BITS Pilani presentation

BITS Pilani
Pilani Campus

K.Anantharaman
kanantharaman@wilp.bits-pilani.ac.in

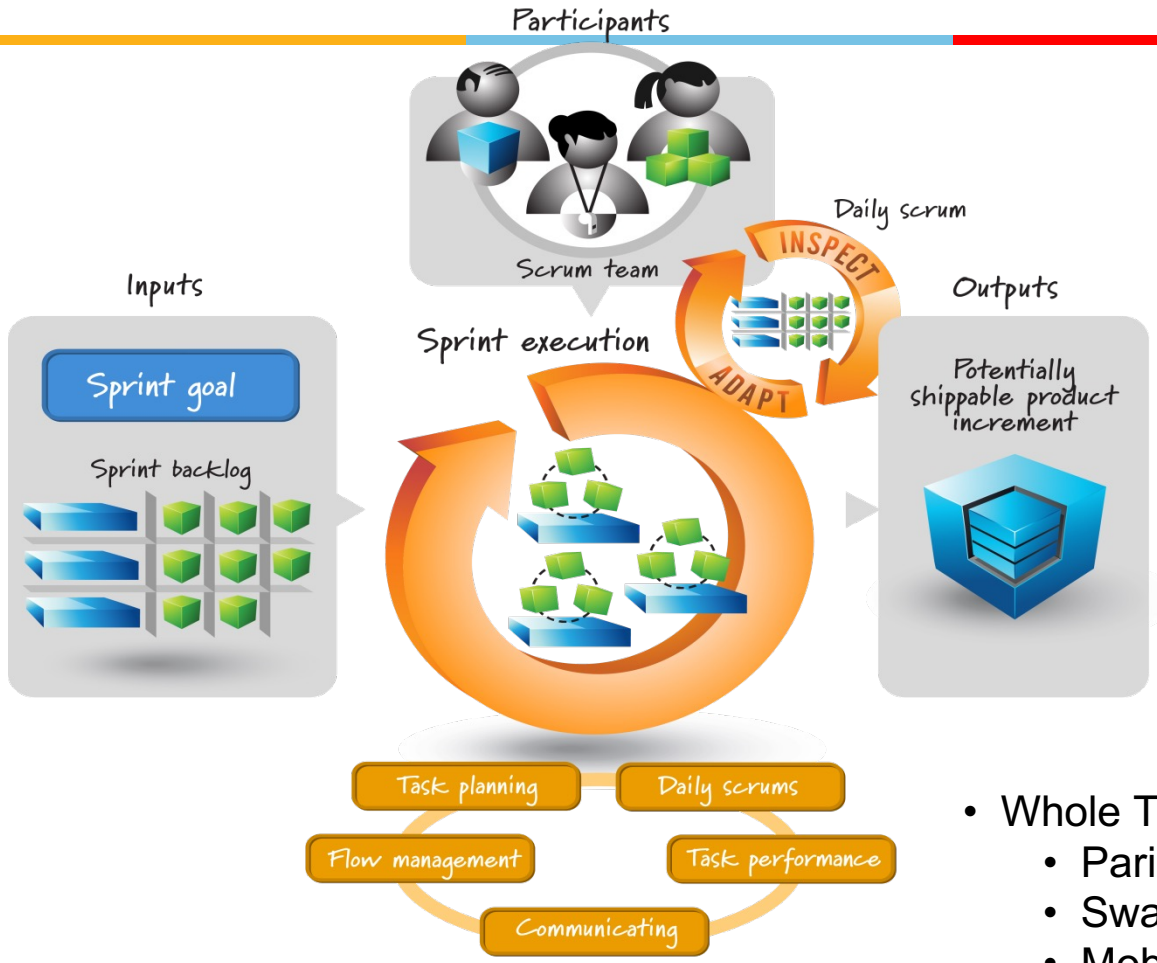
innovate achieve lead

BITS Pilani

Pilani Campus

Module8- Executing a Sprint

Sprint Execution



- Whole Team
  - Paring
  - Swarming
  - Mob Programming

Daily Scrum

- Dev. Team, Scrum master, Product Owner (Optional),

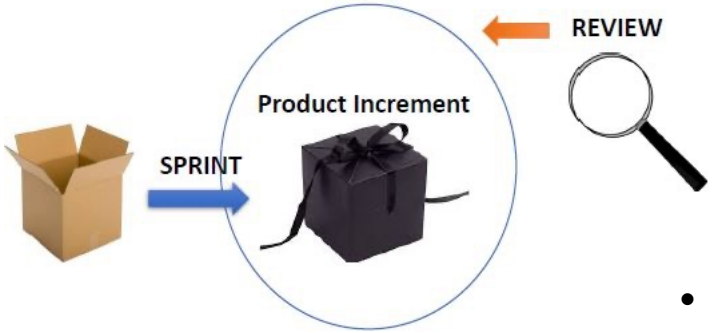
15-minutes everyday
Same place, same time

3 important questions in Daily Scrum

- What did I do yesterday?
- What will I do today?
- Any difficulties or impediments stopping me from the Sprint goal?

