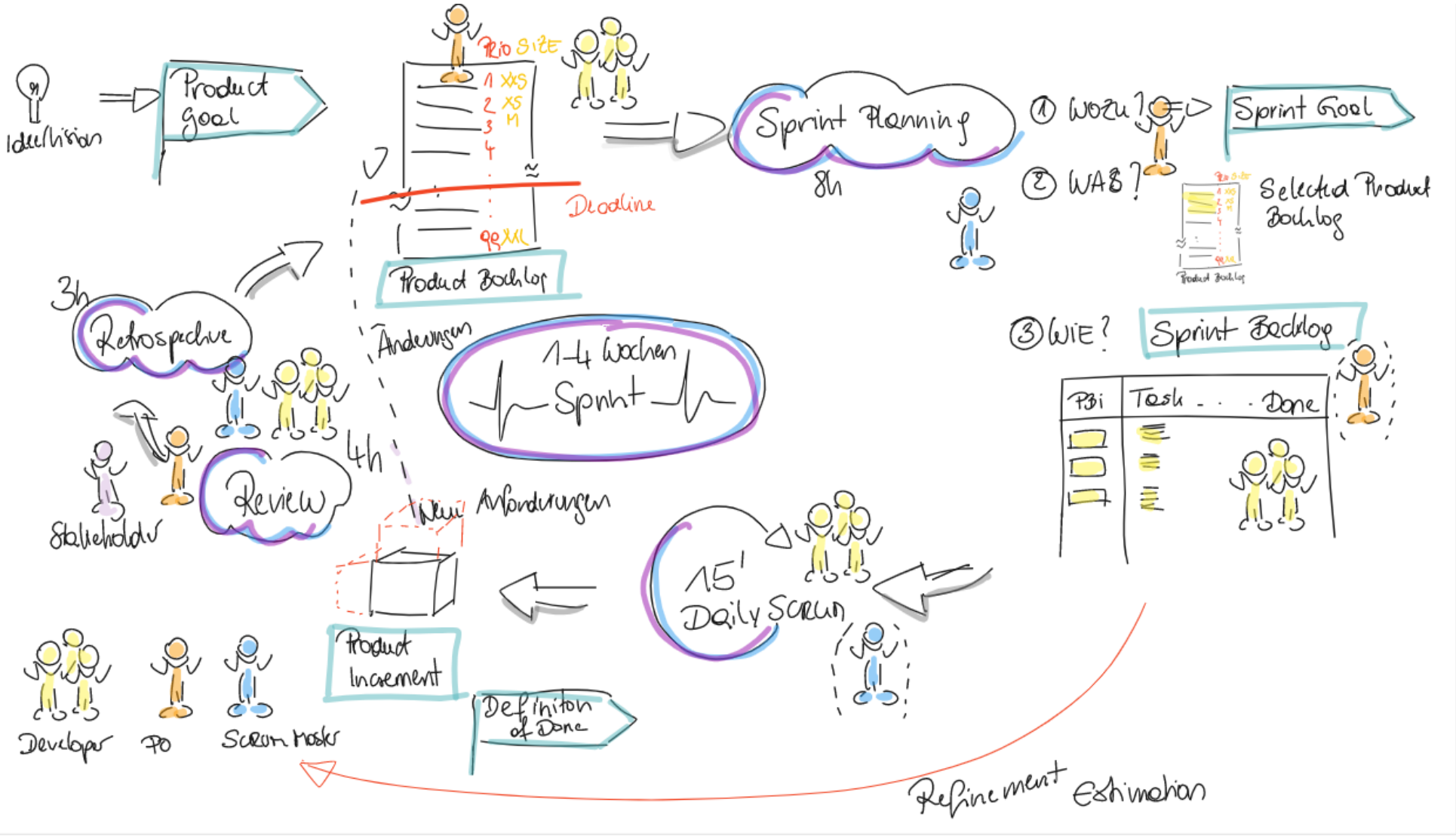


Adaptation

- Process deviations outside acceptable limits must be corrected by adjusting the process.
- Adjustments must be made as soon as possible.
- Adaptation becomes more difficult when the people involved are not empowered or self-managing!



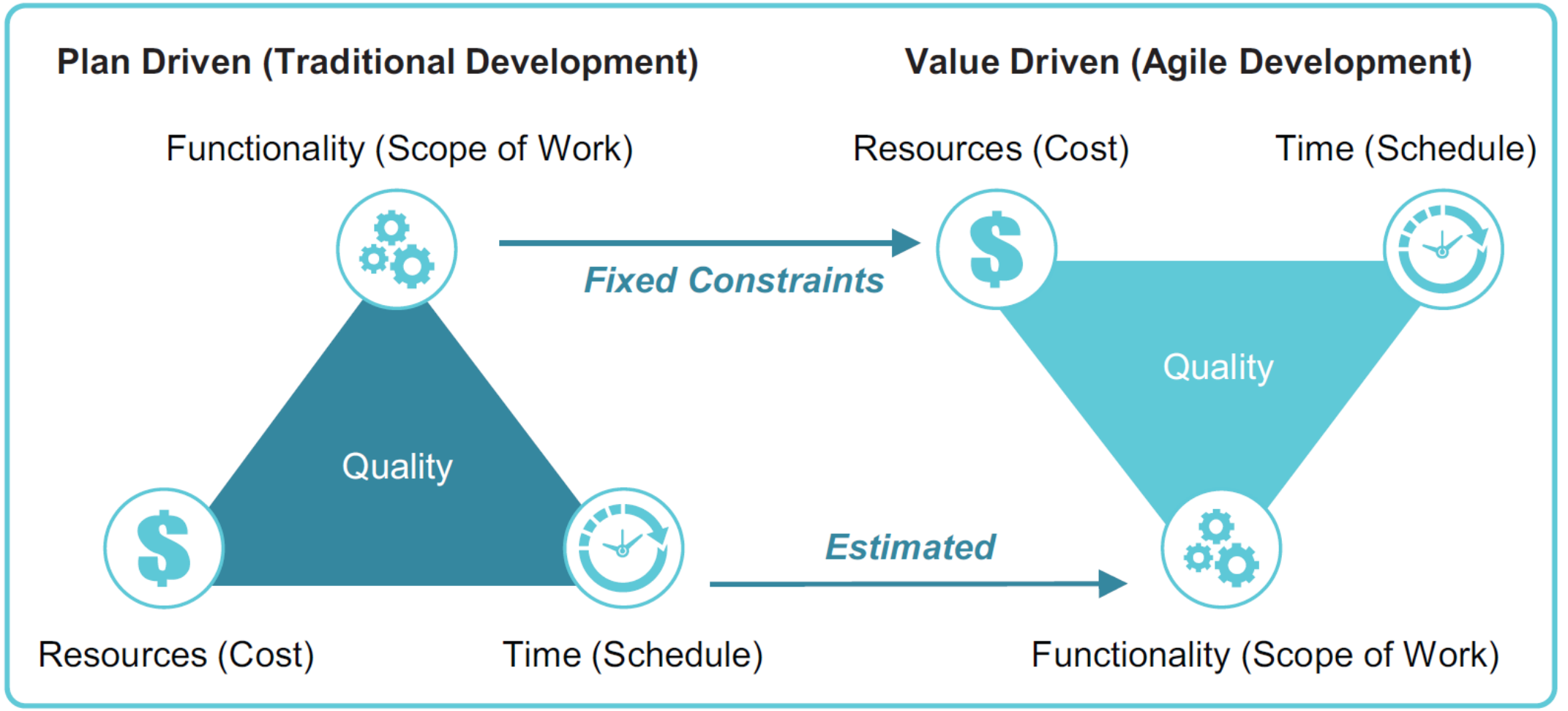
Scrum Flow


Idee/Vision
Product Goal
Prio Size
1 XXS
2 XS
3 M
4
qq XXL
Deadline
Product Backlog
Sprint Planning
8h
① Wozu? Sprint Goal
② WAS? Selected Product Backlog
③ WIE? Sprint Backlog
Pbi
Task
Done
1-4 Wochen Sprint
Änderungen
3h
Retrospective
4h
Review
Stakeholder
Anforderungen
15' Daily Scrum
Product Increment
Definition of Done
Developer
PO
Scrum Master
Refinement
Estimation

