Scrum Cheat Sheets – Scrum Team & Scrum Artifacts

Self-organization – Teams find their own way, autonomously choose how best to accomplish the work and make local decisions
Cross-functionality - Having all competencies needed to accomplish the work without depending on others
Definition of "Done" (DoD)
- Defines all the work that needs to be done on an Item to turn it into a part of the Increment
- Common understanding of "Done" for an Increment or an Item to create transparency
- Guides the Development Team in knowing how many Items it can select during a Sprint Planning
- Companywide convention is present: All Scrum Teams must follow it as a minimum
- If multiple Scrum Teams are working on the product, the Development Teams of all the Scrum Teams must mutually define the DoD. This DoD must be compatible, and capable of creating ONE integrated Increment.
- Quality methods and non-functional requirements are included in the DoD
- We keep improving the DoD when we mature

Artifacts represent work or value to provide transparency and opportunities for inspection and adaptation
- Designed to maximize transparency of key information so that everybody has the same understanding of the artifact

The Product Backlog is the single source of requirements
- Ordered list of everything that is known to be needed in the product (functions, features, requirements, enhancements, fixes)
- Never complete and a living artifact which evolves as the product and its environment (business, market, technology) evolves
- Dynamic and constantly changes to identify what the product needs to be appropriate, competitive and useful
- One Product Backlog for one product

A Product Backlog Item is more detailed the higher the order
- Attributes: Description, Order, Estimate, Value, Grouping Attribute, Test Description
- Items that can be "Done" within one Sprint are "Ready" for selection in a Sprint Planning
- Non-technical and independent

Sprint Backlog = Product Backlog Items + Plan
- Forecast about what functionality will be in the next Increment and about the work needed to deliver it
- Plan with enough detail that changes in progress can be understood in the Daily Scrum
- Crafted during the Sprint Planning
- At least one high priority improvement identified in the previous Sprint Retrospective is included
- Highly visible, real-time picture of the work/tasks that the Development Team plans to accomplish
- Belongs to the Development Team as whole not to individual team members
- Selected Items do not change, work/tasks do change frequently
- Each Team needs a separate Sprint Backlog

A usable, releasable, "Done" Product Increment is a step towards a vision or goal
- Sum of all Items completed during a Sprint and the value of the Increments of all previous Sprints
- At the end of a Sprint, the new Increment must be "Done" (usable and meet the Scrum Team's Definition of "Done")
- Body of inspectable, done work that supports empiricism at the end of the Sprint
- Work of the Development Team
- Each Increment is additive to all prior Increments and thoroughly tested ensuring that all Increments work together

A (Scrum) Team is self-organized and cross-functional
- Proven itself to be increasingly effective for all the earlier stated uses and any complex work
- Decides how and when Product Backlog Refinement is done
- Deliver products iteratively and incrementally, maximizing opportunities for feedback

The Product Owner is responsible for change management and managing the Product Backlog (She "owns" it).
- One person → One Product Owner for one Product/Project
- Entire organization must respect his decisions
- Stays accountable but may outsource the work
- Has the authority to cancel a Sprint as the only one
- Must be addressed by those wanting to change an Items priority
- Accountable for the Total Cost of Ownership (All investments required to conceive, develop, operate and maintain the product)
- Measure success by customer satisfaction or KPIs through frequent releases, NOT by increased velocity or production cost

The Development Team recognizes neither titles nor sub-teams
- Structured and empowered by the organization to organize and manage their own work
- Resulting synergy optimizes overall efficiency and effectiveness
- Accountability to the team as a whole
- More developers ≠ higher productivity - Small enough to remain nimble, large enough to complete significant work within a Sprint
- Recommended to have dedicated developers, but not mandatory
- If Development Teams change, it shouldn't be during the Sprint

↓ Interaction ↓ Productivity gains - Skill constraints, unable to deliver Increment	< 3-9 <	↑ Coordination - Too much complexity for an empirical process

- Clearly expressing Items (Content)
- Order/Prioritize Items by value (up to the Product Owner) to best achieve goals and missions
- Decisions are visible in the content and ordering
- Ensure visibility, transparency and clarity to all, so that it shows what the Scrum Team will work on next
- May help to understand and select trade-offs

