

An Overview of Standard Work

What Is Standard Work?

Standard work is one of the most powerful but least used Lean tools. To standardize a method is to choose and use the best method of those available. By documenting the current best practice, standard work forms the baseline for kaizen or continuous improvement. As the standard is improved, the new standard becomes the baseline for further improvements, and so on. Improving standard work is a never ending process.



Typical Operations

In a command-and-control company, the standard operation is the property of management or the engineering department.

Too many command and-control organizations delude themselves on standards. Imposed work standards lack buy-in, a foundation for continuous improvement, and, worst of all, create a greater likelihood of large process variance.



Agile Operations

In a Lean/Agile company, standard work is the property of the people doing the job. They prepare it, work to it, and are responsible for improving it. This garners buy-in because of the autonomy provided and facilitates controlled experimentation by workers to continuously improve the process.

Standards & Standard Work

Standards are agreed upon ways of doing work. To leverage the power of standard work, it's vital to understand its purpose while continuously seeking ways to improve it.

Standards are executed by doing standard work. Standard work is not a prescription or record of what's been done. Rather it is an identification of steps or activities that adhere to the standard way of doing things; it entails visibility (visual controls) and discipline. Standard work is what teams do to achieve the benefits of iterative development and to increase agility.

Standard work delineates responsibilities and makes potential problems visible before they occur. It is only a baseline for doing further kaizen (change for the better).

There are 3 key aspects of standard work that need to be understood:

- Standard work is not static and when a better way is found the procedure is updated.
- Standard work supports stability and reduces variation because the work is performed the same way each time (depending on the context). Moreover variations (defects, deviations, discrepancies) are easily recognized.
- Standard work is essential for continuous improvement, moving from one standard to a better standard without slipping back.



Standard Scrum Roles (+) & Work



Product Owner (PO)

- · Maximizes value delivered by the Team
- Provides direction to the Team by prioritizing and sequencing the development work
- · Ensures work is sufficiently defined for the Team to work on it



Scrum Master

- Removes impediments and ensures Team follows the rules of Scrum
- · Updates Scrum task board & produces charts for org reporting
- Protects team from distractions
- Works closely with the PO and Technical Owner



Development Team

- · Uses cross-functional approach to create product
- Finds the best way to deliver requested functionality creatively
- Continuously improves their throughput by implementing better ways of getting work done



IT Manager

- · Protects the Team from distractions
- · Clears any escalated impediments faced by team
- · Maximizes value Team is delivering
- Encourages team members to learn new disciplines and expand their knowledge
- Establishes boundaries within which the Team will develop solutions



Technical Owner

- Partners with PO to ensure that Enabling Stories are sequenced in the appropriate order
- · Maximizes business value delivery of the Team
- Provides leadership in designing solutions
- Optional role for projects that may be filled by IT manager

Agile Standard Work - Product Owner

Responsibilities

- Accountable for project success including: measurement, timeline, scope, business case.
- Champions efforts to accomplish vision, goals, and objectives:
 - Prioritizes and sequences business features and stories to maximize business value delivered while maintaining a sustainable pace for the teams.
 - Ensures Scrum Team is building to a future-state vision.
 - Owns adoption of new technology.
- Acts as the single voice for all stakeholders to the Scrum Team.
- Develops the acceptance criteria for the project i.e. a succinct statement that defines when the product is done and the Development Team can be released to work on another product.
- Validation strategy and execution of the strategy.
- Accountable for overall success of business change management and implementation efforts.
- · Manages change request resolution with Business Sponsor and IT.
- Maintains connection to larger program (if necessary).

Agile Prep Activities

- Communicates with internal / external customers to understand needs.
- Creates project Goals/Vision including tangible ROI factors, OKRs, and KPIs.
- Develops a business case, if needed, including approved budget and business timeline.
- · Creates/updates operating model, if needed.
- · Creates/updates business process model, if needed.
- Defines business features from scenarios, personas, and any other inputs from business architecture or planning.
- · Prioritizes list of features and separates into releases.
- Sequences features based on ROI index (business value/cost (story points)).
- Writes acceptance criteria / validation for all features.
- Identifies skills needed (by the business) and ensures their availability.
- Identifies target user stories for Sprint 1.
- Works with the Scrum Master to establish visual controls for the project.
- Works with the Scrum Master to identify and display milestones, dependencies, and risks to achieving business value.
- Works with Scrum Master to establish implementation approach—rollout strategy of delivered business features.

Agile Standard Work – Product Owner

Release Planning

- Communicates vision goals, objectives, measures, and outcomes for the product and for this particular release.
- Introduces backlog and structure.
- · Assigns business value to all epics and features as needed.
- Collaborates with Development Team to refine and add enabling work to the backlog.