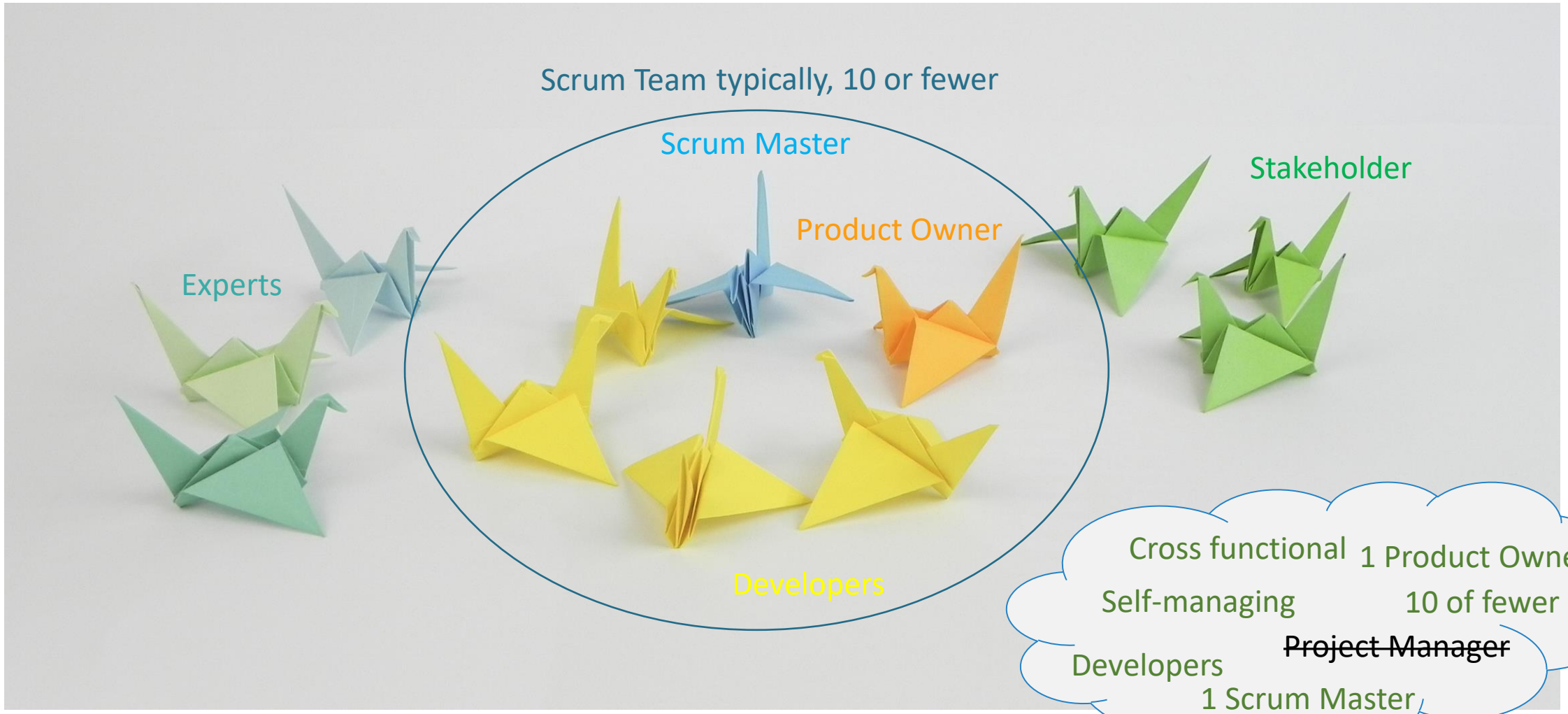
Traditional vs. agile development

Traditional development	Agile development
It starts with a complete design	It is focused to deliver a functioning product every Sprint
Building the product is followed by testing the final product	It is an iterative way to deliver products starting with the basic functionality and adding features with every iteration.
The acceptance test is often done in the production system	It is focused on delivering value to the customer early through continuous delivery (Value-Driven)
There are (almost) no feedback loops	It is focused on the deliverable which is the product (Product-Focused)
It is a plan-driven systematic way to develop products	
It is focused on activities (Activity-Focused)	

Plan driven vs. value driven

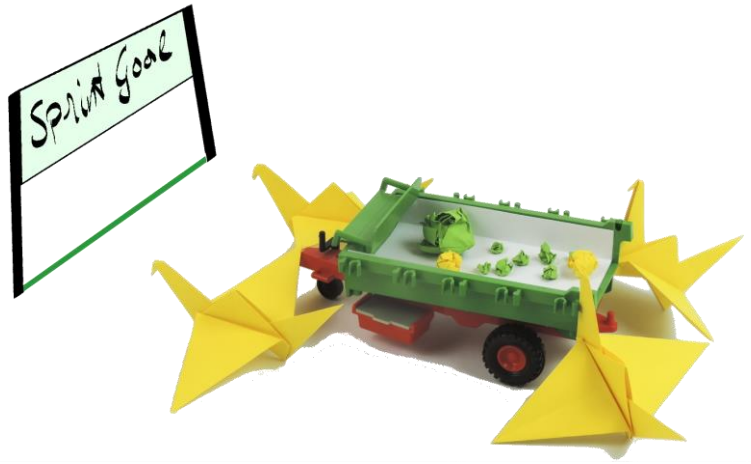


SCRUM Roles


Scrum Team typically, 10 or fewer
Scrum Master
Product Owner
Stakeholder
Experts
Developers
Cross functional
1 Product Owner
Self-managing
10 of fewer
~~Project Manager~~
Developers
1 Scrum Master

Developers

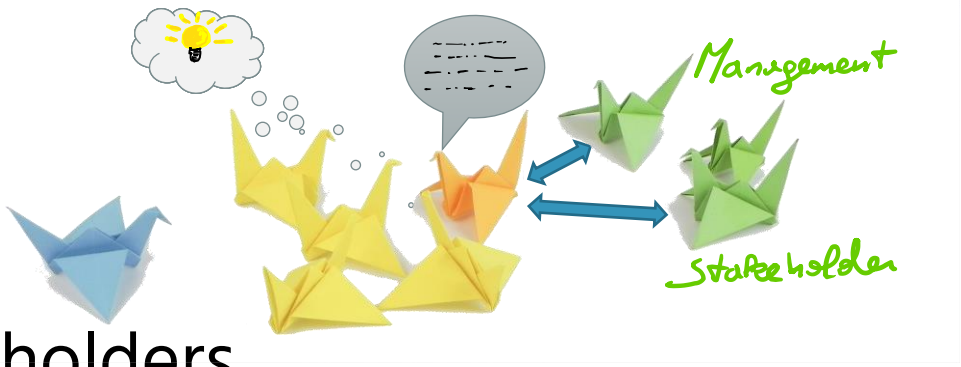
- Are self-managing ➔ who does what, when, and how
- Are cross-functional
- Are able to develop, maintain and support a product
- Have no titles
- No sub-teams
- Accountable for:
  - Creating a plan for the Sprint, the Sprint Backlog
  - Quality by adhering to a Definition of Done
  - Adapting their plan each day toward the Sprint Goal
- Resolve internal team conflicts
- May have specialized skills and areas of focus but support each other