Ref: GenMan Solutions

Sprint Review

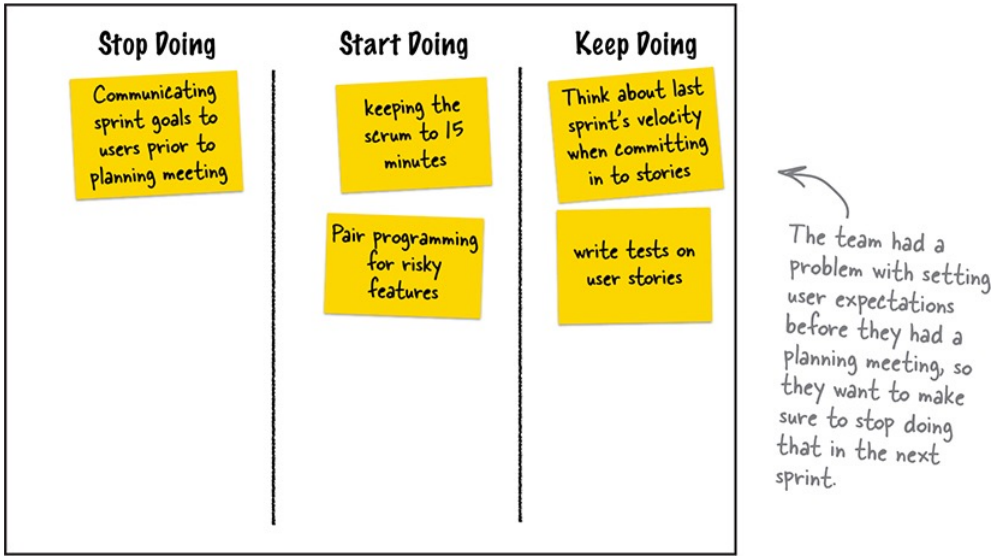


- Duration: Max 4 hrs. or less for 4 week sprint
- Products invites all attendees
- Development Team Demo the completed items.
- Product owner verifies and lists completed and incomplete items.
- Development team share sprint experience and highlights challenges.
- The Product Owner updates the Product Backlog and discusses the next sprint's activities.

Ref: GenMan Solutions

Sprint Retrospective

- Simplest Approach
- Each team member is asked to identify specific things that the team should:
  - Start doing
  - Stop doing
  - Continue doing

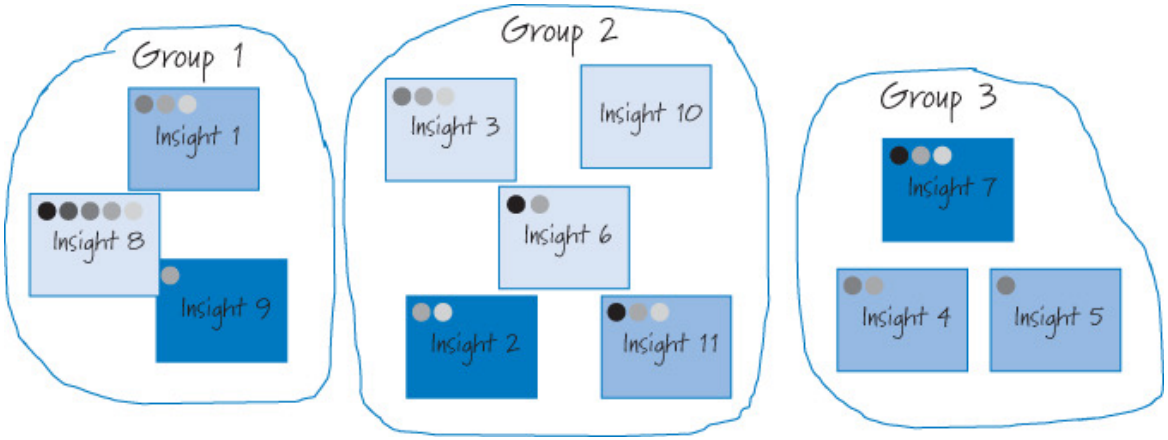


- Note:
  - Choosing Retrospective Topics
  - Use retrospective games, Videos, Movie
  - Use abstraction
  - Avoid-Technical and Management issues