Every Sprint

- Reviews charts
 - Releases story completion—Examines "top line" scope, current and projected velocity, and anticipated date velocity line will intersect "top line" scope. Adjusts scope or release date as necessary.
 - Business value—Decides if higher ROI functionality can be sequenced earlier in release schedule, if project can end early, and if high-cost/low-return stories can be removed.
- Maintains product backlog
 - Re-sequences features/functionality Examines functionality for each release and adjusts as team velocity, capacity, ROI, risk, etc., are better understood.
 - Creates/Updates/Deletes epics, features and stories—As team gets smarter, PO updates backlog with current understanding of the epics/features/stories.
 - Works with the Development Team to assign sizes to relevant epics/features/ stories.
 - Ensures information dashboards are updated and visible (topline, velocity, release burnup).
 - Assesses risks & dependencies among epics/features/stories with team.
- Prepares for next planning meeting
 - Creates top-priority stories to represent ~125% of team's avg sprint velocity.
 - Ensures user stories contain enough detail to validate team commitment.
 - Works with Technical Owner to find & prioritize predecessor-enabling stories.
 - Develops a Sprint Goal.
- Runs Sprint Review
 - Ensures stakeholders participate; collects feedback to add to the backlog.
 - Reviews release burnup/burndown with Stakeholders to ensure transparency.
- Participates in Sprint Retrospective.
- At Sprint Planning meeting, discusses sprint commitment with team. Holds team responsible for meeting that commitment.
- Updates the Goals/Vision if necessary.
- · Communicates with internal/external customers to understand needs.

Agile Standard Work – Product Owner

Weekly

- Coordinates Business Change Management activities.
- Product Backlog refinement:
 - Breaks epics to features and re-estimates business value.
 - · Breaks features to user stories.
 - Ensures all features and user stories have validation criteria.

- Attends the daily Scrum meeting.
- Is available for questions. The team should receive answers to their questions within a few hours.
- Resolves business impediments. As impediments are identified, the Product Owner should resolve/remove those that are related to the business.
- Story-level User Acceptance Testing (UAT). Ensures UAT testing tasks are completed (possibly by Subject Matter Experts, SMEs) for each story.
- · Liaises with customers, business SMEs, and business community.
- Reviews task burndown and story burnup charts. Ensures team is working on highest priority stories.
- · Fine-tunes sprint backlog priorities as sprint unfolds.

Agile Standard Work – Scrum Master

Responsibilities

- Facilitates meetings for Release Planning, Sprint Planning, Sprint Review, Sprint Retrospective, Refinement, and Daily Scrum.
- Helps & challenges the Development Team to improve its productivity.
- Identifies and removes impediments as quickly as possible.
- Ensures working environment is conducive to high-bandwidth communication.
- Coaches the Development Team, the Product Owner, and the Technical Owner.
- · Ensures that Scrum/Agile principles are followed.
- Produces charts for information radiators to maintain visibility into value delivery by the Scrum Team.
- Works with management and the Product Owner to gauge progress and refine the backlog.
- Represents management to the team and the team to management.
- · Protects the Team from distractions.
- Maintains connection to larger program (if necessary).

Prior to Release Planning

- · Facilitates Agile Planning.
- Creates the Project Charter based on input from Product Owner.
- Ensures the visioning completed by UI Designers if user interface is complex.
- Identifies key skill sets needed on the Team.
- Begins coaching the Product Owner in maximizing the business value that the Team will deliver.
- Prepares the Team by co-locating members and ensuring Team has been trained.

Release Planning

- Facilitates Release Planning.
- Ensures the product backlog is properly documented.
- · Documents risks and dependencies.
- Creates the release plan based on input from the Product Owner and Team.
- Defines artifacts and deliverables to be produced for the project.
- Establishes information radiators.
- Documents sprint length.
- · Documents the daily Scrum location and time.
- Procures a work area for the Team.

