



A Hands-on Introduction to Agile & Scrum

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Agenda

- A Slice of History
 - Agile & the Agile Manifesto
 - Scrum
- The Scrum and the Sprint
 - Scrum Basics, Teams, and Concepts
 - Sprint Sizing Techniques
- Introduce the Sprint Game
 - Planning & Execution Steps
 - Tally Results & Close Sprint
- Play Sprint Game
 - Each team (table) executes the Sprint, and reports results
 - Determine Winner
- Retrospective – Q&A

A Slice of History: Agile

- Software Development Roots
- Heavyweight vs. Lightweight Models
 - Structured (Formal Methods, Waterfall Methodologies)
 - Iterative Models (Extreme, Adaptive, Feature-Driven, etc.)
- Snowbird, Utah; February 2001
 - 17 Software Developers
 - *Manifesto for Agile Software Development*
 - Enlarged to Agile Project Management by Some Founders

Agile's Manifesto

“We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

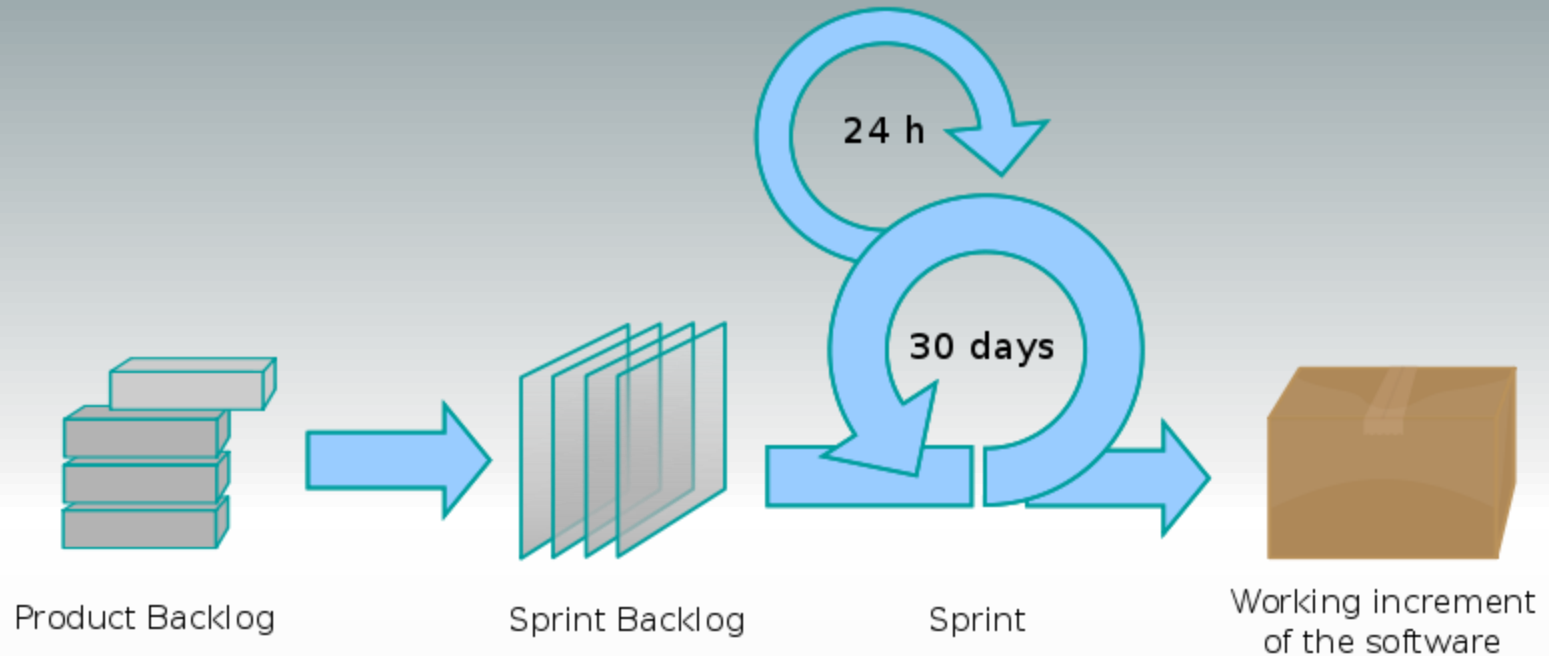
- Individuals and interactions over processes and tools*
- Working software over comprehensive documentation*
- Customer collaboration over contract negotiation*
- Responding to change over following a plan*

That is, while there is value in the items on the right, we value the items on the left more.”

