



ZEN VALUE

Scrum Master Certification



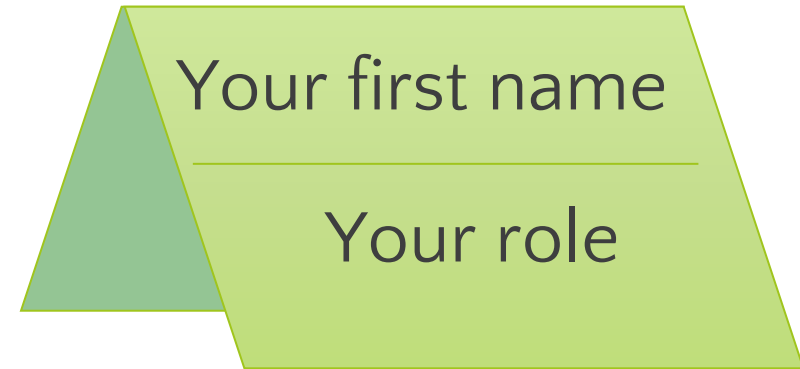
Formation

Go around the table

1. Build your tent

1. Express your expectations

- Post for each expectation
- Maximum of 3 posts per person



Objectives of the session



Understand the role of Scrum Master in a Scrum team



Learn and master Scrum Master's responsibilities



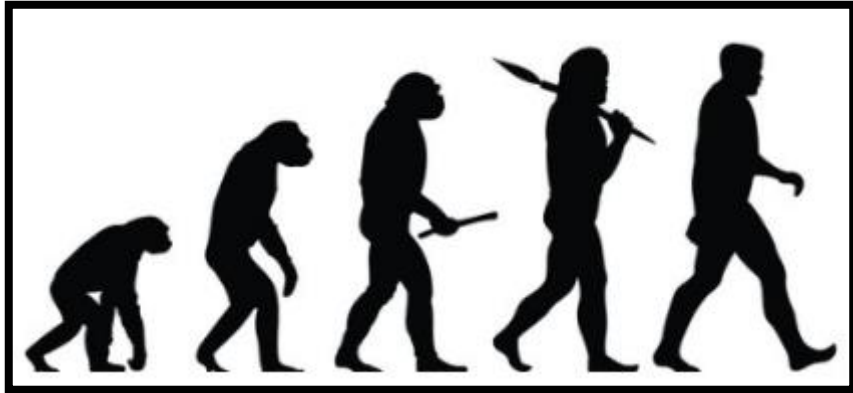
Take the « PSM I assessment » on the web site [Scrum.org](https://www.scrum.org) to obtain your certification

Summary

- Introduction to agility
- Scrum overview
- Scrum roles
- Scrum events
- Scrum artefacts
- Zoom in the Product Backlog
- The concept of value
- Estimation and planification
- Scrum Master's Responsibilities
- Take the Professional Scrum Master assessment