Cross functional team

Typically, we want to have T-shaped Team members

Product Owner

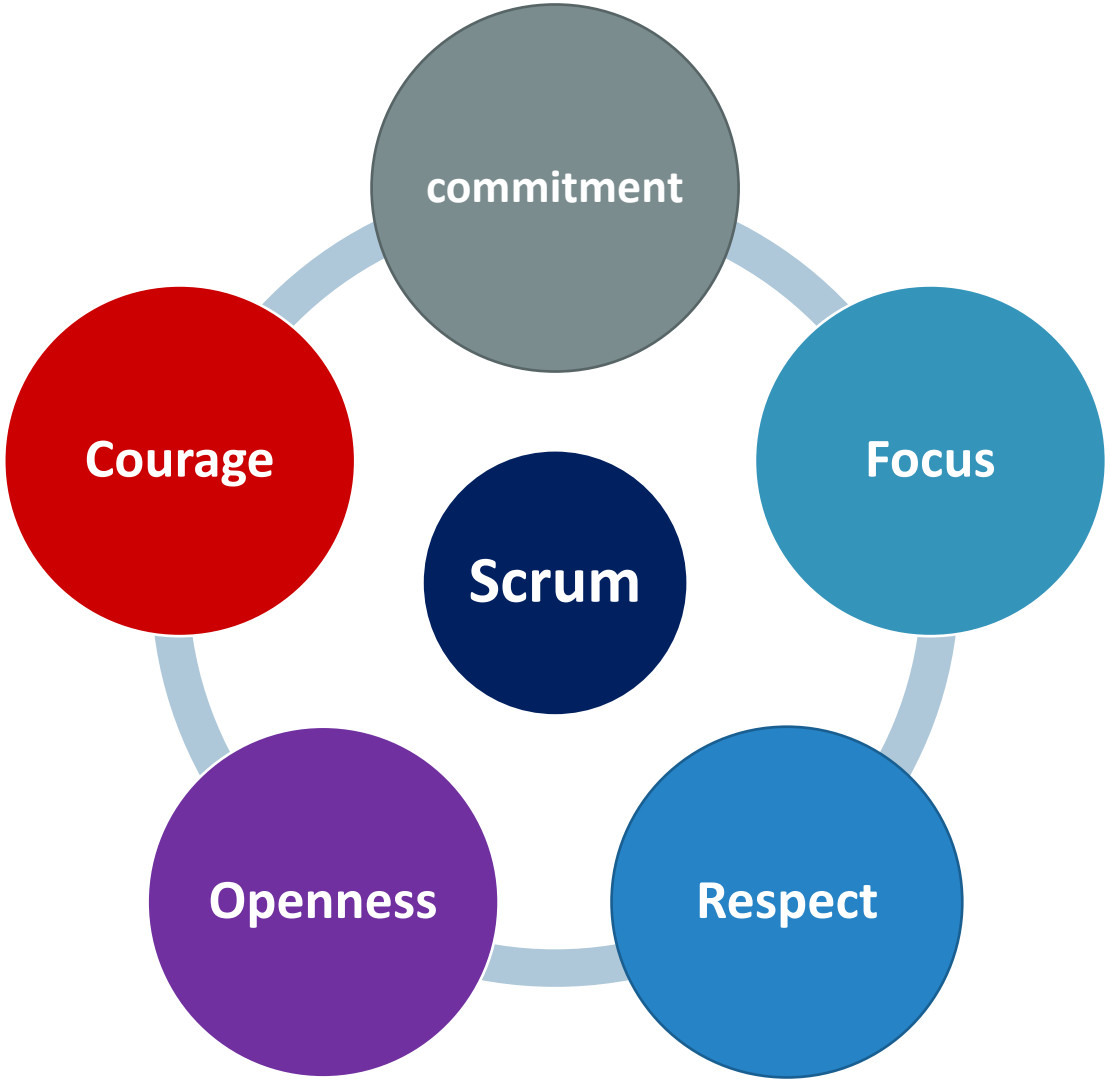


- is one person
- may represent the needs of the stakeholders
- accountable for effective Product Backlog management
  - Developing and explicitly communicating the Product Goal
  - Creating and clearly communicating Product Backlog items
  - Ordering Product Backlog items
  - Ensuring that the Product Backlog is transparent, visible and understood.
- The entire organization must respect their decisions
- Only person who can cancel the Sprint

Scrum Master

- Accountable for establishing Scrum by helping everyone understand Scrum theory and practice
- Accountable for the Scrum Team's effectiveness by enabling the Scrum Team to improve its practices
- Are true leaders who serve the Scrum Team and the organization
- Removing barriers between Stakeholders and Scrum Team
- Facilitating stakeholder collaboration
- Removes impediments

Scrum Values



Commitment

- Is often misinterpreted as the „expectation that all scope would be delivered, no matter“ - very much like a hard-coded contract.
- it was always intended as an indication that the team would do the maximum possible effort in the Sprint and be completely transparent about progress.
- The Scrum Team commits to achieving its goal and to supporting each other.
- „Commitment is about dedication and applies to the actions, the effort, not the final result.“
- “Commitment is a pledge to do our best with what we have.” (Ken Schwaber)

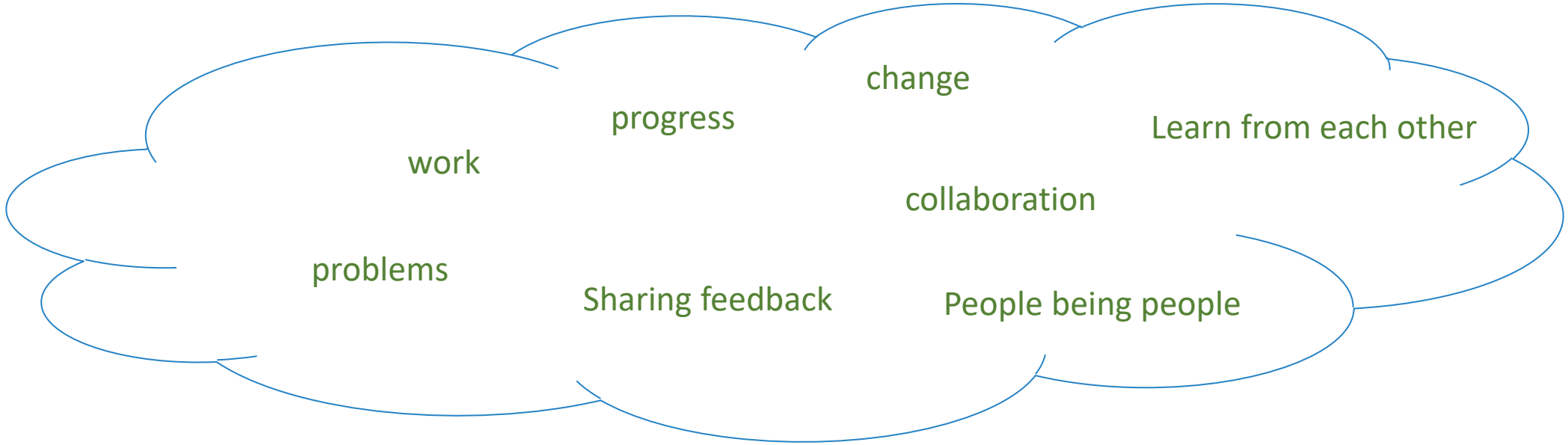
Focus

We focus on

- what‘s most important now and NOT on what might be important one day.
- what we know now.
- what‘s most nearby in time – the future is highly uncertain („Cone of uncertainty“)
- the work to get things done
- the simplest thing that might possibly work
- To make the best possible progress toward the goal

