شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Scrum Master

Tahaluf Training Center 2021

Day 3

1. **What is Agile Estimation?**
2. What is Planning Poker in Agile?
3. What are Scrum Artifacts?
4. What is Burndown Chart in Scrum?
5. Write SMART Goals & INVEST for User Stories

What is Agile Estimation?

Whether the team is developing a product or developing a project, we all need to answer "When will we be able to complete it?", or to what extent we can do it at a certain point in time.

So, like the traditional development model, we need to estimate the amount of work before we start the project.

Agile estimation has the following three characteristics:

1. Team collective estimate:

During the development of Scrum, the team shared responsibility and collectively committed to the work of each Sprint, so the estimated workload for the agile team used a collective estimation approach.

2. Estimate size, not estimate time period, use relative estimates instead of absolute estimates:

An estimate is nothing more than a well educated guess. We use all the knowledge and experience at hand to make a guess about the amount of time it is going to take.

So instead of looking at every new work item separately, why not compare it to previously finished work items? It's easier for humans to relate to similar items than to guess the actual size of things anyway.

3. Estimate Velocity – Record and Average the team speed of each Sprint:

The team velocity is the number of story points that the Scrum team actually completes in a Sprint. The team velocity tells you how fast the team is doing.

Day 3

1. What is Agile Estimation?
2. **What is Planning Poker in Agile?**
3. What are Scrum Artifacts?
4. What is Burndown Chart in Scrum?
5. Write SMART Goals & INVEST for User Stories

Planning Poker

Effective estimation is one of the toughest challenges software developers face in their jobs.

Regardless of team size, they need to define, estimate, and distribute work throughout a team.

As teams get larger, it becomes even more important to build good habits around planning and estimating work.

Lack of planning and estimating reduce confidence in a program, breaks down relationships between the team and the business, and makes development harder on everyone.

What is Planning Poker?

Planning poker (also known as Scrum poker) is a consensus-based, gamified technique for estimating, mostly used to estimate effort or relative size of development goals in software development.

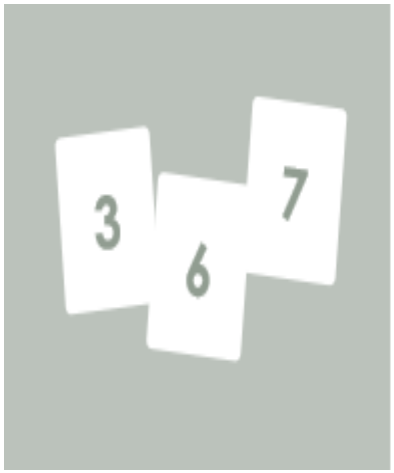
Steps for Planning Poker

- To start a poker planning session, the product owner or customer reads an agile user story or describes a feature to the estimators.
  For example:
  “Customer logs in to the reservation system”
  “Customer enters search criteria for a hotel reservation”

- Team members of the group make estimates by playing numbered cards face-down to the table without revealing their estimate (Fibonacci values: 1,2,3,5,8,13,20,40)

What is Planning Poker?

- Cards are simultaneously displayed.
- The estimates are then discussed and high and low estimates are explained.
- Repeat as needed until estimates converge.



Estimators	Round 1	Round 2
Peter	4	5
Dorothy	5	6
Derek	6	3
Tom	4	6

Exercise

1. How is Estimation Done in a Scrum Project?

2. What are some risks in Scrum? **How are they handled**?

Day 3

1. What is Agile Estimation?
2. What is Planning Poker in Agile?
3. **What are Scrum Artifacts?**
4. What is Burndown Chart in Scrum?
5. Write SMART Goals & INVEST for User Stories

What are Scrum Artifacts?

Scrum **Artifacts** provide key information that the Scrum Team and the stakeholders need to be aware of for understanding the product under development, the activities being planned, and the activities done in the project.

What are Scrum Artifacts?

The following artifacts are defined in Scrum Process Framework:

1. Product Vision
2. Sprint Goal
3. Product Backlog
4. Sprint Backlog
5. Definition of Done
6. Burn-Down Chart
7. Increment
8. Other required artifacts…

Product Vision

The **Product Vision** is an artifact to define the long-term goal of the project/product. It sets the overall direction and guides the Scrum Team.

Everyone should be able to memorize the Product Vision; therefore it must be short and precise.