Ref: Head First Agile by By Andrew Stellman and Jennifer Greene

Sprint Retrospective

- Group insights



Vote

Determine Actions

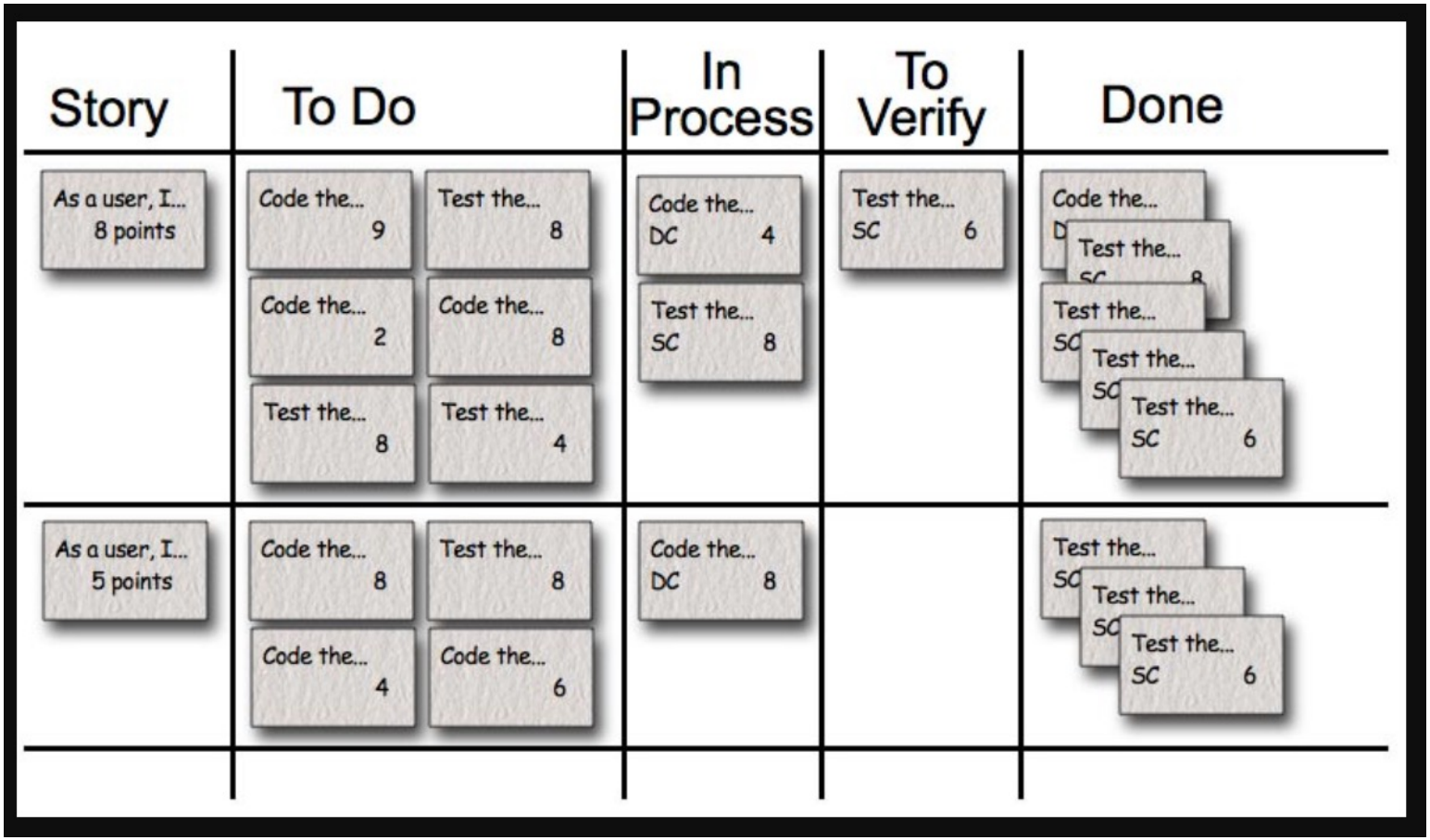
Start Doing	Stop Doing	Continue Doing
Recalculate velocity after each iteration	Allow the daily stand-up meeting to last more than 15 minutes	Team lunch on Fridays
Enroll the team in a clean coding course	Write new code when unresolved defects exist	Retrospectives
Encourage testers to pair program with developers		Customer feedback sessions

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Communicating: The Progress

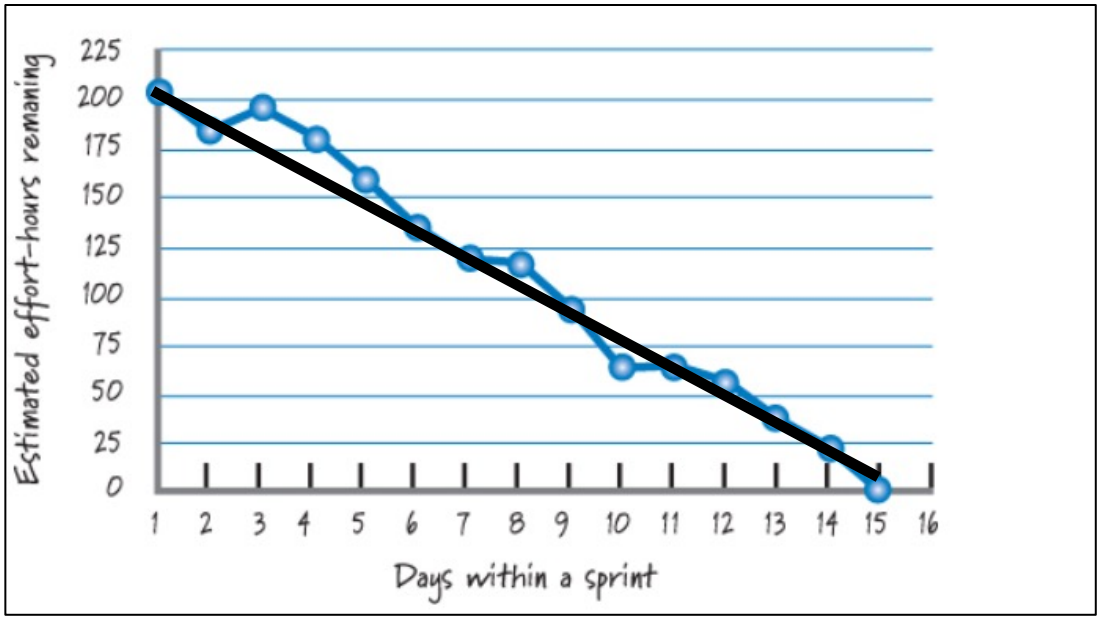
- Information radiator
  - Self interpretable format
- Task Board
- Burndown charts
- Burnup charts