Openness

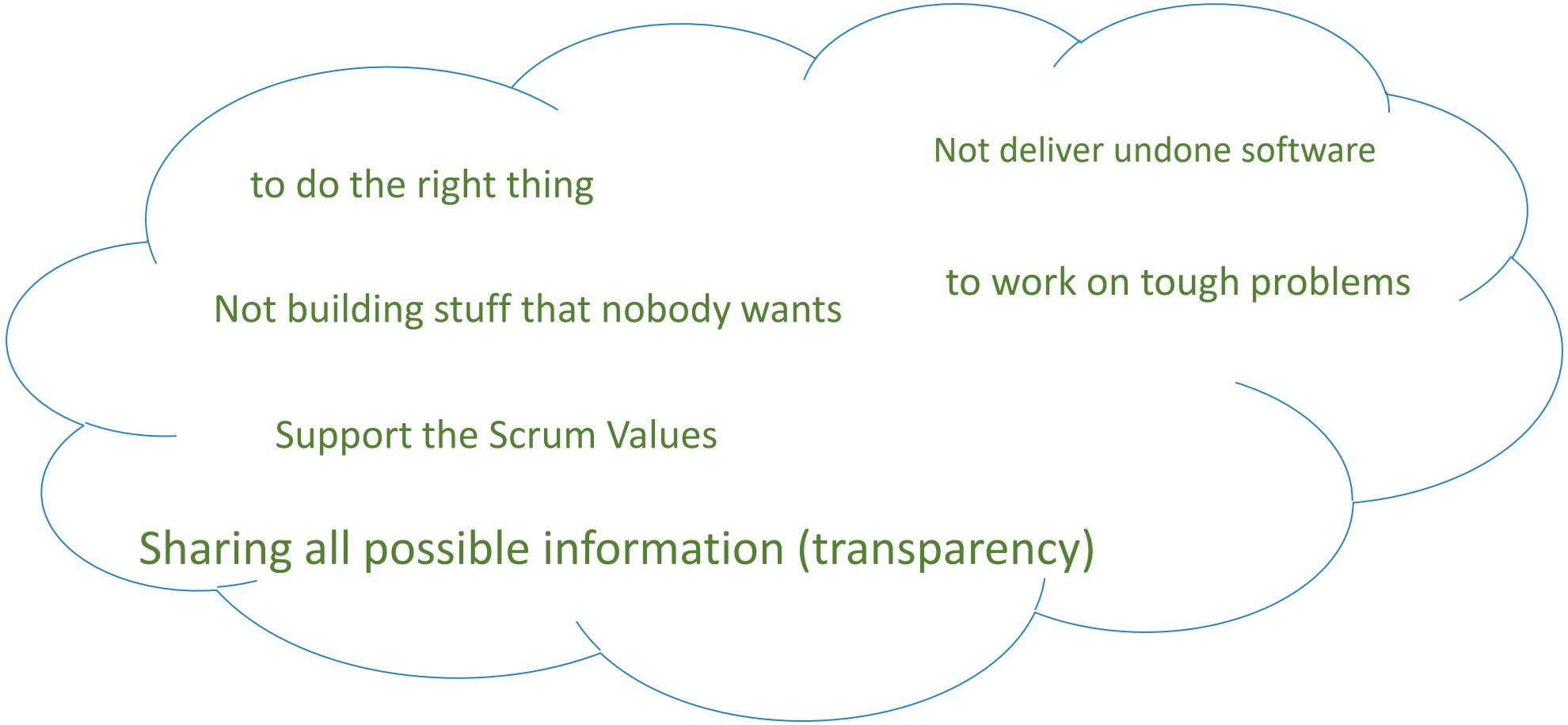
- The empiricism of Scrum requires transparency, openness. We want to inspect reality in order to make sensible adaptations.



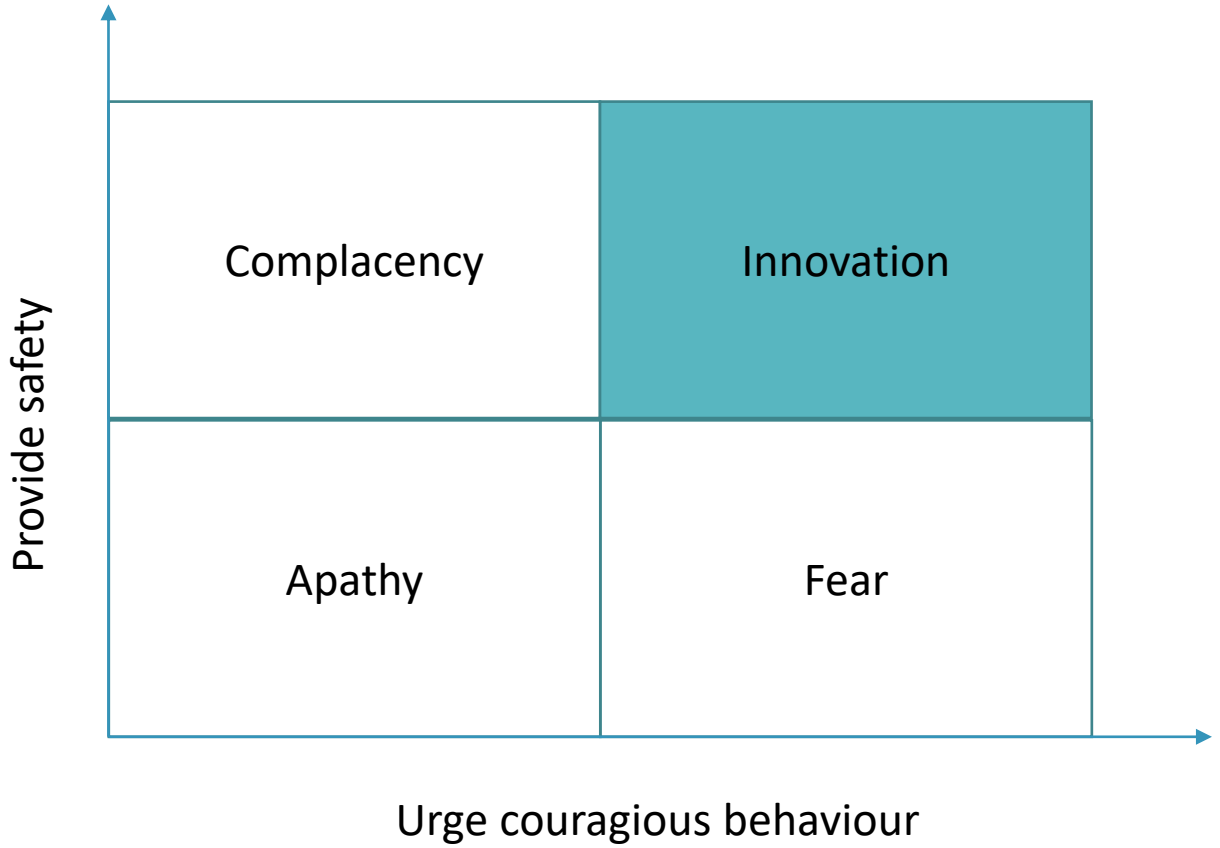
Respect

- We show respect for people, their experience and their personal background.
- We show respect for our sponsors by not building features that nobody will use.
- We show respect by not wasting money on things that are not valuable or might never being implemented or used.