Agile Standard Work – Scrum Master

Every Sprint

- Facilitates Sprint Review and Sprint Retrospective meetings.
- Facilitates Sprint Planning meeting.
- Updates tracking charts:
 - Release story completion—This chart should show the "top line" scope, actual velocity for completed sprints, predicted velocity for future sprints (using 3 sprint average), and the planned release date. If there's a gap between the predicted points and the desired "top line" points, this should be noted.
 - Feature completion—This chart should show the progress toward all features as well as the priority/sequence order that features are to be built. Lowest sequence features are "at risk" if the predicted velocity doesn't intersect the "top line" by the planned release date.
 - Features at risk—If the projected velocity doesn't intersect the "top line" scope in time for the planned release date, produce this list of the lowest priority features that make up the point difference.
 - Business value completion—Works with the Product Owner to produce the desired graphs (e.g. business value points per story point, story point burn-up, breakdown of business stories vs. enabling stories, etc.).
 - Cost, Schedule, Scope—Captures planned vs. actual Cost, Schedule, and Scope measurements and updates appropriate systems.
 - Team velocity chart—If desired, documents completed story points per FTE.
 This chart should be used cautiously. Assume that the Team is as productive as they can be and improving velocity is accomplished by the leadership team removing impediments.
- Get ready for the next sprint:
 - Collects out of office schedules to inform Team when determining commitment.
 - Schedules Sprint Planning meeting.
 - · Schedules Sprint Review and Sprint Retrospective.
 - Works with the Product Owner to groom the product backlog to maximize ROI.

Weekly

- Product Backlog planning:
 - As necessary, schedules and facilitates weekly product backlog meetings with Product Owner and Technical Owner.
- Works with Technical Owner and Product Owner to maximize team velocity:
 - Identifies and removes issues that reduce Team velocity.
 - Encourages role-sharing, training, pair programming and other techniques that will promote greater velocity in the long-term.

Agile Standard Work - Scrum Master

- · Daily Scrum:
 - · Attends and facilitates the daily Scrum meeting.
 - Rigorously ensures the rules of Scrum are followed.
 - Reports on status of impediments and dependencies reported by the Team.
- Updates and posts the task burndown and sprint story completion charts.
- Updates the Scrum board to make work and progress visible.
- · Looks for unidentified impediments.
- Works to remove the impediments identified by the Team and escalates to management as required.
- · Represents project and Team to outside parties.
- · Protects the Team from distractions.
- Walks the floor daily and look for issues/delays/improvement opportunities.

Agile Standard Work – Development Team

Responsibilities

- · Cross-functional, autonomous and self-organizing group.
- · Responsible for:
 - Estimating size of backlog items.
 - Making design and implementation decisions for each Sprint.
 - Committing to delivering increments of software functionality for each Sprint.
 - Incrementally developing high quality features in sequence as directed by the Product Owner and Technical Owner as fast as possible.
- Accountable to the Product Owner for delivering as promised.
- Participates in the Sprint Planning, Sprint Review, Sprint Retrospective, and Daily Scrum meetings.
- · Works with Scrum Master to improve productivity.
- Follows the Scrum/Agile principles.
- Creates technical/enabling Stories and estimates all Stories.
- · Mitigates risk in all activities.
- Raises and works to resolve issues, not workarounds.

Release Planning

- Participates in the Release Planning meetings:
 - · Identifies enabling work.
 - · Provides estimates for all work.
 - · Identifies dependencies and risks.
 - Identifies all skills needed to successfully produce work.
- Reviews and updates artifacts and deliverables required by organization boundaries and project dynamics (be responsible for organization's goals).
- Collaborates to create the "Definition of Done" for the Team.
- Establishes environment to work:
 - Training.
 - Location/logistics.
 - Technology (new, existing, enhanced).
- Proves architectural and design concepts (invests in spike stories).
- Identifies practice/standard improvements to be implemented to ensure quality and efficiency based on project/release dynamics.

Agile Standard Work – Development Team

Every Sprint

- · Participates in the Sprint Planning meeting.
- Participates in the Sprint Review and Sprint Retrospective.
- Identifies opportunities for improving how work is done.
 - Creates stories for improvements to be undertaken by the Team.
 - Communicates improvements to Agile Coach, Scrum Master or IT Manager for improvements beyond control of the Team.
- Ensures all stories & tasks have a good description and validation.
- Ensures all stories/features/epics have sizes.
- Makes a sprint commitment that they believe in and works to achieve the commitment.

Weekly

 Identifies ways to get better. Collects ideas for Sprint Retrospective or creates improvement stories.

- · Daily Scrum:
 - Attends the daily Scrum meeting on time.
 - All Team members should talk at the daily Scrum.
 - All Team members should answer "the three questions."
 - Works (swarm) on the highest priority stories.
 - Shows all work as tasks on the Scrum board.
 - Updates tasks with hours remaining.
 - Ensures the rules of Scrum are followed.
 - Holds other Team members accountable for working on the highest priority stories.
- Works on tasks.
 - Ensures development standards are followed.
- Raises all issues; makes them visible to the Team; (be practical).
- Looks for any improvement opportunities for daily work.
- Looks at each user story and asks what is the best way to approach it:
 - What skills?
 - · What issues?
 - · What design?
 - · What extent of technical solution?
 - · How to verify?
 - How to validate?

Agile Standard Work – Technical Integration

Whether this is done by the Team or someone outside of the Team, these responsibilities must be carried out.