Sprint Goal

The Sprint Goal helps to focus the Sprint. It is the objective that will be met within the Sprint through the implementation of the forecasted Product Backlog items, and it provides guidance to the Development Team on why it is building the Product Increment.

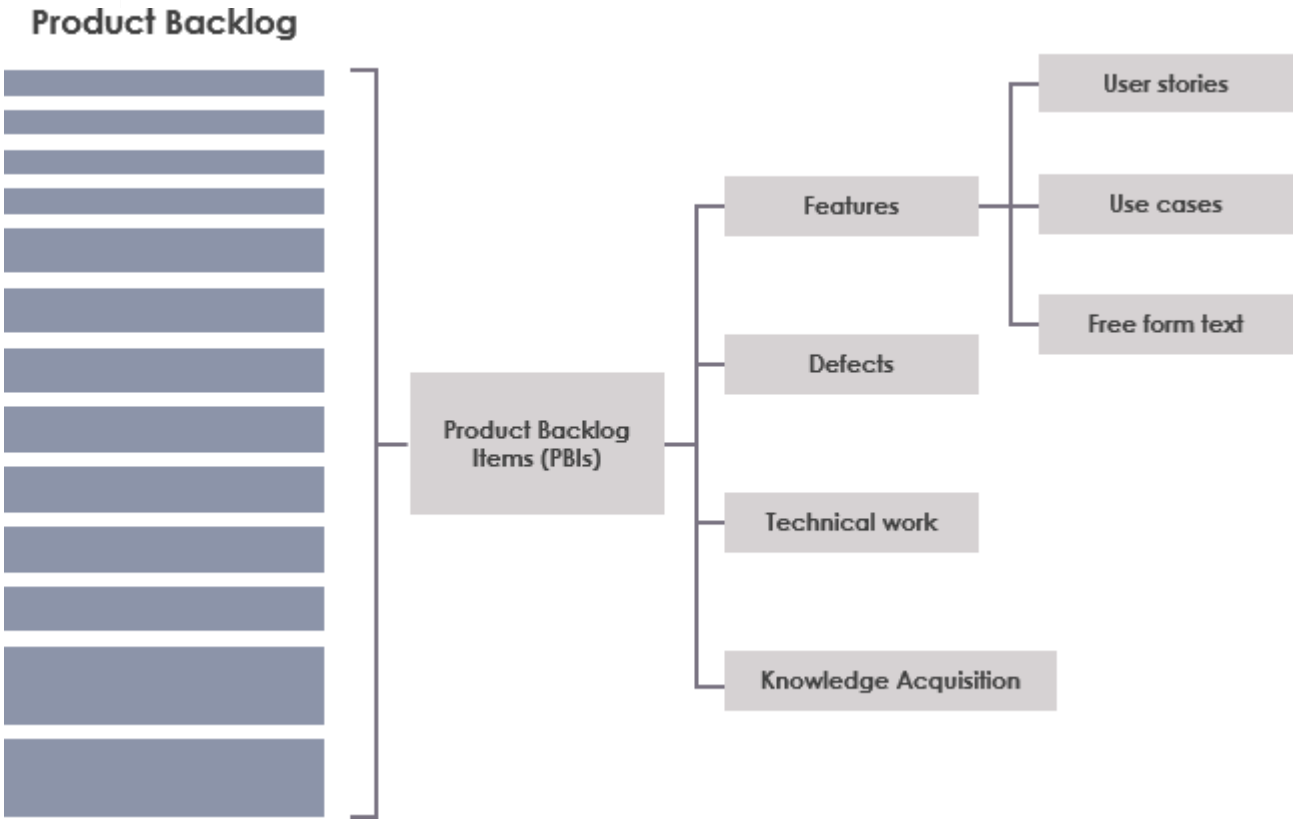
the responsibility for crafting a Sprint Goal is for the Scrum Team. It is however in large part of interest to the Product Owner to support this process by having clear business goals for the coming Sprint, which can also make ordering the Product Backlog a lot easier by providing Focus.

Product Backlog

A product backlog is a list of all the things that are required in the product and it is a dynamic and best understood requirements for any changes to be made to the product.

Product backlog owned by the Product Owner (PO) which consists of a lists all features, functions, requirements, enhancements, and fixes that constitute the changes to be made to the product in the future releases.