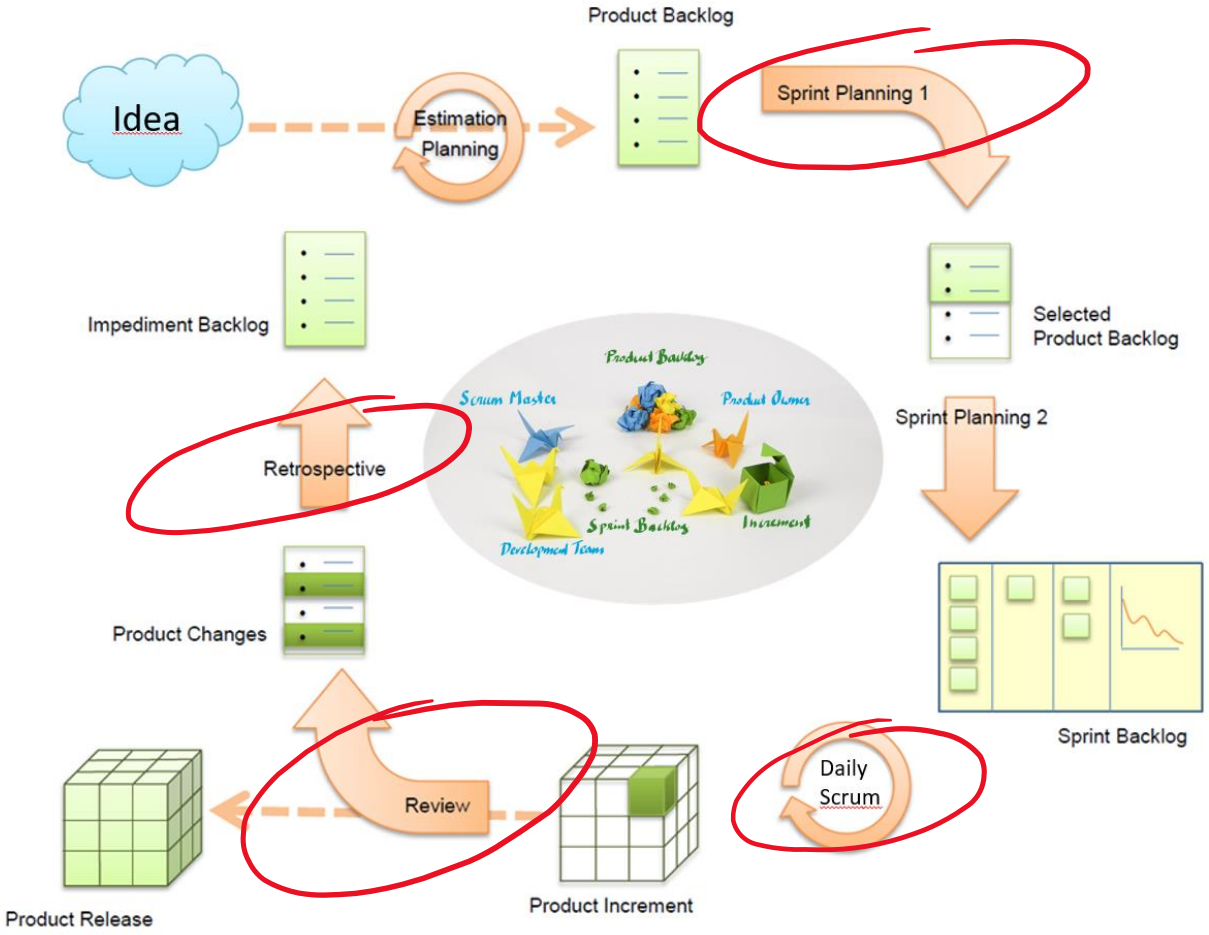
Courage


to do the right thing
Not deliver undone software
Not building stuff that nobody wants
to work on tough problems
Support the Scrum Values
Sharing all possible information (transparency)

Courage requires safety



Scrum Events



- Sprint Planning
- Sprint Retrospective
- Daily Scrum
- Time-box
- Sprint Review
- Enable transparency and inspection
- Opportunity to inspect and adapt

The Sprint

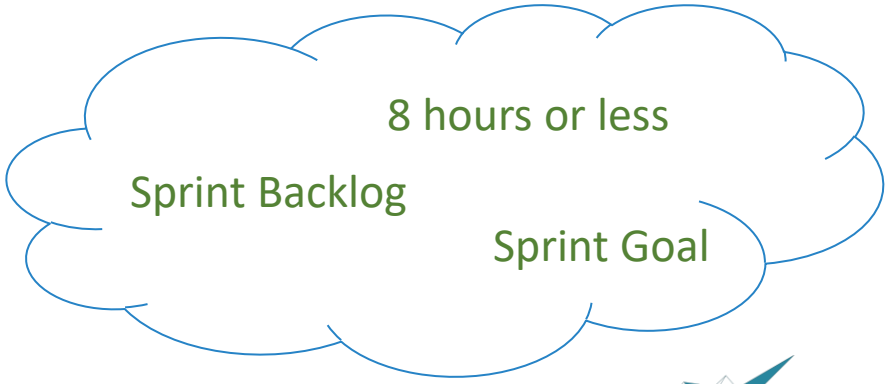
- A time-box of one month or less
- A „Done“, usable, and potentially releasable product increment is created
- Starts immediately after the conclusion of the previous Sprint
- Has a Sprint Goal that has to remain intact
- Quality goals do not decrease
- The scope may be clarified and re-negotiated between the Product Owner and the Development Team
- Can only be cancelled by the Product Owner when the Sprint Goal becomes obsolete
- Requires no more than a Product Owner, a team and enough ideas to potentially complete a full Sprint

The optimal Sprint length

- No more than one month
- Not shorter than one week
- Short enough to keep the business risk acceptable to the PO
- Short enough to synchronize the development work with other business events
- Consider the risk of being disconnected from the stakeholders
- Consider the level of uncertainty of the technology to be used
- Prefer consistent length through a project

Sprint Planning

- Time-boxed; 8 hours for a monthly Sprint. For shorter Sprints it is usually shorter.
- Answers the questions
  - “Why is this Sprint valuable”
  - “What can be done” and
  - “How can we do it”
- The Sprint Backlog is created



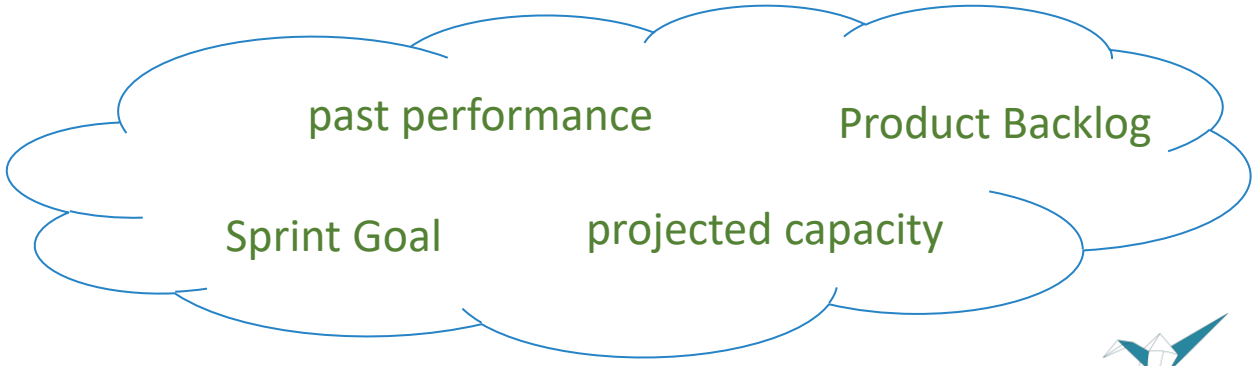
Sprint Planning – „Why“

The Sprint Goal

- describes the benefit for the customer
- helps the Development Team to focus on why it is building the Increment
- gives flexibility regarding the functionality
- is a result of the Sprint Planning

Sprint Planning – „What“

- The Product Owner explains what he wants to achieve with this Sprint
- The Product Owner tells which Product Backlog items are needed
- The entire Scrum Team collaborates on understanding the work of the Sprint
- The number of items selected is solely up to the Development Team



Sprint Planning – „How“

- the Developers plan the work necessary to create an Increment that meets the Definition of Done
- This is often done by decomposing Product Backlog items into smaller work items of one day or less.
- How this is done is at the sole discretion of the Developers
- The PO helps to clarify and make trade-offs
- The Developers may invite other people for advice

Daily Scrum

- A 15-minute time-boxed event for the Developers
- every working day of the Sprint
- same time and place to reduce complexity
- plan the next 24 hours
- structure is set by the Developers
- The Developers are responsible for conducting the Daily Scrum
- If Product Owner or Scrum Master are actively working on items in the Sprint Backlog, they participate as Developers
- The Scrum Master ensures that the Developers have the meeting and teaches them to keep it in it's time-box

Sprint Review

- At the end of the Sprint
- Possibility to inspect and adapt
- The Scrum Team and the Stakeholders collaborate about what was done in the Sprint ➔ the Sprint results (product increment).
- The entire group collaborates on what to do next
- Results in a revised Product Backlog ➔ base for the next Sprint Planning
- 4 hours for a monthly Sprint. For shorter Sprints it is usually shorter.
- More than a presentation ➔ working session