Introduction to agility

A bit of history



From the 1950s to today



The manifesto

4 values, 12 underlying principles

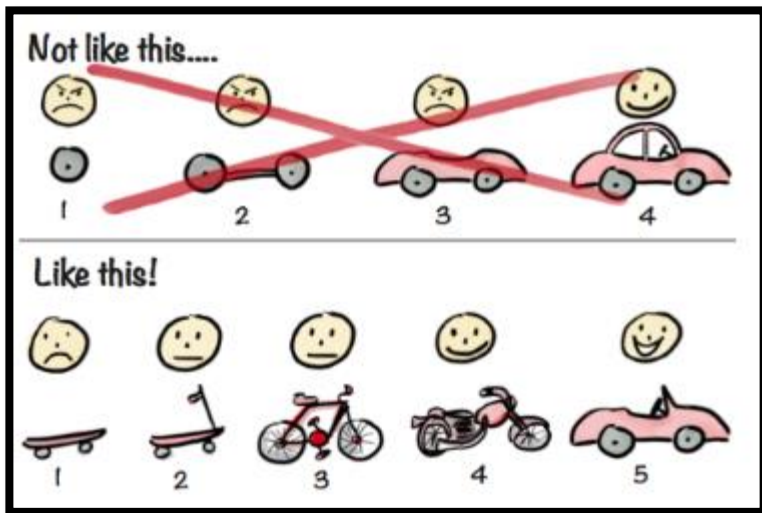


February 2001 : 17 experts



Agile Methodologies

Synthesis of an agile approach



Iterative & Incremental



Alignment between values
and objectives



Strong collaboration

Synthesis of an agile approach



Self-organization

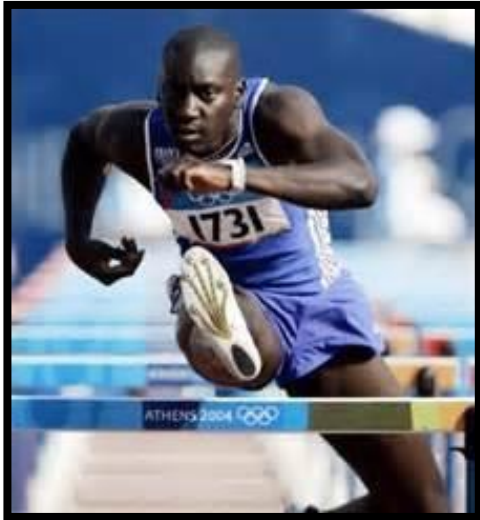


Continuous
improvement



Right dose
Events /documentation

Synthesis of an agile approach



Frequent delivery



High quality



Responding to change

Synthesis of an agile approach



Effective



Efficient

Synthesis of an agile approach



Maximizing the value



Another vision of the
work



Proximity and
communication

Scrum overview

Scrum Definition

Scrum is a lightweight framework that helps people, teams and organizations generate value through adaptive solutions for complex problems.

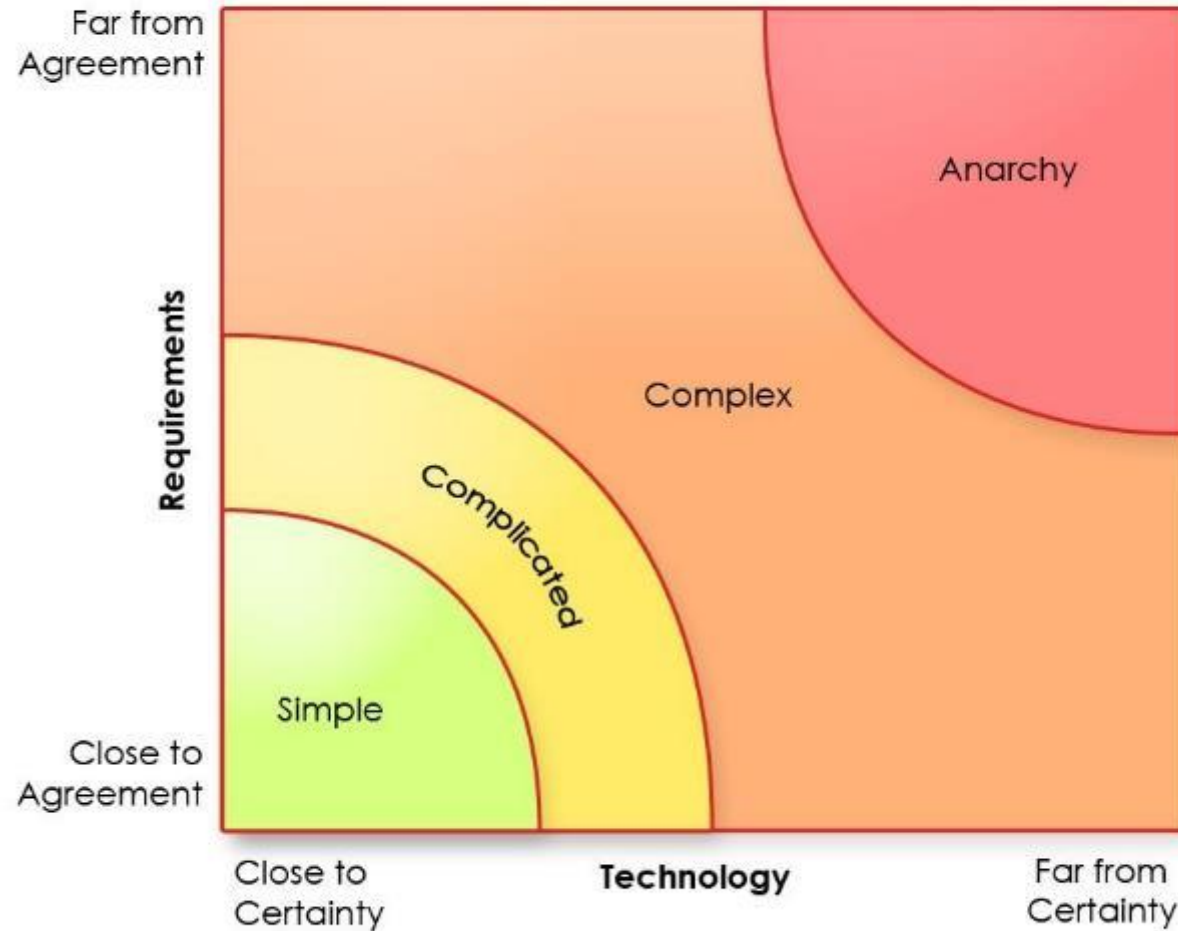


The Scrum framework, as outlined herein, is immutable. While implementing only parts of Scrum is possible, the result is not Scrum



Complicated or Complex ?

The Spectrum of Process Complexity



Scrum in a nutshell

1. A Product Owner orders the work for a complex problem into a Product Backlog.
2. The Scrum Team turns a selection of the work into an Increment of value during a Sprint.
3. The Scrum Team and its stakeholders inspect the results and adjust for the next Sprint.
4. Repeat

Our highest priority is **to satisfy the customer** through early and continuous delivery of **valuable software**.
[1st principle of the agile manifesto]

Scrum Theory

Scrum is founded on **empiricism** and **lean** thinking.