A Slice of History: Scrum

- Product Development Roots – 1986
 - 2 Professors at Hitotsubashi University, Tokyo
 - Rugby Metaphor
 - Whereas Agile is an ***approach***, Scrum is a ***framework***
- Scrum is thus one of a number of “flavors” of Agile
 - Is considered by some the purest framework for Agile
- ***Sprint*** is the “project” unit within Scrum
 - Highly iterative & comprises a complete project
 - Typically lasts from 2 weeks to 1 month

Scrum Basics



- Graphic taken from Wikipedia: “Scrum (development)”

Scrum Roles

- There are 3 Roles in a Scrum Team
 - Product Owner
 - Scrum Master
 - Team Member
- Scrum Team
 - Everyone has a voice
 - Everyone is responsible for delivering a quality product

User Stories

- “Backlog items”, which relate to deliverable features or components are expressed in ***User Stories*** and are in the format:
 - ***As a (user role type),***
 - ***I want to (perform some action or operation)***
 - ***So that (describe an advantage or benefit)***
 - ***I’ll know that I’m done when (required end state and definition of how it is to be tested/validated)***

Example User Story

- As a **Human Resources Administrator**, I want to **be able to review employee time cards and post hours to the client projects they have charged time to** so that **I can perform cost accounting operations on each account.** I'll know I am done when **I can post such hours to all 16 categories used within the HR system, including vacation, sick time, and overhead.**