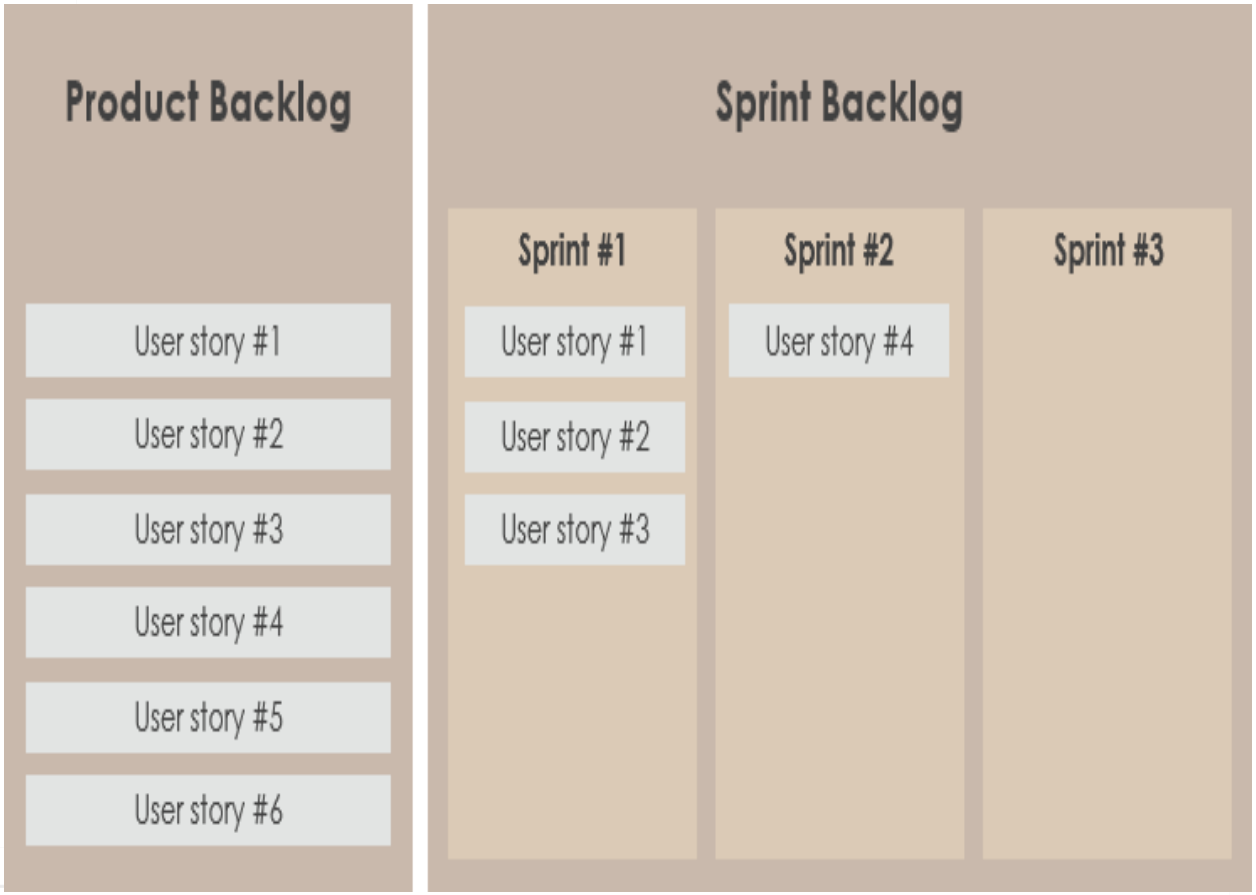
Product Backlog



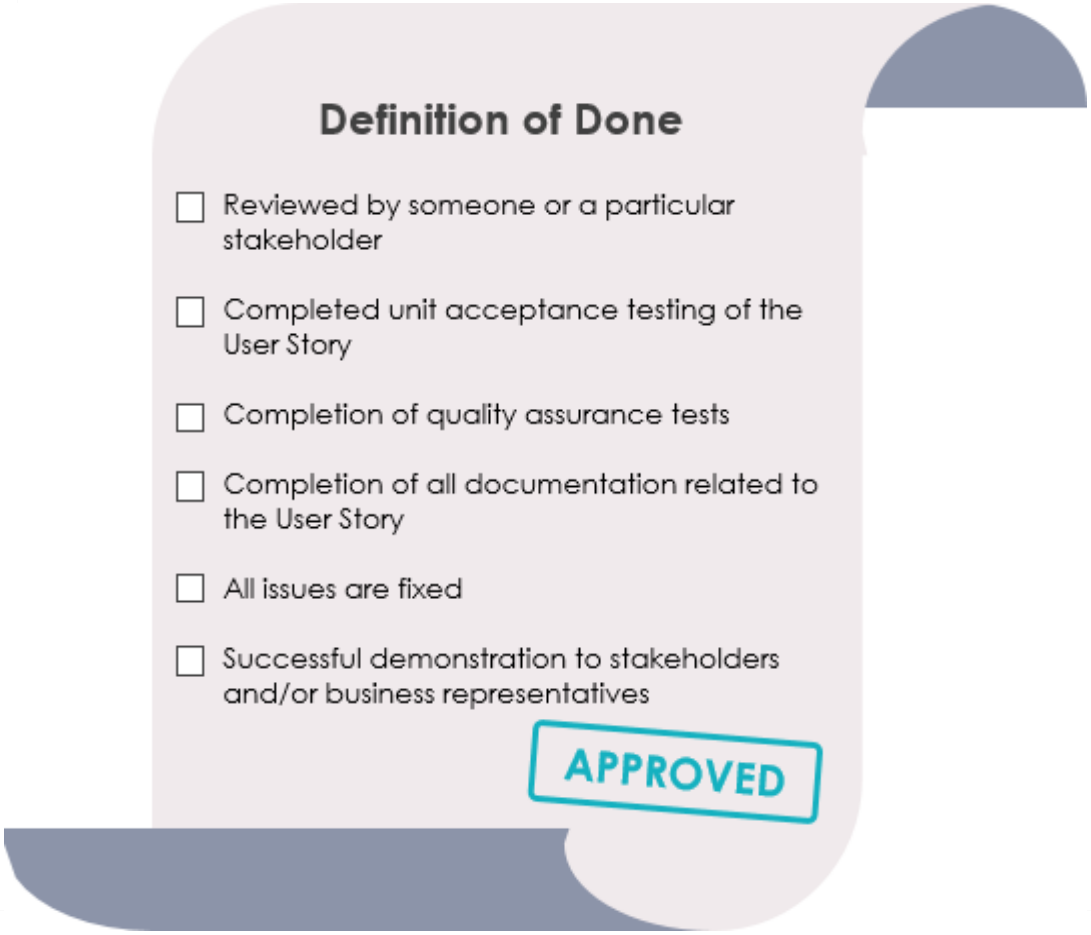
The Sprint Backlog is the set of Product Backlog items selected for the Sprint plus a plan for delivering the product Increment and realizing the Sprint Goal.

The Sprint Backlog is a forecast by the Development Team about what functionality will be in the next Increment and the work needed to deliver that functionality.

Sprint Backlog



Definition of Done



The **Increment** is the sum of all the Product Backlog items completed during a Sprint and all previous Sprints.

At the end of a Sprint, the new Increment must be "**Done**," which means:

- It must be in usable condition regardless of whether the Product Owner decides to actually release it.

Day 3

1. What is Agile Estimation?
2. What is Planning Poker in Agile?
3. What are Scrum Artifacts?
4. **What is Burndown Chart in Scrum?**
5. Write SMART Goals & INVEST for User Stories