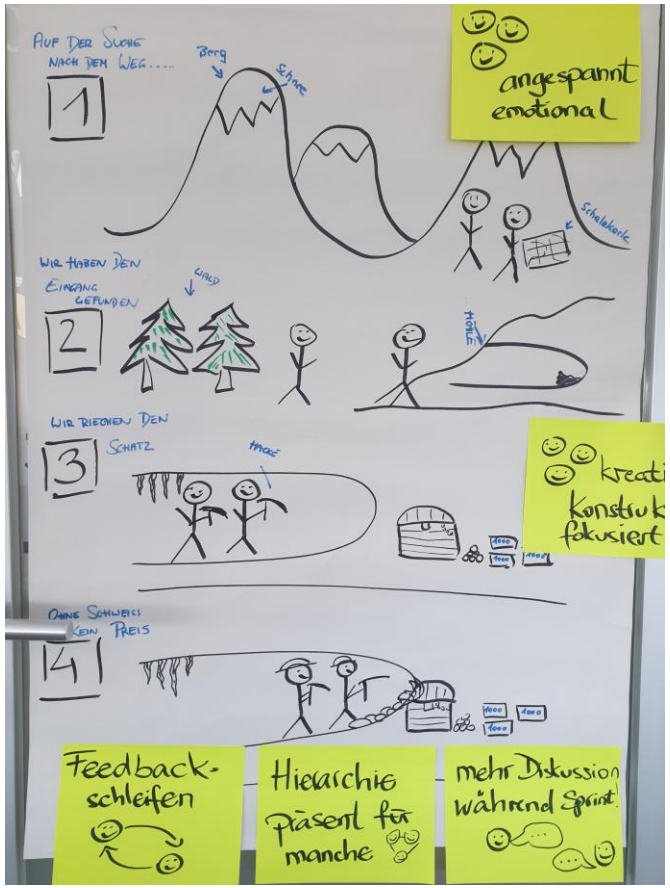
Sprint Retrospective

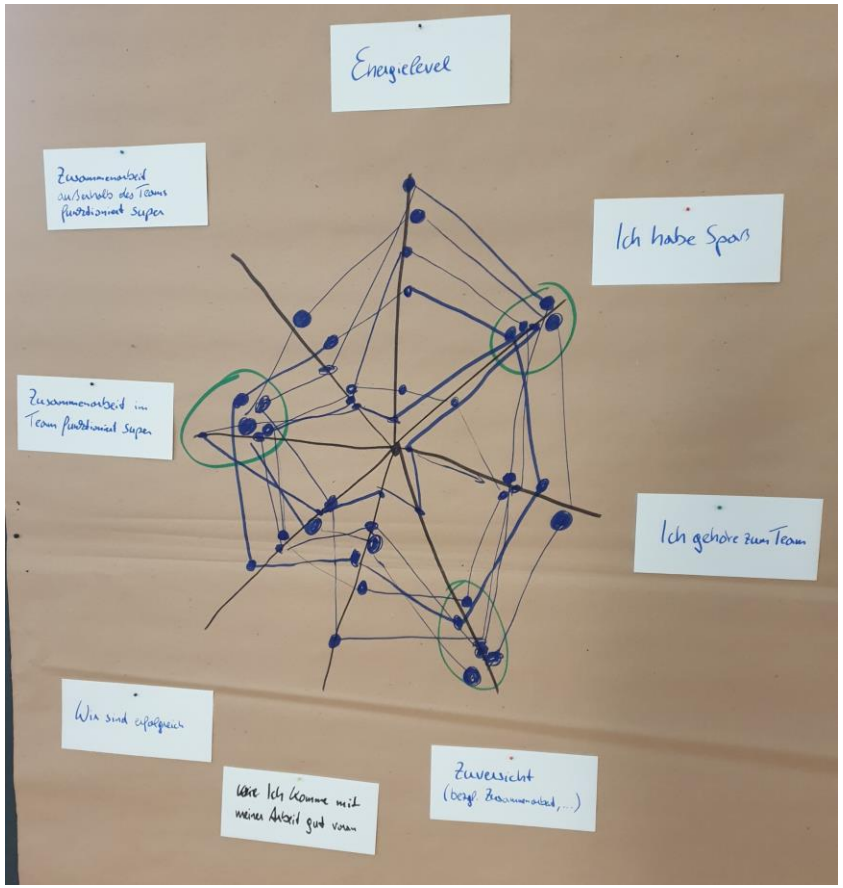
- At the end of each Sprint after the Sprint Review
- Three-hour time-box or shorter
- Opportunity for the Scrum Team to inspect itself
- Improve work processes
- Adapt the definition of „Done“ when necessary

Sprint Retrospective

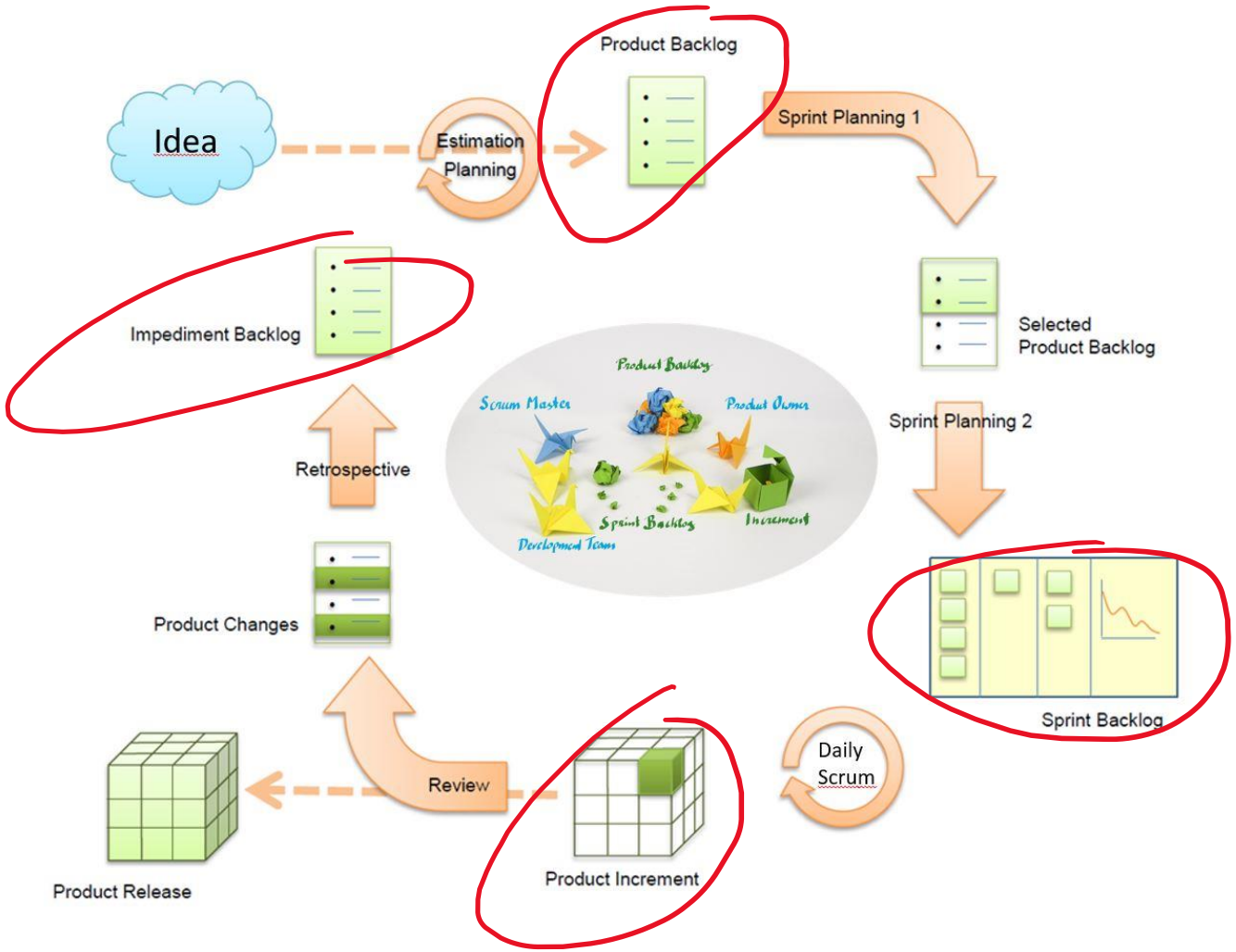
- Learning about the history & environment
- Shaping the goal for the retrospective
- Duration and structuring
  - Set the stage (5%)
  - Gather data (30-50%)
  - Generate insights (20-30%)
  - Decide what to do (15-20%)
  - Close the retrospective (10%)
  - Shuffle time (10-15%)

What does it look like?