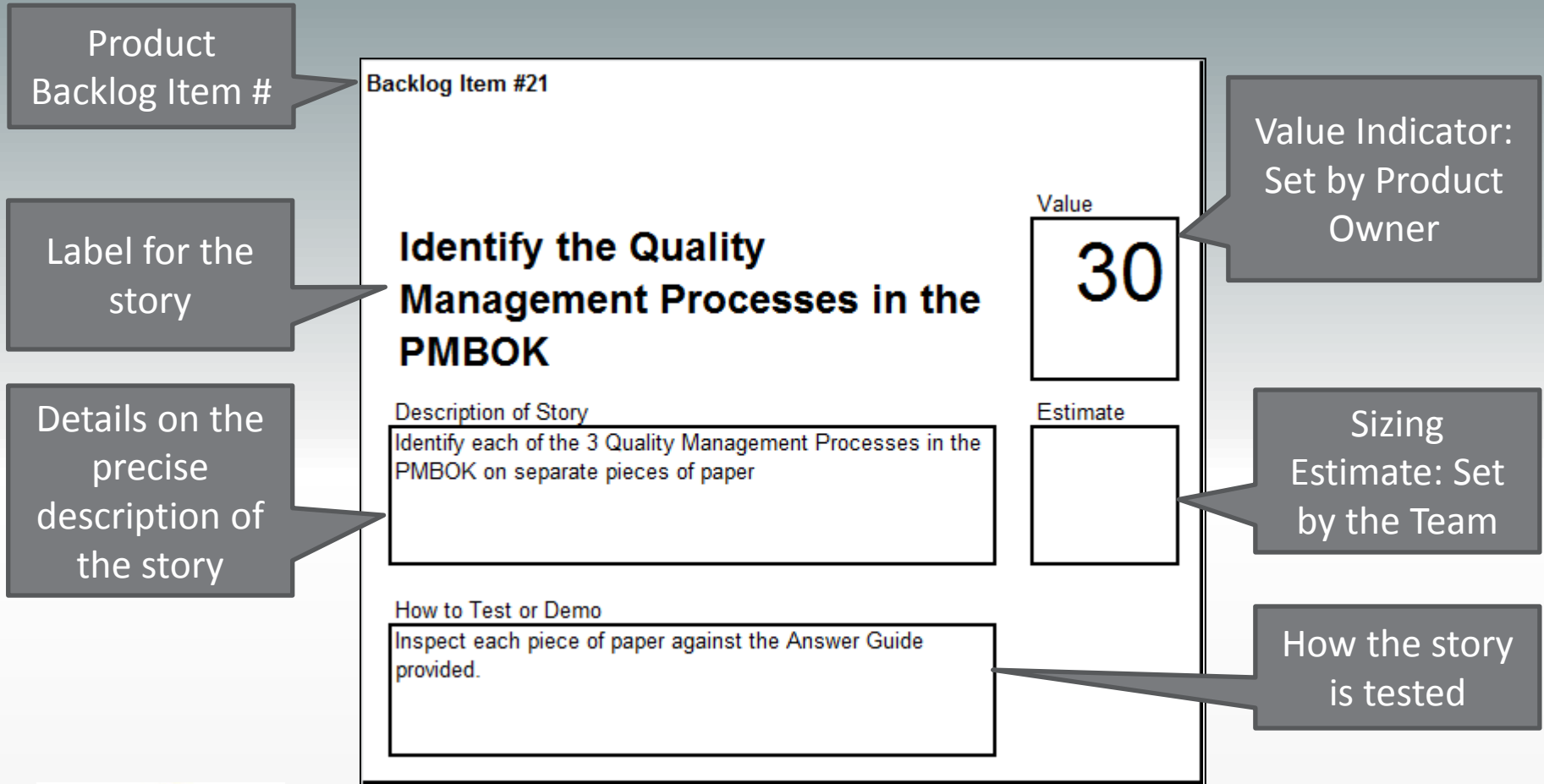
Sizing Concepts

- In Scrum, sizing backlog items is:
 - Performed by the consensus of the team
 - Expressly NOT influenced by outside pressures
 - “Planning Poker” is a technique to gain consensus
 - Although it roughly maps to effort & duration, is expressed in *dimension-less units*
 - Is used to calculate Team Velocity
 - Is not transferable to other teams
 - In practice, utilizes a modified Fibonacci Series
 - 1, 2, 3, 5, 8, 13, 20, 30, 50, 75, 100 (among several variants)

Sprint Exercise

- Goal: Each team plans and executes a group of tasks to **acquire as much value** within a 60 minute “sprint”
- Critical Timing Considerations:
 - Have a total of 60 minutes to size, assess, order, select, execute, determine results, and report value
 - When executing each of these tasks, you will **prepare for the task, select** which **team members** will participate in that task, and use the **stopwatch** provided to **time the duration** of the accomplishment of the task
 - You have a total of 3 minutes (180 seconds) to execute all selected tasks

Product Backlog Cards (in User Story format)



1) Sizing Product Backlog

Backlog Item #21

Identify the Quality Management Processes in the PMBOK

Value
30

Description of Story
Identify each of the 3 Quality Management Processes in the PMBOK on separate pieces of paper

Estimate
2

How to Test or Demo
Inspect each piece of paper against the Answer Guide provided.

Useful Trick:
“Divide & Conquer”

Goal: Agree on the number that should go here.

For this mini-sprint, values should be 1, 2, 3, 4, 5, 6, BIG, or ?

2) Prioritize Product Backlog

Order cards in the way you wish to proceed in the execution phase

Backlog Item #21	
Identify the Quality Management Processes in the PMBOK	Value 30
Description of Story Identify each of the 3 Quality Management Processes in the PMBOK on separate pieces of paper	Estimate 2
How to Test or Demo Inspect each piece of paper against the Answer Guide provided.	15

Useful Trick:
Calculate “Value to Estimate” Ratio to help prioritize and sort

3) Adjust for Dependencies & Preferences

Re-order cards to account for group preference decisions & dependencies

Backlog Item #21

Identify the Quality Management Processes in the PMBOK

Value

30

Description of Story

Identify each of the 3 Quality Management Processes in the PMBOK on separate pieces of paper

Estimate

2

How to Test or Demo

Inspect each piece of paper against the Answer Guide provided.

15

Useful Trick:
Dry-run tasks that may be challenging


4) Select Sprint Backlog

Once your list is prioritized, count the first 18 estimate points – these comprise your Sprint Backlog. You may have to exchange items to get 18

Place a BLUE DOT on the card, identifying it for inclusion in the Sprint

This is called an “Information Radiator”

Backlog Item #21



Identify the Quality Management Processes in the PMBOK

Value **30**

Description of Story

Identify each of the 3 Quality Management Processes in the PMBOK on separate pieces of paper

Estimate **2**

How to Test or Demo

Inspect each piece of paper against the Answer Guide provided.