Sprint Task Board



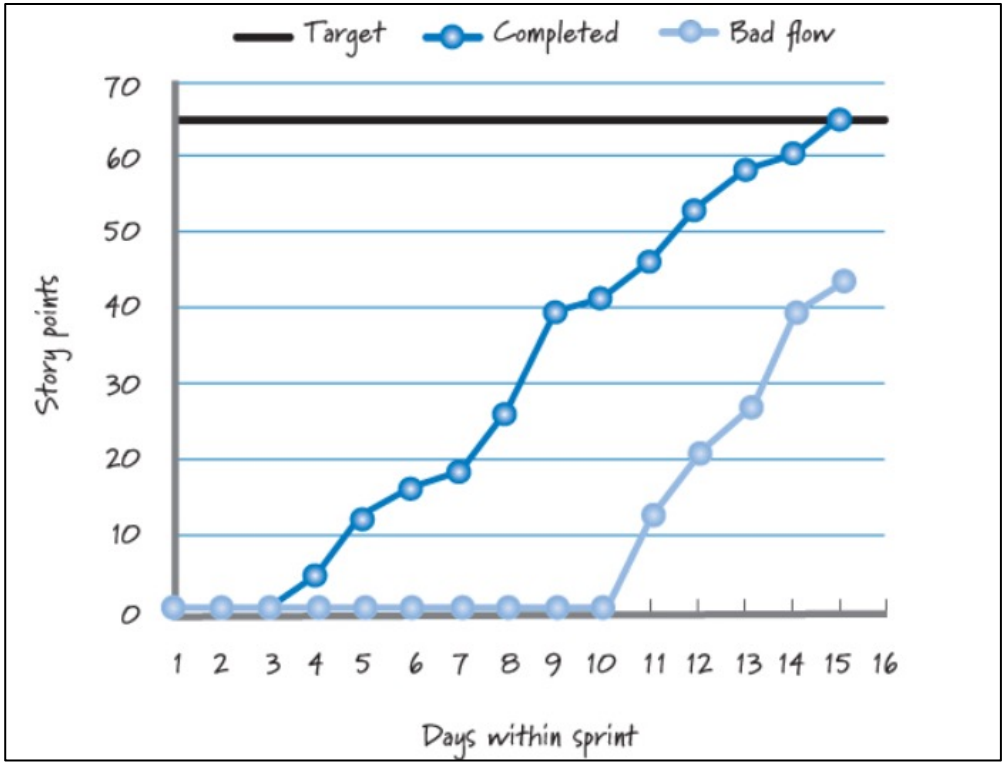
Ref: Agile Estimation and Planning by Mike Cohn

Sprint burndown
Effort <> Days



Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint burndown
Story Points <> Days



Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Quiz

- https://forms.gle/yRbPFB8Yv9YckeuX7
- https://forms.gle/Q3QpLLYGuBTZkZeo7
- https://forms.gle/uRZvRQDwtUCqTwEW7
- https://forms.gle/BtDEjG19sCrqvfZF8