Ensuring the Development Team understands Items to the level needed
During the Product Backlog Refinement Items are reviewed and revised
- Act of adding detail, estimates and order to Items
- Ongoing process of collaboration
- Items are reviewed and revised
- Consumes ≤ 10% of the capacity of the Development Team
- Items that will occupy the Development Team for the upcoming Sprint are refined so that they can reasonably be "Done" within the Sprint
- Should be made in one or two preceding Sprints or during the Sprint, if this did not happen

- No one can force the Development Team to work from a different set of requirements.
- Responsible for all estimates

If the work turns out to be different than expected the scope of the Sprint Backlog is negotiated within the Sprint

- Modifies the Sprint Backlog throughout the Sprint
- Emergence occurs as the Development Team works through the plan and learns more about the work/tasks needed to achieve the Sprint Goal
- Only the Development Team can change its Sprint Backlog during a Sprint.
- As new work/tasks are required, the Development Team adds them to the Sprint Backlog.
- Unnecessary Items are removed.
- The total work remaining can always be summed
- Work/Tasks are assigned to Developers (by themselves), but all stay accountable

- Responsible for optimizing/maximizing the value
- Decides if the Increment is released (It is not required to release all Increments)

- Professionals who do the work of delivering at the end of each Sprint
- Only members of the Development Team create it
- Keep the Sprint Goal in mind
- In order to satisfy the Sprint Goal, it implements functionality and technology

The Scrum Master is a servant-leader and a management role for processes
- Responsible to promote and support Scrum as defined
- Help understand Agility, Scrum theory, practices, rules, values
- Facilitate Scrum events as requested/needed
- Help the Team to understand goals, scope and product domain
- Help the Team understand the need for clear and concise Items
- Works with all participants to understand if artifacts are transparent (inspecting artifacts, sensing patterns, listening to what is being said, differences between expected and real results)
- Increase transparency of the artifacts working with participants

- Find techniques for effective Product Backlog management
- Understand product planning in an empirical environment
- Ensure knowledge about Item arrangement to optimize value

- Lead and coach in Scrum adoption
- Plan Scrum implementations
- Help employees and stakeholders understand and enact Scrum as well as empirical product development
- Cause change improving productivity of the Team
- Work with other Scrum Masters the effectiveness of the application of Scrum in the organization
- Help others understand which interactions with the Team are helpful, which aren't and to change these

- Coach in self-organization and cross-functionality
- Coach in organizational environments in which Scrum is not yet fully adopted or understood
- Help to create high-value products
- Remove impediments to their progress (sometimes supported by the Senior Management or the Development Team)

Service of the Scrum Master to the …	Product Owner	Organization	Development Team

Scrum Cheat Sheets – Scrum Team & Scrum Events

Events are a formal opportunity to inspect and adapt (feedback loops), designed to enable critical transparency
- Create regularity and minimize the need for meetings not described in Scrum
- Events may end whenever the purpose is achieved