Scrum Artifacts



Designed to maximize transparency

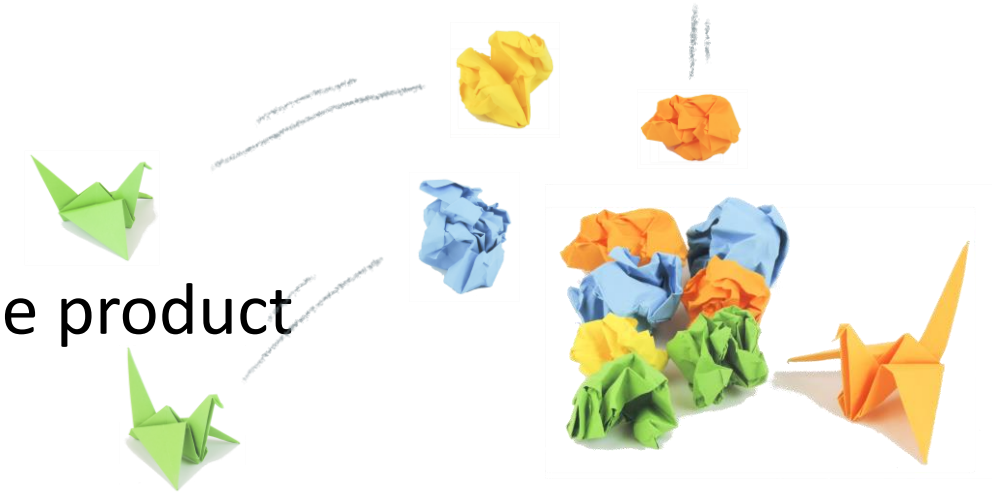
Product Backlog

Increment

Impediment Backlog

Sprint Backlog

Product Backlog



- Single source of requirements for the product
- Is never complete
- Lists all features, functions, requirements, enhancements and fixes
- Often includes test descriptions to prove its completeness when „Done“
- Is ordered by the Product Owner with most valuable items at the top (based on priority, value, dependencies and risk)
- For one product there is only one Product Backlog

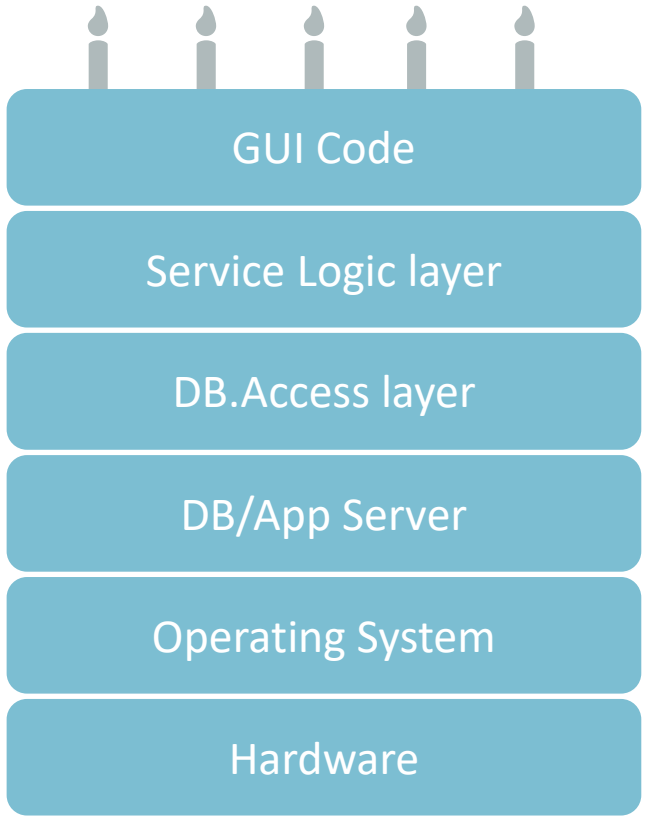
Product Goal

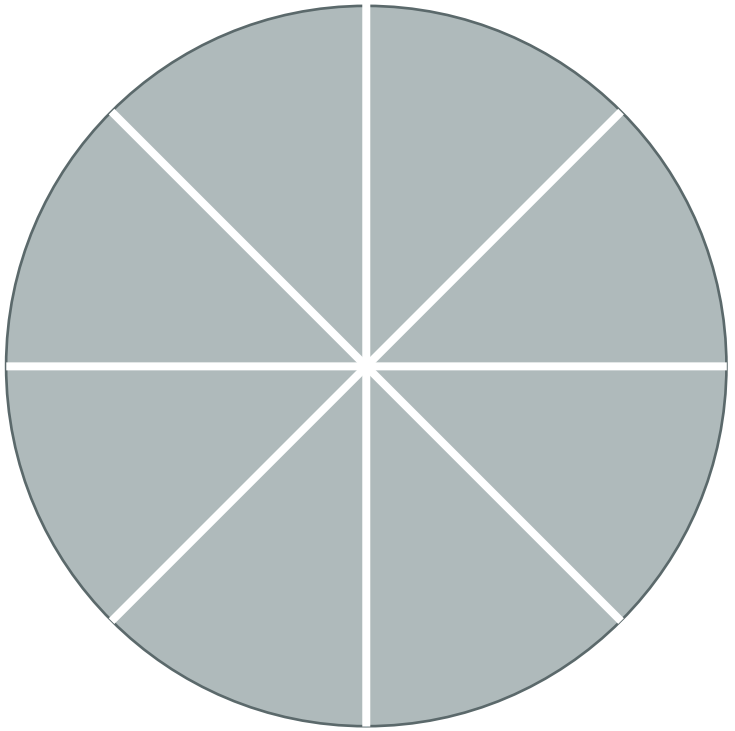
- A product is a vehicle to deliver value. It has a clear boundary, known stakeholders, well-defined users or customers.
- A product could be a service, a physical product, or something more abstract
- The Product Goal describes a future state of the product
- The Product Goal is the long-term objective for the Scrum Team.
- The Product Goal is part of the Product Backlog

Product Backlog Refinement

- Act of adding detail, estimates and order to items
- Consumes not more than 10% of the capacity of the Development Team
- Higher ordered Product Backlog items (PBI) are usually clearer and more detailed
- PBI for the upcoming Sprint are refined so that they can be „Done“ within one Sprint. ➔ „Ready“ for Selection
- The Development Team is responsible for all estimates!
- The Scrum Teams work together to refine PBI

A piece of functionality





Sprint Backlog

- The Sprint Goal, selected Product Backlog items plus the plan for delivering the Increment
- Makes visible all the work the Developers identify as necessary to meet the Sprint Goal
- To ensure continuous improvement, it may include at least one high priority process improvement identified in the previous Retrospective meeting.
- Can be modified during the Sprint
- Belongs solely to the Developers

Sprint Goal

- The Sprint Goal is the single objective for the Sprint
- provides flexibility in terms of the exact work needed to achieve it
- The Sprint Goal also creates coherence and focus, encouraging the Scrum Team to work together rather than on separate initiatives.
- The Sprint Goal is created during the Sprint Planning event and then added to the Sprint Backlog