Responsibilities

- Think and act at the system level.
- Build the system holistically.
- Implement and test integrations across all subsystems.
- Coordinate work across multiple teams to ensure integrity, manage collusion, and manage collaboration and dependencies.
- Ensure the engineering practices/standards support the team in its completion of incremental work.

Agile Standard Work – Technical Owner

Responsibilities

- Collaborates with Product Owner to prioritize the product backlog including the enabling stories ensuring consistent flow of work to Team.
- · Works with Scrum Master to remove impediments.
- Coordinates technical Scrum of Scrum meeting for large projects/programs.
- Ensures holistic integrity of the technical solutions/system products.
- Establishes clear boundaries for empowering the team(s).

Prior to Release Planning

- · Identifies risks/issues/dependencies for the work approved (project & business case).
- · Identifies all technical skills necessary to accomplish work.
- Coordinates with Business on collaboration and responsibilities including involvement cycles.

Release Planning

- Identifies technical issues, constraints, risks, and challenges.
- Identifies key milestones or coordination points with other projects and/or Teams.
- Manages system initiatives and how they will be addressed through the product backlog.
- Collaborates in establishing project topline (based on team's sizing), release targets, and order of work (approach) based on combined business and technical priorities and dependencies.

Every Release

• Works with Product Owner to identify minimal releasable feature sets and potential features for each release.

Every Sprint

- · Identifies enabling stories.
- · Works with Product Owner to ensure proper priorities are identified.
- Represents the enabling stories to ensure that the Product Owner prioritizes them appropriately.
- Improves team Agile maturity:
 - Drives adoption of advanced processes and technology practices to increase Team productivity.
 - Drives Team to improve how they do their work.
- For large projects:
 - · Facilitates a technical scrum of scrums.
- Ensures retrospectives are identifying improvements, Team is adding stories for improvement, and Product Owner is giving appropriate priority to improvement stories.

Agile Standard Work - Technical Owner

Weekly

- Works with Scrum Master to maximize Team velocity:
 - Identifies and removes impediments that reduce Team velocity.
- Product Backlog planning:
 - Works with Product Owner and Scrum Master to maintain backlog.
 - Identifies dependencies and risks for epics, features, and stories.

- "Reads" the Scrum board for signs of problems with the sprint or signs of failing agility.
- Daily Scrum—Attends the daily Scrum meeting.
- Removes impediments Works to remove the impediments identified by the Team.
- Provides Scrum Master with status of impediments reported by the Team.

Agile Standard Work – IT Manager

Responsibilities

- Works with Scrum Master to remove impediments.
- Enables the Team to improve productivity and standards.
- · Supports Team with improving Agile maturity.
- Coordinates Scrum of Scrum meeting for large projects/programs.
- Protects the Team from distractions and outside influences.
- · Represents project and Team to outside parties.
- · Frequently observes the daily Scrum meeting.
- Establishes clear boundaries for empowering the team(s).

Prior to Release Planning

- Identifies risks/issues/dependencies for the work approved (project & business case).
- · Identifies all skills necessary to accomplish work and establish roster.
- Coordinates project initiation and accounting process.

Release Planning

- Coaches the business in creation of product backlog epics/business features.
- Identifies key milestones or coordination points with other projects and/or Teams.
- Manages system initiatives and how they will be addressed through the product backlog.
- Ensures the team is ready to start work.

Every Release

· Adjusts Team composition to maximize possible throughput of the Team.

Every Sprint

- Improves team Agile maturity:
 - Drives adoption of advanced people, process, and technology practices to increase Team productivity.
 - Drives Team to improve how they do their work.
- · For large projects:
 - · Facilitates scrum of scrums.
 - Facilitates sharing of retrospective information.
- Ensures information dashboards are updated and visible.
- Ensures retrospectives are identifying improvements, Team is adding stories for improvement, and Product Owner is giving appropriate priority to improvement stories.

Agile Standard Work – IT Manager

Weekly

- Encourages team to deliver highest business value first.
- Works with Scrum Master to maximize Team velocity:
 - · Identifies and removes impediments that reduce Team velocity.
 - Encourages role-sharing, training, and other techniques that will promote greater velocity in the long-term.
- Continually coaches lean principles to Team, Product Owner, and Scrum Master.

- "Reads" the Scrum board for signs of problems with the sprint or signs of failing agility.
- Daily Scrum—Frequently observes the daily Scrum meeting.
- Removes impediments—Works to remove impediments identified by the Team.
- Provides Scrum Master with status of impediments reported by the Team.
- Represents project and Team to outside parties.
- Protects the Team from distractions and outside influences, including loaner requests, multiple projects, and production support (where possible).