Additional Notes

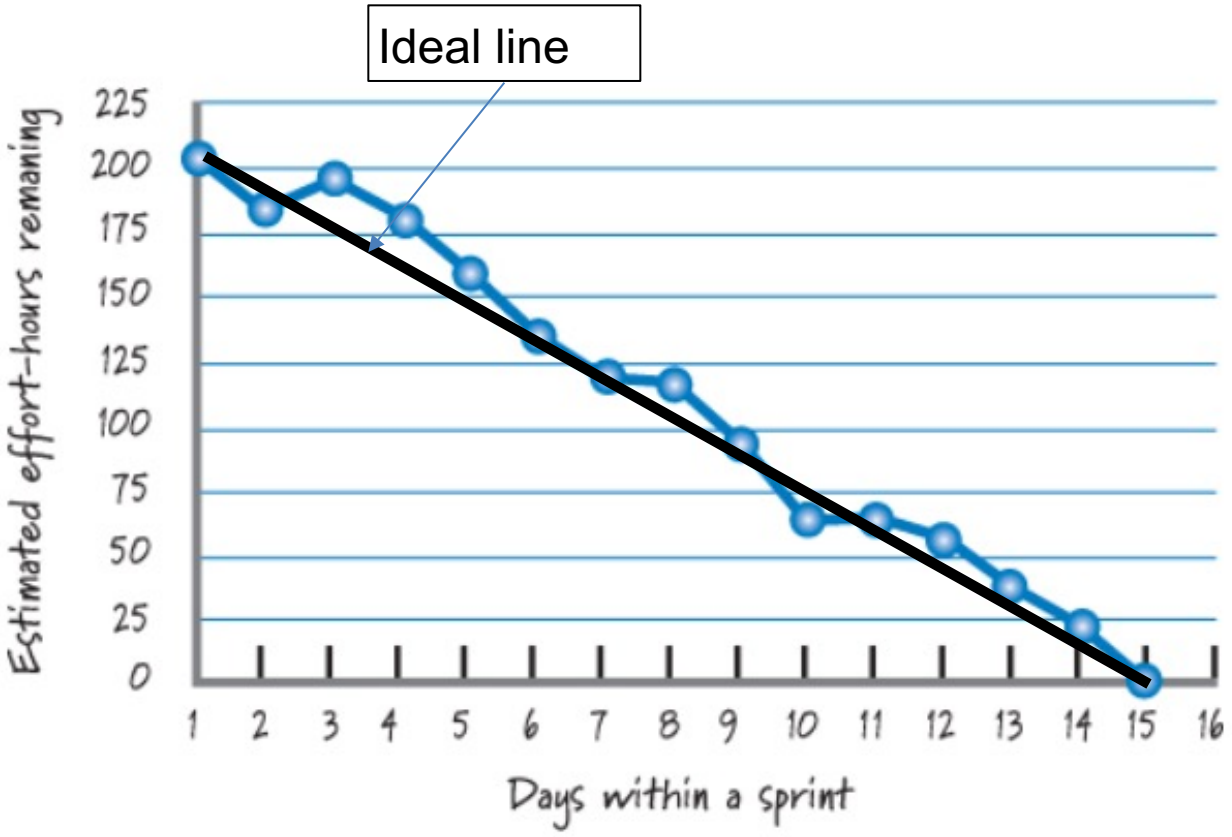
Sprint Execution: The Process

innovate achieve lead

- Task planning
  - No Gantt chart, Just-in-time, dependency planning (e.g. Stress testing)
- Flow Management
  - Team responsibility to **organize the flow work**, what should be done next and in parallel. Don't aim to make everyone 100% busy.
  - Parallel work and swarming
  - Which item to start? What Tasks Needs to Be Done? – Height priority/Value.
  - How to organize the work? - No hands-off approach, no artificial wall across boundaries (e.g. UX/ Business logic/Database).
  - Who does the work? – Person with appropriate skills.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint burndown chart- Effort

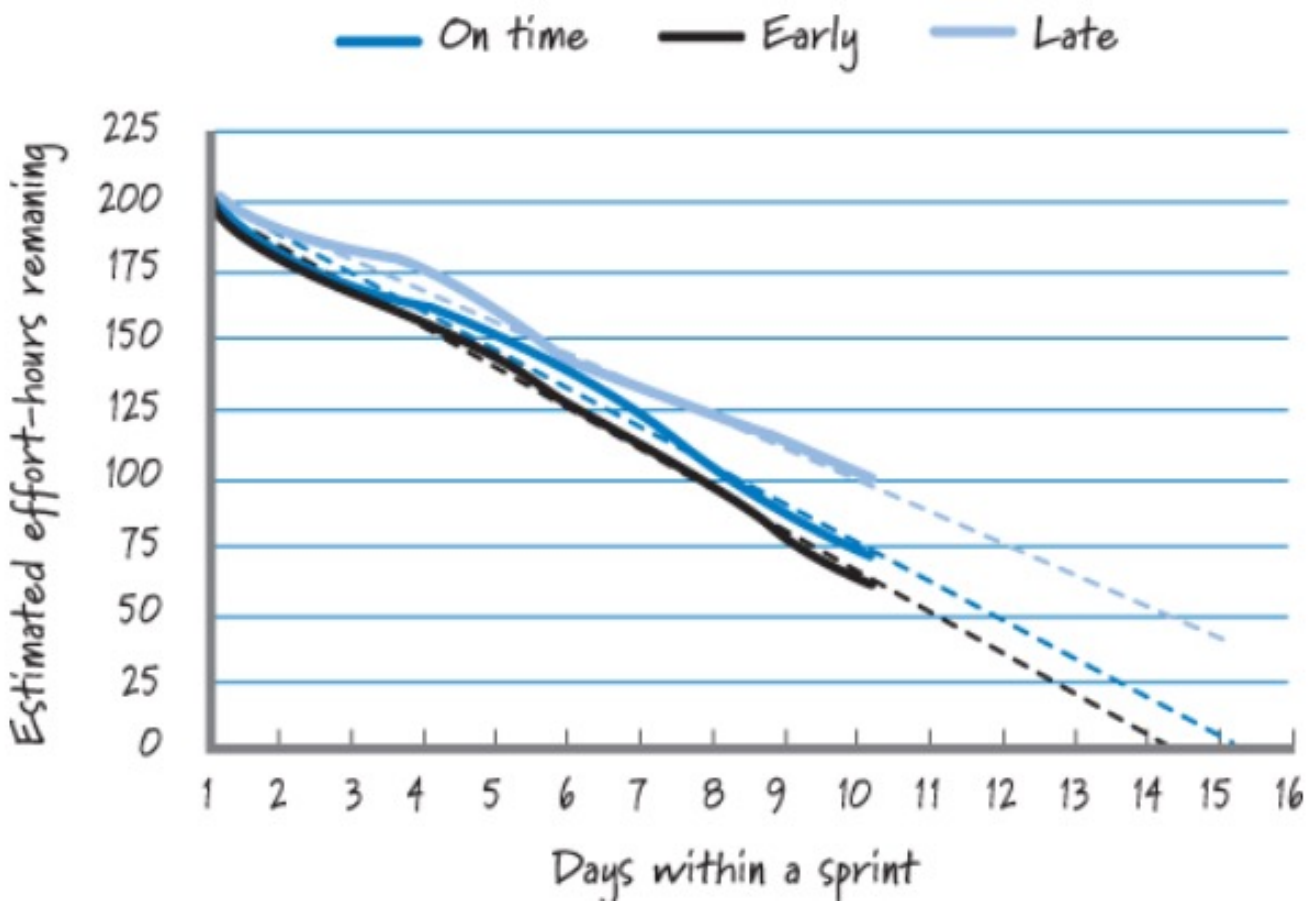


X-Axis: Represents the days within a sprint.
Y-Axis: Remaining estimated effort-hours
Should be updated every day
•Charts shows the trend – likelihood of completing the work by end of the sprint

- Only shows the number of Story points/Efforts that have been completed. The burndown chart doesn't show any changes in the scope of work. For that, We use burnup charts.