Increment

- Concrete steppingstone toward the Product Goal
- sum of all the Product Backlog items completed during a Sprint and the value of the increments of all previous Sprints
- Must be “Done” at the end of a Sprint
- Must be in useable condition
- The Product Owner decides whether to release it or not
- May be released during the sprint
- Is likely to increase customer satisfaction
- Can be used to obtain feedback from users and the market

Definition of „Done“

- Is used to assess when work is complete on the product increment
- Ensures transparency through a shared understanding
- guides the Developers in creating a forecast at the Sprint Planning
- May expand as Scrum Teams mature
- Must exist – either as standard of the development organization or defined by the Scrum Team

Agile Estimation Techniques

- The Scrum Estimation of User Stories is described in terms of the degree of difficulty of each User Story and not the respective efforts. Measure for the performance of a team is Velocity. Velocity is defined as the amount of functionality that can be produced within a timeslot. To be able to estimate a Backlog Item we need
- reference – the smallest Backlog Item
- unit – e.g. story points, gummy bears, etc.
- scale – e.g. Fibonacci sequence (0,1,1,2,3,5,8,13,21,34,55,89)

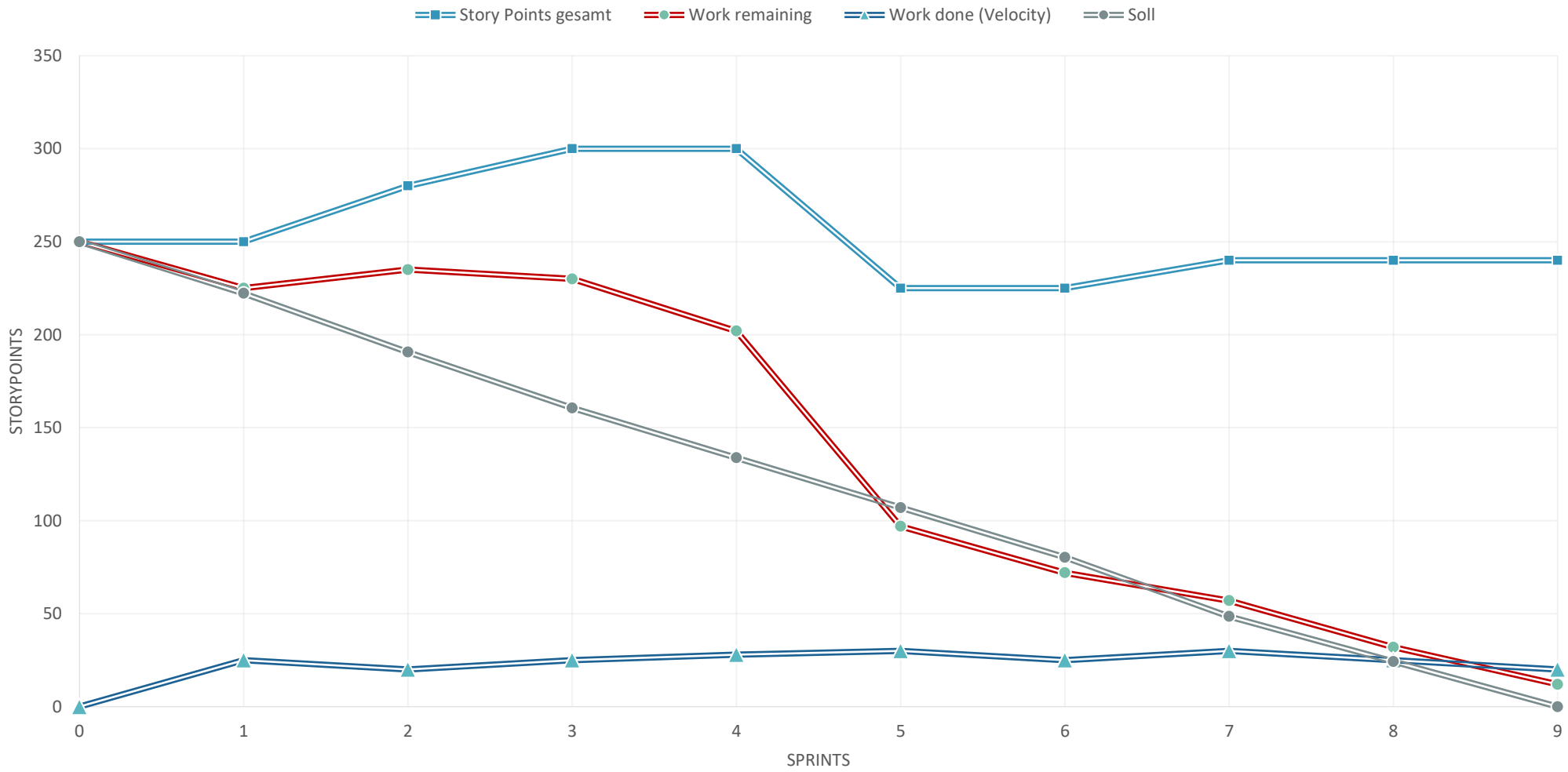
Agile Estimation Techniques

- Planning Poker
- Team Estimation Game
- Magic Estimation

Monitoring progress

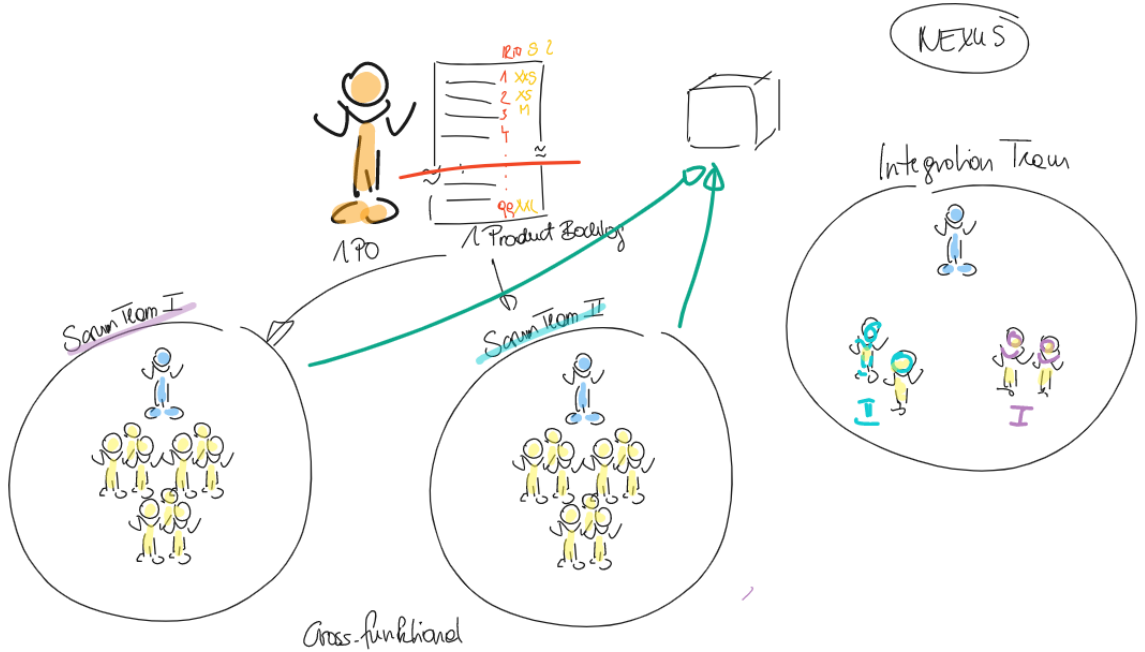
- Toward goals
- Release Burndown Chart
- Sprint Burndown Chart
- Feature Burnup Chart

RELEASE BURNDOWN CHART



Scaling Scrum

- Multiple Scrum-/Development Teams to create one product
- One product – one Product Owner! – one Product Backlog!
- Development Teams are self-organizing



When introducing agile practices in your organisation, it‘s best to use an **agile** approach.