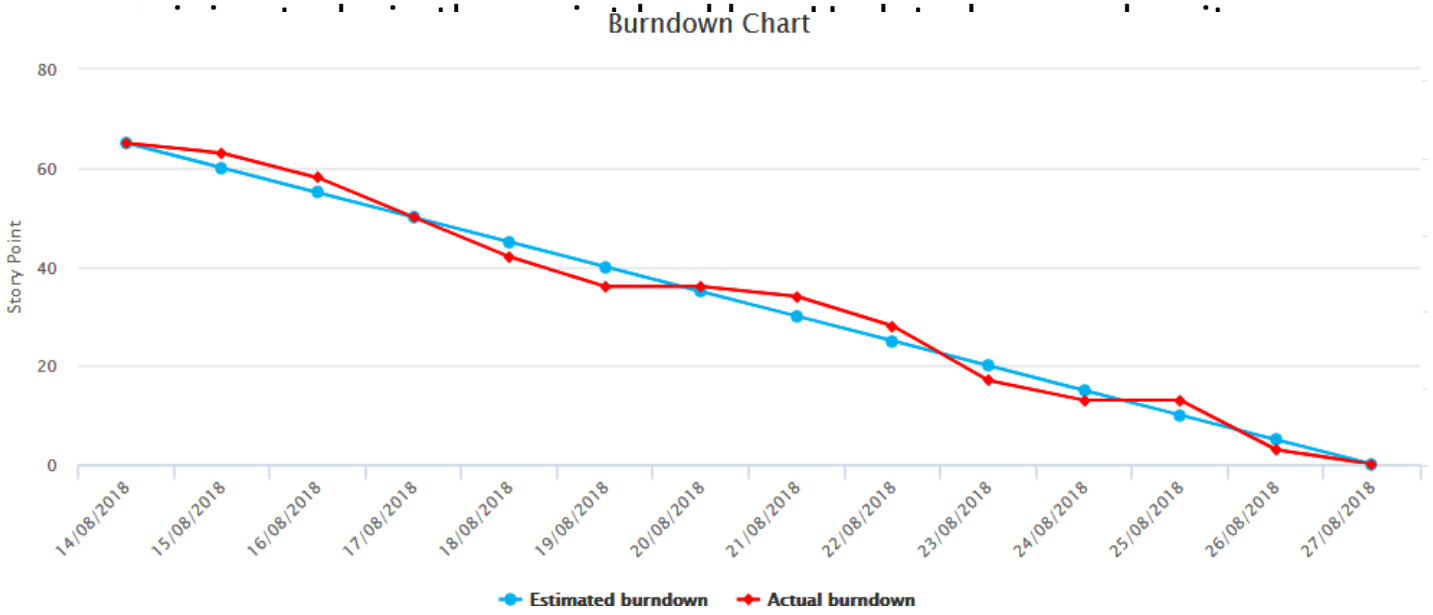
Burn-down charts are graphs that give an overview of progress over time while completing a project. As tasks are completed, the graph “burns down” to zero.

It is used as a tool to guide the development team to a successful completion of a Sprint on time with a working final product.

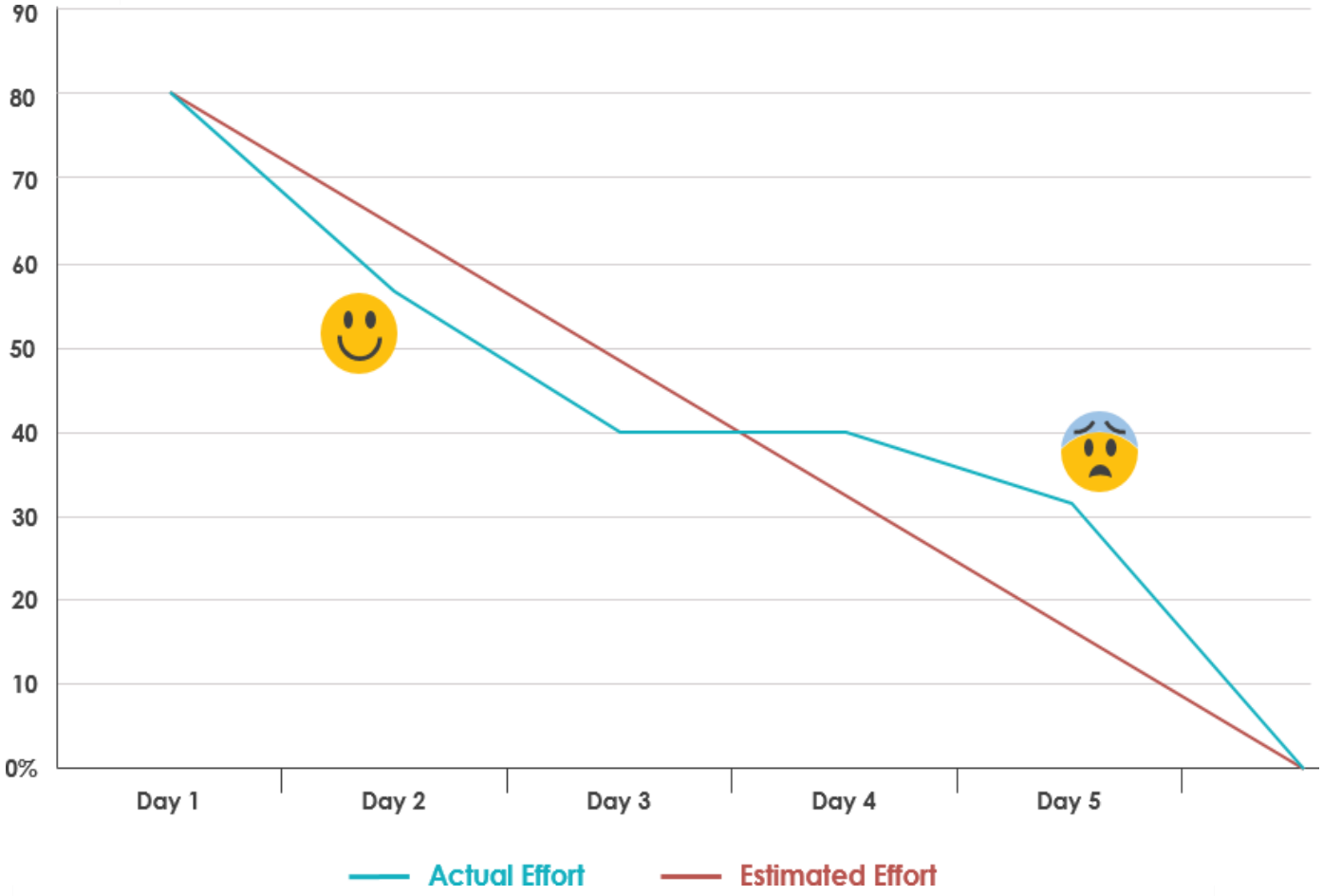
If a team decides they have moved more objectives than possible for completion from the Product Backlog to the Sprint Backlog, the Burndown Chart can aid them is ascertaining which tasks they are not realistically able to complete so that these task can be moved back to the Product Backlog.