15



If the team is satisfied with this list, the planning is now done, and you can proceed with the task execution

5) Execute Sprint Backlog Tasks

Place a YELLOW DOT on the card of the task you are performing currently

Although for this exercise, it may not appear to have a lot of value, on an actual project, it easily IDs WIP

Backlog Item #21

Identify the Quality Management Processes in the PMBOK

Value **30**

Description of Story

Identify each of the 3 Quality Management Processes in the PMBOK on separate pieces of paper

Estimate **2**

How to Test or Demo

Inspect each piece of paper against the Answer Guide provided.

15


For each task, determine which team members will accomplish the task, and who will be the time keeper – each team is on the “honor system”

Once completed, you can write the number of seconds transpired on the card

Also plan for “shared” resources

6) Mark the Task as Done

Backlog Item #21



Identify the Quality Management Processes in the PMBOK

Description of Story

Identify each of the 3 Quality Management Processes in the PMBOK on separate pieces of paper

How to Test or Demo

Inspect each piece of paper against the Answer Guide provided.

25_s

Value

30

Estimate

2

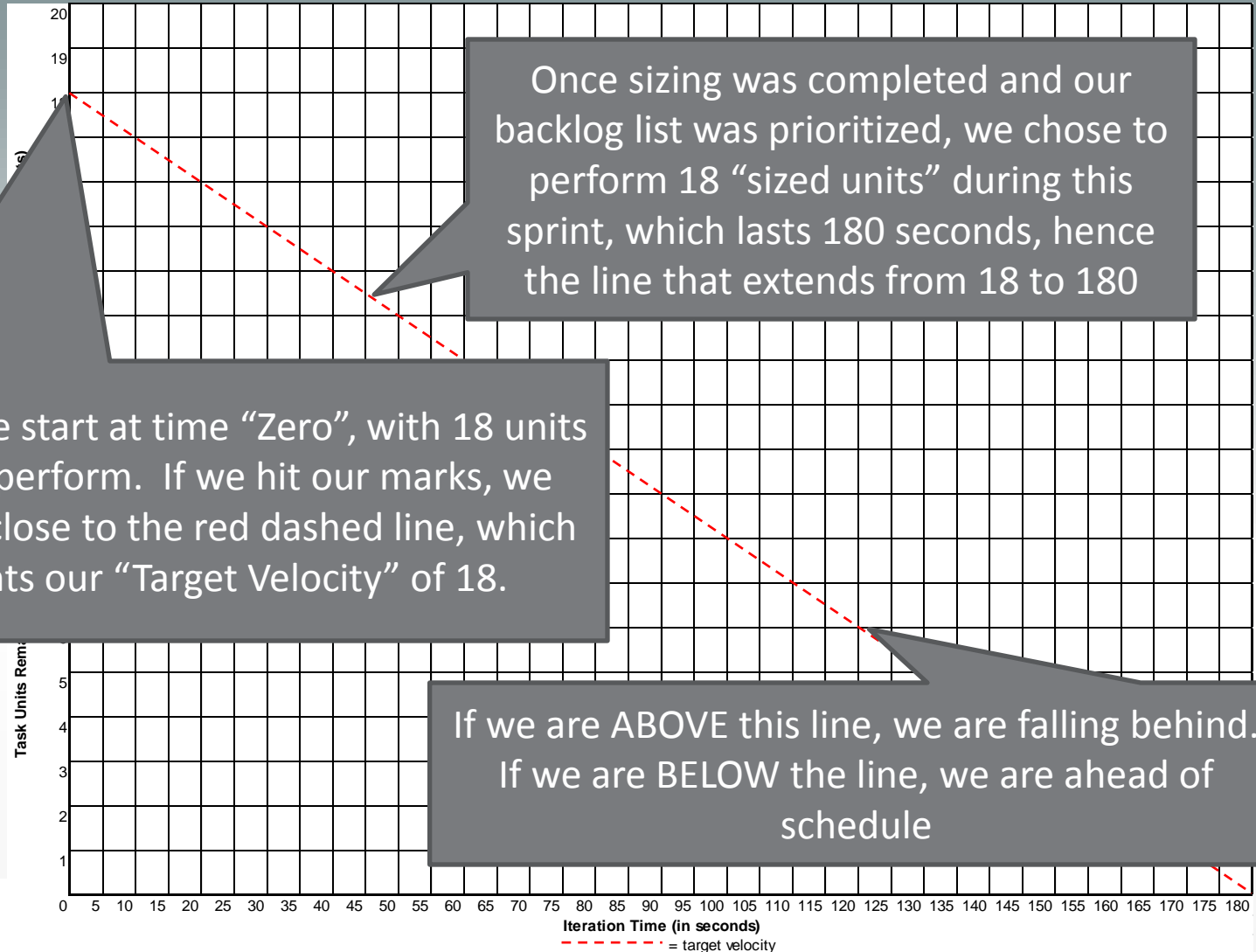
15

Place a RED DOT on the card you have just finished working on

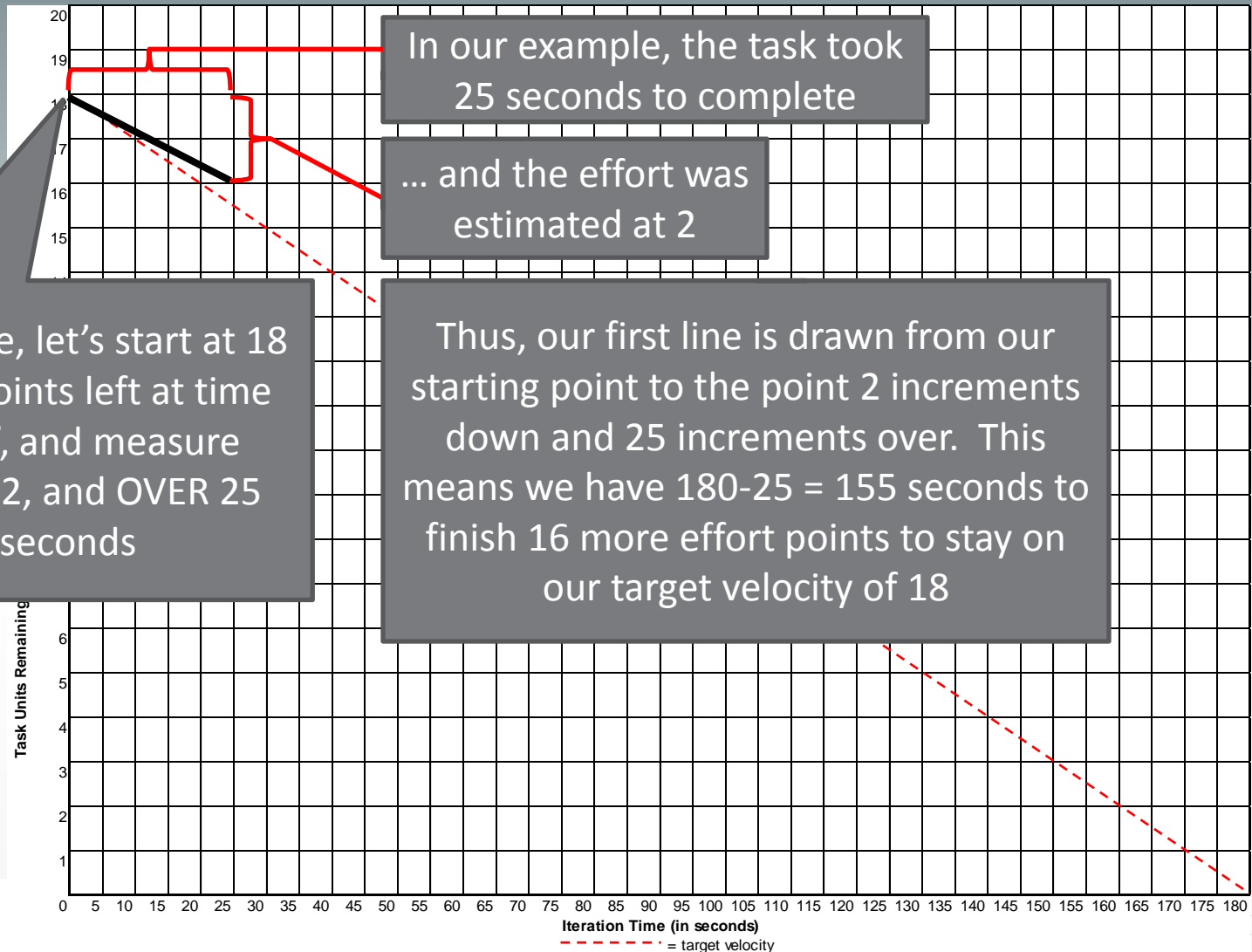
Write the time in seconds to accomplish the task

For this example, the estimate was a "2", and it ended up taking 25 seconds. On the next slide, we'll see how this is plotted on a burn down chart.