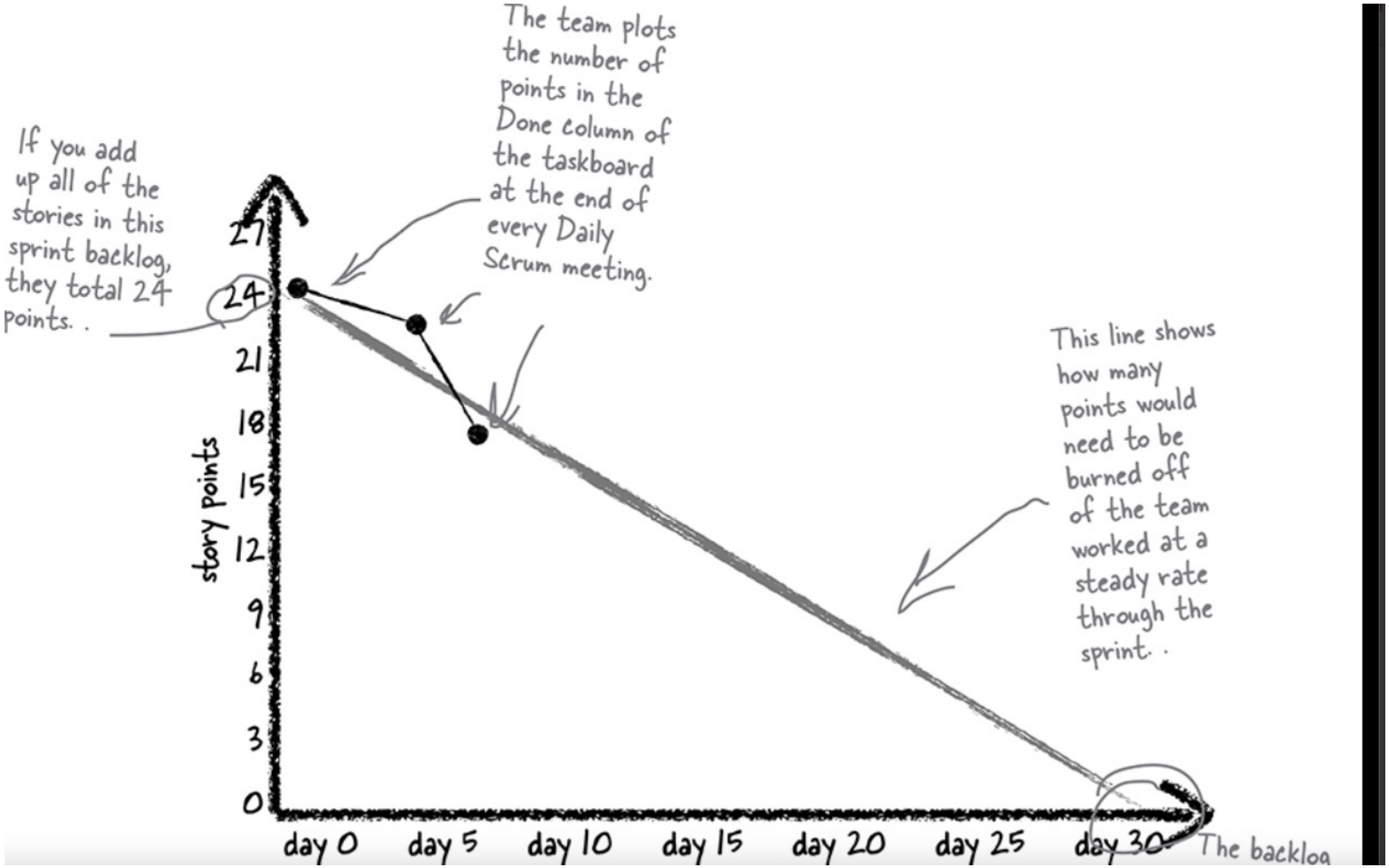
Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint burndown chart with trend lines