The Burndown Chart

The following sprint burndown chart is displayed showing



The Burndown Chart



A burndown chart is almost a “**must**” have tool for a Scrum team for the following main reasons:

1. monitoring the project scope creep.
2. Keeping the team running on schedule.
3. Comparing the planned work against the team progression.

Burndown Chart **Example**:

Duration: 5 days
Sprint Backlog: 8 tasks
Velocity: 80 available hours

Step 1 – Create Estimate Effort

Suppose your ideal baseline for using the available hours over the sprint. So in the simplest for this is the available hours divided by number of days.

In this example, 80 hours over 5 days equating to 16 hours a day. In order to create the project burn-down chart, the data needs to be captured as a daily running total starting with 80 hours than 64 hours left 1 (80 – 16) at end of day, 48 hours left at end of day 2, etc.

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Effort remaining	80	64	48	32	16	0

Step 2 – Track Daily Process

The daily progress is then captured in the table against each task. It is important to remember that the value captured for each day is the estimated effort to complete the task, not the actual effort.

Task	Hours	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Task 1	10	3	2	0	1	4	10
Task 2	10	3	2	0	1	4	10
Task 3	10	3	2	0	1	4	10
Task 4	10	3	2	0	1	4	10
Task 5	10	3	2	0	1	4	10
Task 6	10	3	2	0	1	4	10
Task 7	10	3	2	0	1	4	10
Task 8	10	3	2	0	1	4	10

Step 3 – Compute the Actual Effort

The total remaining effort needs to be captured at the end of each day. This is the total (**sum**) of all of the estimated time remaining at the end of each day.

		Day 1	Day 2	Day 3	Day 4	Day 5
Actual effort	80	56	40	40	32	0
Effort remaining	80	64	48	32	16	0