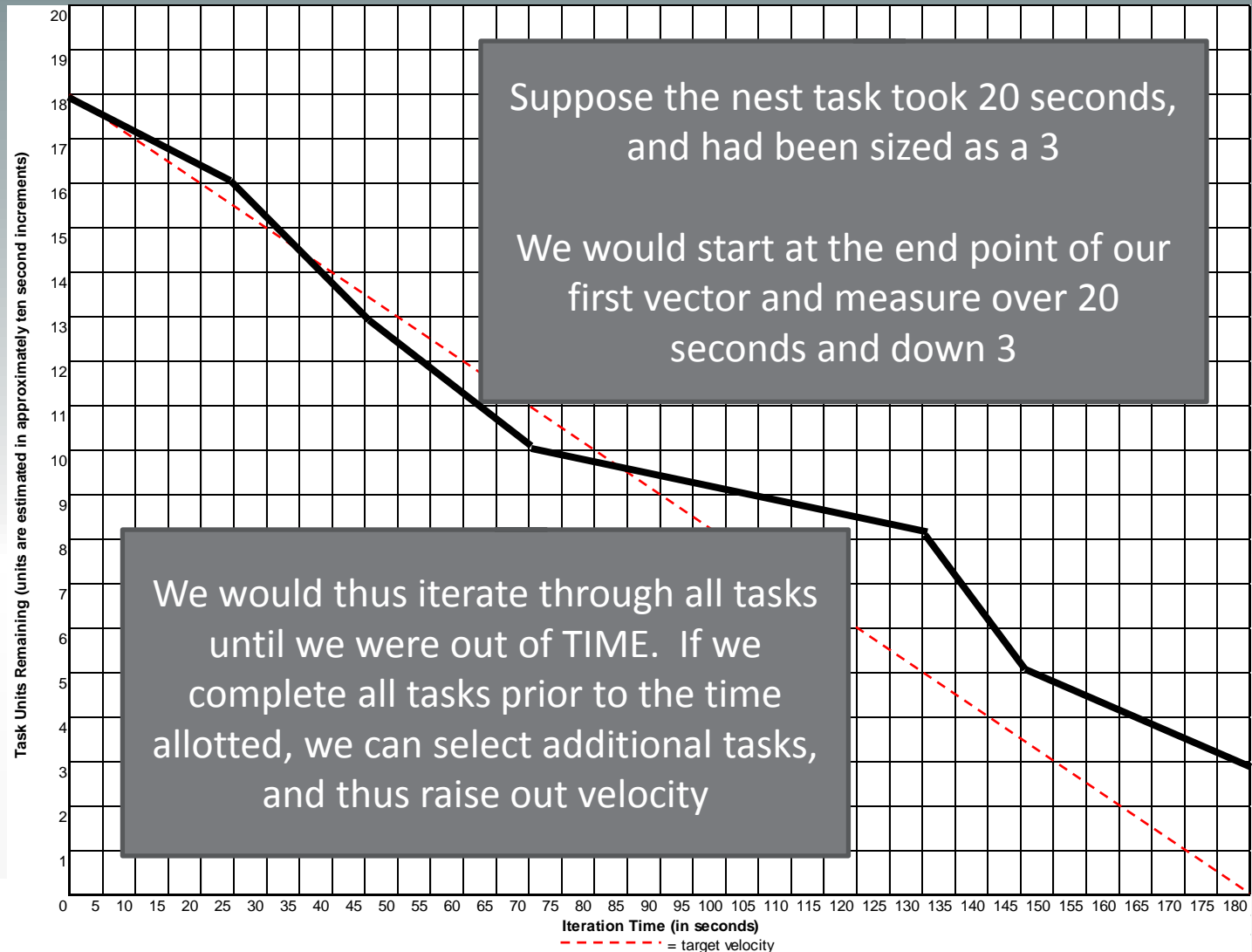
The Burn Down Chart



7) Plot Burn Down Chart



8) Repeat until out of time



9) Calculate Team Velocity & Value Acquired

- Go back through all the cards that have a RED DOT on them (completed tasks), and sum all *Values* from each card
 - This represents your team's score for acquired value
- For this task, the projected velocity was 18
 - Count the “Task Units” you achieved (that were COMPLETED). This is your team's actual velocity
- Provide these numbers to me, and I will write them on the score pad, along with the reporting time. In case of a first-place tie in points, the earlier reporter wins

Execute Sprint

Retrospective – Q&A

