3.4.2 Sprint Development Summary Points

To begin, it's important to review the principles of Sprint Development:

- ***Daily Stand Ups*** - daily face to face communication so there's no "scheduling" of coordination
- ***Whole Teams*** - Everyone knows what the work is (we planned it together), and works on it together
- ***Team Ownership*** - Multiple team members working on the same User Story
- ***Limit WIP*** - limit the Work-In-Progress (WIP) to achieve faster, predictable development with focused time

When we look at these principles we see a lot of the Agile Manifesto Values restated within them.

- Individuals and Interactions over Processes and Tools Daily
- Working Software (Systems) over Comprehensive Documentation
- Customer Collaboration over Contract Negotiation
- Responding to Change over Following a Plan

Daily Stand Ups

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- Two types of daily standups

  - "Scrum Standup" - each team member reports on what they did, what they plan to do, and any blockers
  - "Forward-Looking Standup" - facilitator asks about work-in-progress, team self selects what they'll be doing

Whole Teams

- Whole team is available to work on closing User Stories
  - Product Owner provides input on features as developed, and is available to close stories
  - Scrum Master facilitates meetings, workshops, and ensures quality through good User Stories, Story Closing, etc.
  - Development Team collaborates to complete work, which may mean switching to help others
- Continuous Planning
  - As product takes shape, Product Owner consults with stakeholders to gather feedback
  - Scrum Master ensures feedback is facilitated and efficient
  - Scrum Master works to engage other stakeholders as necessary, or other teams at scale
  - Product Owner write stories, which are audited by the Scrum Master

Team Ownership

- Teams know what work needs to get done, each supporting as needed
- Sometimes that means three Development Team Members work on one User Story
  - First gathers user interface (UI) and process requirements from stakeholders, and builds UI
  - Second begins working on technical solution for middle (logic layer) and backend (data management)
  - Third designs and builds tests based on Acceptance Criteria (automated tests)
  - Scrum Master might facilitate meetings with stakeholders or UI rapid prototyping
  - Product Owner will validate the final product

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- If one User Story begins to fall behind, then pair programming or "war rooms" can be established to solve the problem
    - Team members know the work, and can jump in to help
    - No individual ownership removes issues of "pride of authorship"
    - Team reduces risk of failing to deliver critical functionality
- This "Team Ownership" ensures progress on the highest priority work, which also carries the most value for stakeholders

Limit WIP

- Limiting work-in-progress (WIP) enables all processes to work faster
    - Reducing WIP means team members are available to support as needed
    - Reducing WIP means fewer meetings and coordination activities
    - Reducing WIP means clear, small tasks that can be accomplished and reviewed quickly
    - Reducing WIP means more time spent getting work done, and less time organizing multiple acitvities
- Primary means of reducing WIP is to use a Kanban or "Scrumban" board
    - Kanban board - manages stories as work items, moving Stories across the value stream of a states
        - Stories may have three or more states, often requiring five states (Planned, Ready, In-Development, Testing, Done)
        - Each state is limited in terms of the number of stories allowed (such as only two in Testing at once)
        - Limiting the WIP in each state ensures that work must be completed before starting new work
    - Scrumban Board - manages tasks as work items, moving tasks and then Stories across a value stream of states
        - Like Kanban, there are three or more states that tasks and Stories can be in, often five (Planned, Ready, In-Dev, Testing, Done)
        - Stories can only move forward in states in the Value Stream once all tasks oved forward

    - Stories are only "In-Development" if all tasks are "In-Development" or further in the Value Stream (e.g. "Testing")
    - Stories and tasks are managed in their own row or lane
- Scrumban may also include "fast lanes" for high-priority tasks

Note that many of these techniques are borrowed from Lean approaches; especially the Kanban board for limiting WIP. This is because once Stories are planned the team should operate like a well-oiled machine cranking through work. The goals of continuous improvement and reducing waste definitely apply.

However, one key aspect of Scrum that differs and remains Agile is the fact that the Product Owner is on the team, and they can accept work incrementally. Also with the full transparency of the Sprint Backlog showing what work the team must accomplish by the end of the Sprint, the Development team can decide to manage their time based on those Sprint Requirements. These Stories also combine to form a meaningful, shippable increment.

For these reasons, Agile offers sustainability, purpose, mastery, and autonomy to the Development Team not offered in pure Lean approaches. These elements have been proven to be the most motivating for teams of knowledge workers.

More on these ideas of motivation and team facilitation is presented throughout the Agile Leadership Principles course in the Agile Project Management Professional Certificate.

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