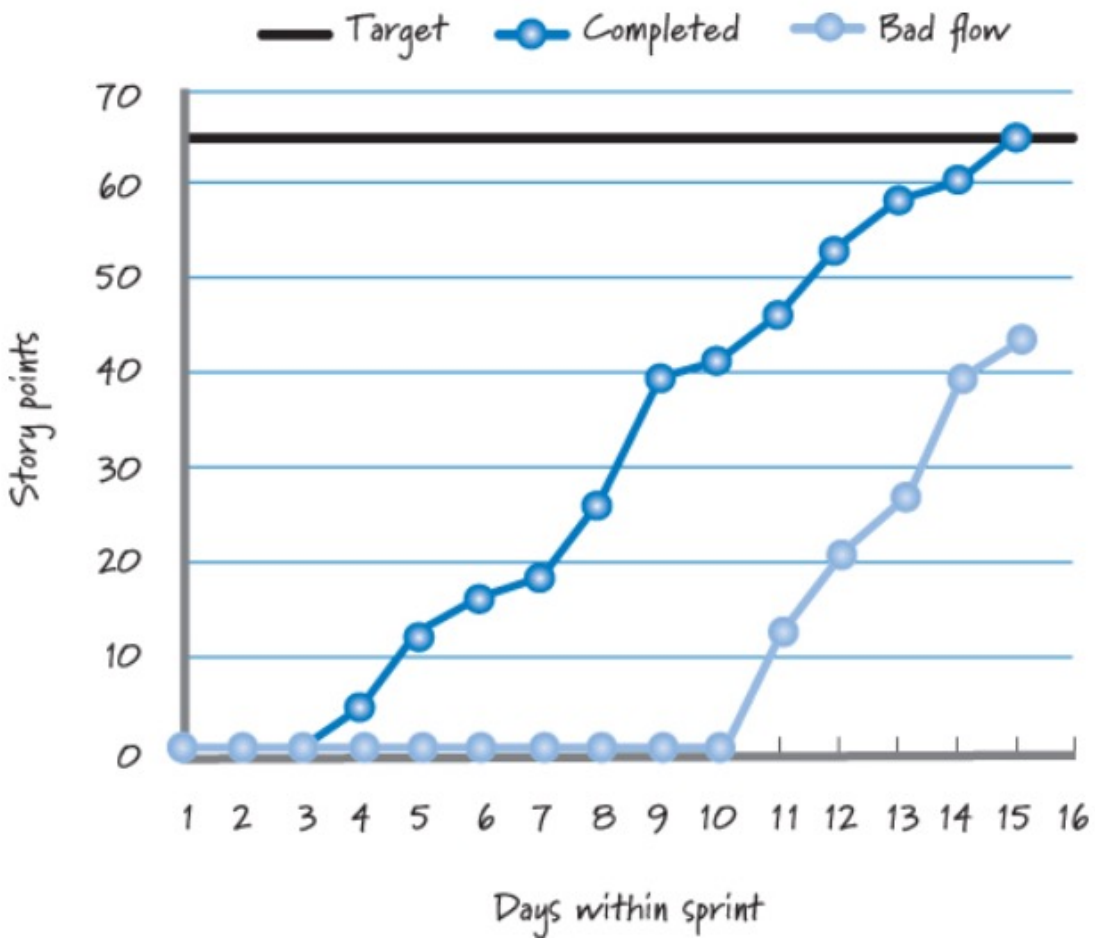
Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint burndown chart- Story points



Ref: Head First Agile by By Andrew Stellman and Jennifer Greene

Sprint burnup chart



- Many people prefer to use story points in their burnup charts, because it represents business value
- **The "Bad flow" line illustrates** - the team starts too many product backlog items at the same time, doing too much work in parallel.
- Works on product backlog items that are large and therefore take a long time to finish, or takes other actions that result in bad flow.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint Execution: Daily Scrum team meeting

- Daily Scrum – 15 minutes or less, held at the same time everyday. Not a problem solving meeting.
- Also called daily standup to promote brevity.
- **ScrumMaster facilitating** and each team member taking turns answering three questions for the benefit of the other team members:
  - What have I done since our last meeting?
  - What am I planning on doing between now and our next meeting?
  - What roadblocks are in my way?
- The daily scrum is an inspection, synchronization, and adaptive daily planning activity that helps a self-organizing team do its job better.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint Execution

- Sprint execution is the work the Scrum team performs during each sprint to meet the sprint goal.
- Performs all of the work necessary to deliver a potentially shippable product implement. The team's work is guided by the sprint goal and sprint backlog.
- We shall focus on the principles and techniques that guide how the Scrum team plans, manages, performs, and communicates during sprint execution.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint Execution: Timing

- The majority of the team's time each sprint should be spent in sprint execution.
- It begins after sprint planning and continues until the sprint review begins.
- For a two-week sprint, sprint execution would likely count for 8 to 8.5 of the 10 days

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint Execution: Participants

innovate achieve lead

- During sprint execution:
- The **development team** members self-organize to determine the best way possible to meet the sprint goal.
- The **ScrumMaster** coaches, facilitates, and removes any impediments that block or slow the team's progress.
- The **product owner** is available to answer questions, review intermediate work, and provide feedback to the team. The product owner might also be called upon to discuss adjustments to the sprint goal or to verify acceptance criteria.
- The ScrumMaster doesn't assign work to the team or tell the team how to do the work. A self-organizing team figures these things out for itself.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Sprint execution: Process Task Planning

- During sprint planning the team produces a high-level plan for how to achieve the sprint goal, usually in the form of a sprint backlog.
- Team members perform **just-in-time task-level planning** as needed, as opposed to trying to formulate a detailed plan or Gantt chart.
- Massive influx of learning comes from building and testing. This will disrupt even a well laid out plan.
- However, **some upfront planning helps** in exposing the task level dependencies
  - Example: if a feature being developed to be subjected two day long stress testing. Develop the feature and plan for the test at least two days before the end of sprint execution.