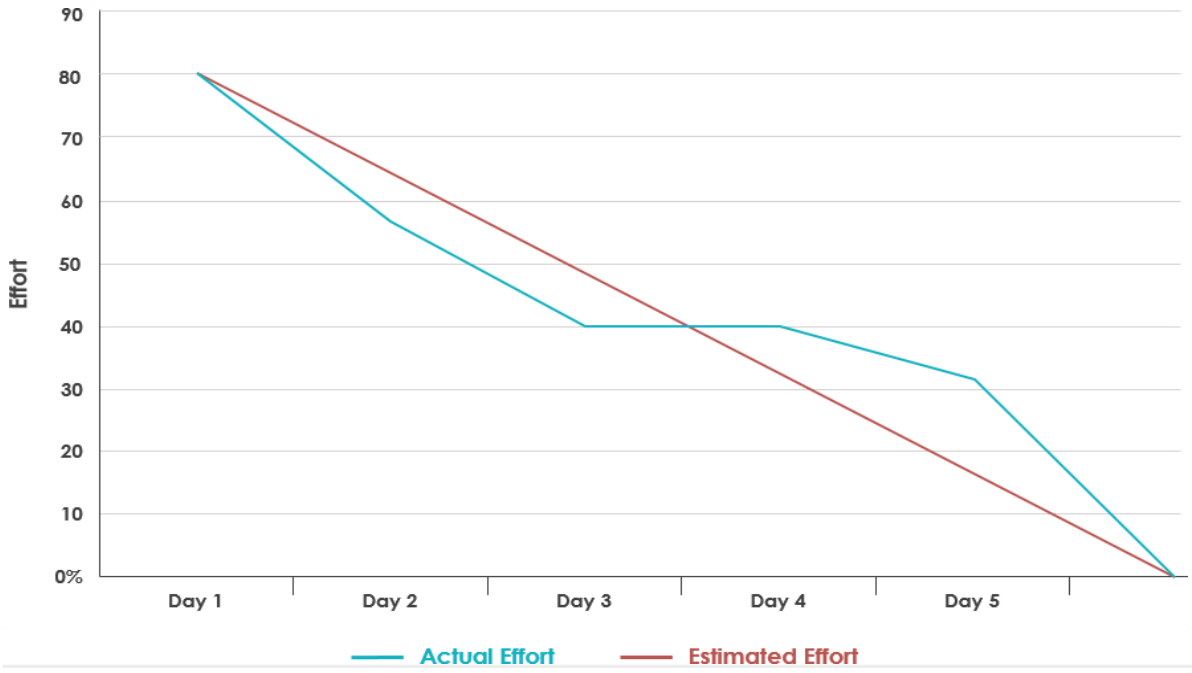
Step 4 – Obtain the Final Dataset

When the data is available, the project burn-down chart can be created. This is relatively simple using the line chart option available within Excel.

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Actual effort	80	56	40	40	32	0
Effort remaining	80	64	48	32	16	0

Step 5 – Plot the Burndown using the Dataset

It is very simple to create a project burn-down chart as following, as long as you know what data you are tracking.



Day 3

1. What is Agile Estimation?
2. What is Planning Poker in Agile?
3. What are Scrum Artifacts?
4. What is Burndown Chart in Scrum?
5. **Write SMART Goals & INVEST for User Stories**

SMART is a set of criteria for creating goals such as Sprint goals which is a short statement written by the Scrum team (based on the Product Owner's initial objective) to lead them in the direction of what they want to accomplish.

SMART stands for Specific, Measurable, Achievable, Relevant and Time-bound.

Write SMART Goals & INVEST for User Stories

SMART means:

Specific: when setting a goal, be specific about what you want to accomplish. Think about this as the mission statement for your goal.

Measurable: what metrics are you going to use to determine if you meet the goal? This makes a goal more tangible because it provides a way to measure progress. If it's a project that's going to take a few months to complete, then set some milestones by considering specific tasks to accomplish.

Achievable: This focuses on how important a goal is to you and what you can do to make it attainable and may require developing new skills and changing attitudes. The goal is meant to inspire motivation, not discouragement.

Think about how to accomplish the goal and if you have the tools/skills needed. If you don't currently possess those tools/skills, consider what it would take to attain them.

Relevant: This refers focusing on something that makes sense with the broader business goals. For example, if the goal is to launch a new product, it should be something that's in alignment with the overall business objectives.

Time bound: anyone can set goals, but if it lacks realistic timing, chances are you're not going to succeed. Providing a target date for deliverables is imperative. Ask specific questions about the goal deadline and what can be accomplished within that time period.

If the goal will take three months to complete, it's useful to define what should be achieved half-way through the process.

The INVEST as a reminder of the characteristics of a good quality Product Backlog Item (PBI) (or user stories) commonly written in user story format. But what are characteristics of a good user story?

Write SMART Goals & INVEST for User Stories

Independent	Standalone PBI with no dependencies.
Negotiable	It can be changed in anytime.
Valuable	Having a good value for the end user.
Estimable	The team is able to estimate its size.
Small	Small enough to be developed and tested.
Testable	Testing is possible from AC and DOD.

Any Question ?!