	During the Sprint Planning the Sprint Goal is crafted	**The Daily Scrum is an internal meeting for the Development Team**	**The Sprint Review is an informal meeting, not a status meeting**	**During the Sprint Retrospective major Items that went well, and potential improvements are identified and ordered**
	🕒 [≤ 8 h] at the **beginning of the Sprint** ? **What can be delivered** in the Increment resulting from the next Sprint? ? **How will the work** needed to deliver the Increment be **achieved**? ↻ Product Backlog, Latest Increment, Capacity of Development Team, Past performance of Development Team ↥ Sprint Goal, Sprint Backlog, Commitment	🕒 [≤ 15 min] **every day** same time and place - **Optimize collaboration, performance and probability** to meet the Sprint Goal by inspecting the work since the last Daily Scrum and forecasting upcoming work - Improve communication, eliminate other meetings, identify impediments, promote quick decision-making, and improve knowledge	🕒 [≤ 4 h] held at the **end of the Sprint** - Inspect the Increment and review the feasibility of the project - **Key stakeholders** are invited ↻ Latest "Done" Increment, Product Backlog ↥ **Revised (and adjusted) Product Backlog** defining the probable Product Backlog Items for the next Sprint to meet new opportunities	🕒 [≤ 3 h] **after Sprint Review and prior to the next Sprint Planning** - Inspect how the last Sprint went with regards to **people, relationships, process and tools** - **Plan for implementing improvements** to the way of working of the Scrum Team
Scrum Team	- Collaborate on **understanding the work** - **Plan the work** to be performed - **Creates the Sprint Goal**		- **Collaborate on what was done** in the Sprint - **Collaborate on what to do next**, so that it provides valuable input to subsequent Sprint Planning and to optimize value - Review how the market/potential use of the product might have changed - **Review timeline, budget, capabilities and market** for the next anticipated releases of functionality or capability of the product	- **Inspect itself, identify improvements and create a plan for improvements** to be enhanced during the next Sprint - **Plan ways to increase product quality** by improving work processes of adapting the definition of "Done", if appropriate and not in conflict with product or organizational standards
Product Owner	- **Discuss the objective/target** that the Sprint should achieve, but does not prepare the Sprint Goal - **Discuss the Items** that would achieve the Sprint Goal - **Help to clarify** selected Items and make trade-offs **Re-negotiation of selected Items** if Development Team determines it has too much or too little work	- NOT required/allowed to attend	- **Invite key stakeholders** - Explain what Items have been "Done" and what not - **Discuss the Product Backlog** as it stands - **Project likely target/delivery dates** based on progress to date - **Tracks the total work remaining** and compares it with work remaining of previous Sprints to assess progress toward completing projected work by the desired time for the goal **(Project performance measurement)**	- Mandatory to be present
Development Team	- **Forecast** the functionality that will be developed - Crafts **Sprint Backlog** by selecting Items from the Product Backlog - **Decide how to build the functionality** into a "Done" Increment - **Design the system and the work/tasks** needed to convert the Product Backlog into a working Increment - Enough work is planned to forecast what the Development Team believes it can do in the upcoming Sprint - Work planned for the first days of the Sprint is decomposed - **May invite others** to attend to provide technical/domain advice - **Able to explain how to work as a self-organizing team** to accomplish the Sprint Goal	- **Set the structure** of the meeting and conduct the event - **Plan the work for the next 24 h** - **Inspect progress towards the Sprint Goal** and how progress trends towards completing the work in the Sprint Backlog **(Sprint performance measurement)** - Understand how it intends to work together as a self-organizing team to accomplish the Sprint Goal ? **What did I do** yesterday to meet the Sprint Goal? ? **What will I do today** to help to meet the Sprint Goal? ? **Do I see any impediment** that prevents me/us from meeting the Sprint Goal?	- **Discuss what went well** during the Sprint, **what problems** the team ran into, and how those problems were solved - **Demonstrates the Increment** and answers questions (elicit feedback and foster collaboration)	- Mandatory to be present
Scrum Master		- NOT required/allowed to attend - **Ensure that others don not disrupt the meeting** if present		- **Ensure positivity and productivity** and encourage to improve - **Participate as a peer team member** from the accountability over the Scrum framework
	Ensure that the events take place, the attendants understand the purpose and teach the Scrum Team to keep them within the time-box			

The Sprint is a container for all other Scrum Events
🕒 [≤ 1 month] with **consistent/fixed duration** throughout the development effort
- Too long: ↑ complexity, risk & definition of what is being built may change
- Usable, potentially releasable and **"Done" Product Increment is created**
- New Sprint **starts immediately after the conclusion of the previous Sprint**
- No changes are made that would endanger the Sprint Goal
- Quality Goals do not decrease
- **Scope may be clarified and re-negotiated**
- Limit risk to one month of cost
- All Sprints are the same: No Sprint 0, no integration Sprint etc.
- **Short enough to keep business risks acceptable to the Product Owner** and to be able to synchronize the development work with other business events

The Sprint Goal is an objective set for the Sprint that can be met through the implementation of Product Backlog Items
- **Provides guidance** to the Development Team on why building the Increment
- **Gives some flexibility** to the Development Team regarding the functionality implemented within the Sprint
- The selected Items deliver one coherent function which can be the Sprint Goal
- Can be any other coherence causing the Development Team to work together rather than on separate initiatives

Sprint Cancellation can only be done by the Product Owner
? If it no longer makes sense given the circumstances
? Sprint Goal obsolete
? Market or technology conditions change
- "Done" Items are reviewed
- Incomplete Items go back to the Product Backlog re-estimated
- Traumatic to the Scrum Team
- Consumes Resources