Sprint execution: Process Flow Management

innovate achieve lead

- It is the team's responsibility to manage the flow of work throughout the sprint to meet the sprint goal.
- This includes making decisions about how much work the team should do in parallel, which work to start, how to organize the task-level work, which work to do, and who should do the work.
- When answering these questions, teams should discard old behaviors, such as trying to keep everyone 100% busy believing that work must be done sequentially, and having each person focus on just her part of the solution.
  - Example: Don't create artificial wall across technical boundaries (UX/Business logic/Backend work/Testing)
  - Sit together and discuss: How the work can accomplished iteratively and efficient way

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Flow Management: Parallel Work and Swarming

innovate achieve lead

- The team must determine how many product backlog items to work on in parallel, in other words, at the same time. Working on too many items at once slows the team down. But working on too few items at once is equally wasteful. To find the proper balance, I recommend that teams work on the number of items that leverages but does not overburden the T-shaped skills and available capacity of the team members.

- The goal is to reduce the time required to complete individual items while maximizing the total value delivered during the sprint. Another name for this approach is swarming. Swarming is when team members with available capacity work together to complete one unfinished item rather than moving ahead to work on new items. This doesn't mean teams should always work on only one item at a time—the actual number of open items at any one time is highly dependent on context. Teams will have to experiment to find the balance that maximizes the value they deliver each sprint.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Flow Management: Which Items to start

- The simplest way to choose the product backlog item to work on next is to select the highest-priority item as specified by the product owner.
- Unfortunately, this doesn't always work. In reality, dependencies or skills capacity constraints might dictate a different order. The development team should be enabled to opportunistically select work as appropriate.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Flow Management: How to Organize the work?

innovate achieve lead

- It's tempting for new agile teams to approach task level work in a waterfall fashion: design it, code it, and then test it.
- It's better, however, to approach the work from a value and delivery-focused mindset.
- This means minimizing the amount of time work sits idle and reducing the size of handoffs
- In practice, this sometimes looks like a developer and tester pairing at the start of a task to work in a highly interleaved fashion, with rapid cycles of test creation, code creation, test execution, and test and code refinement. This approach keeps work flowing, supports very fast feedback, and enables team members with T-shaped skills to swarm on an item to get it done.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Flow Management: What tasks need to done?

- The team should decide which task-level work it needs to perform to complete a product backlog item. Product owners and stakeholders influence these choices by defining the scope of a feature and creating acceptance criteria.
- They also provide business-facing requirements for the team's definition of done. Overall, the team and the product owner must work together to ensure that technical decisions with important business consequences are made in an economically sensible way.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Flow Management: Who does the work?

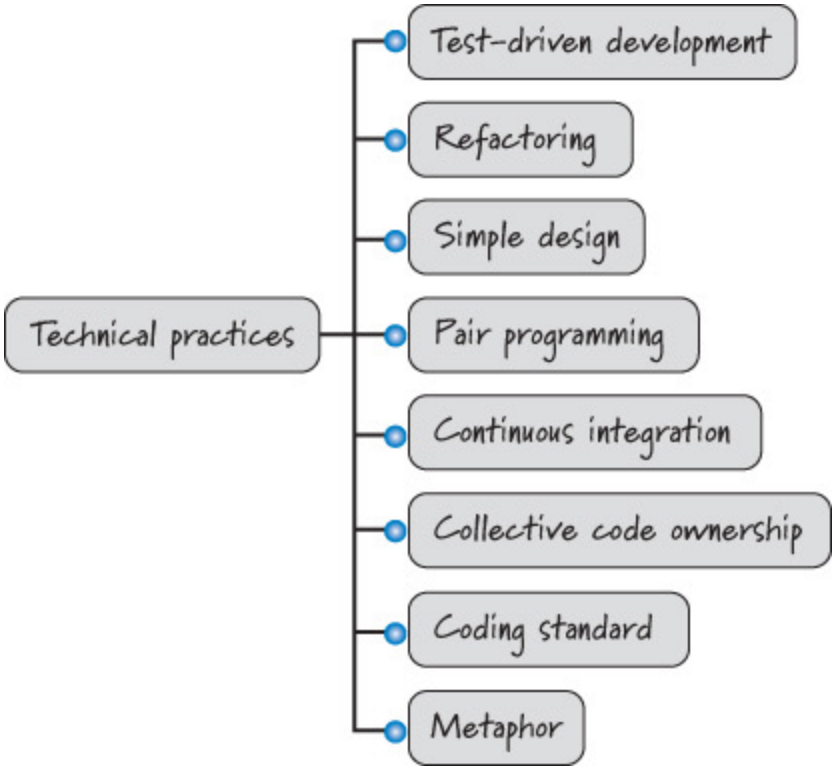
innovate achieve lead

- Who should work on each task? An obvious answer is the person best able to quickly and correctly get it done. And if that person is unavailable, the team should decide on the next best person.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Task Performance: Technical Practices

- Development team members are expected to be technically good at what they do.



- Most teams achieve the long-term benefits of Scrum only if they also embrace strong technical practices when performing task-level work.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Communicating: The Progress

- Most teams use a combination of a task board and a burndown and/or burnup chart as their principal **information radiator.**

- **Information radiator:**
- A visual display that presents up-to-date, sufficiently detailed, and important information to passersby in an easy, self-interpretable format.

Ref: Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin Published by Addison-Wesley Professional, 2012

Thank you