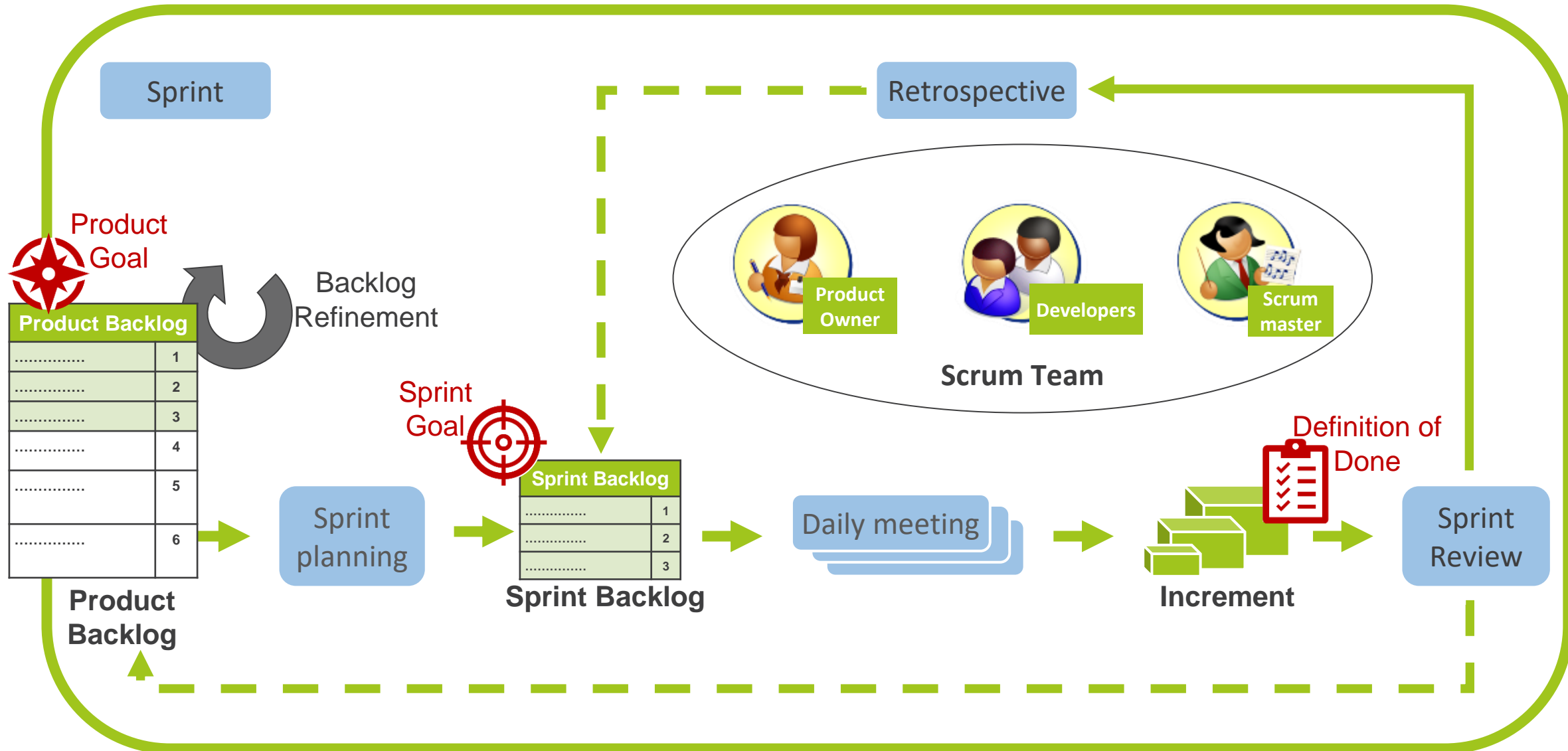


Empiricism asserts that knowledge comes from **experience** and **making decisions based on what is observed**.

Lean thinking **reduces waste** and **focuses on the essentials**.



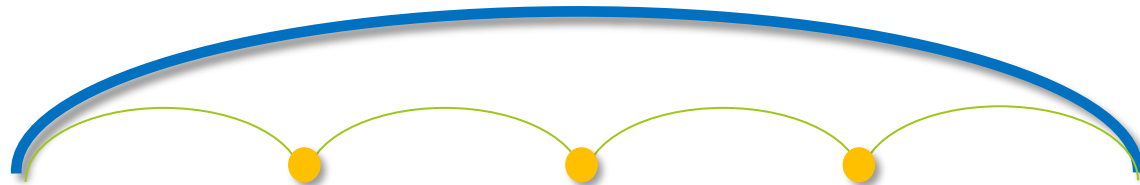
Scrum Framework



Iterative approach

Breaking down project into time-boxed cycles :

- To provide visibility in order to be aligned with strategy
- To create regularity (sustainable pace) for project realization in order to reduce complexity
- Ability to repeat actions to eliminate defects



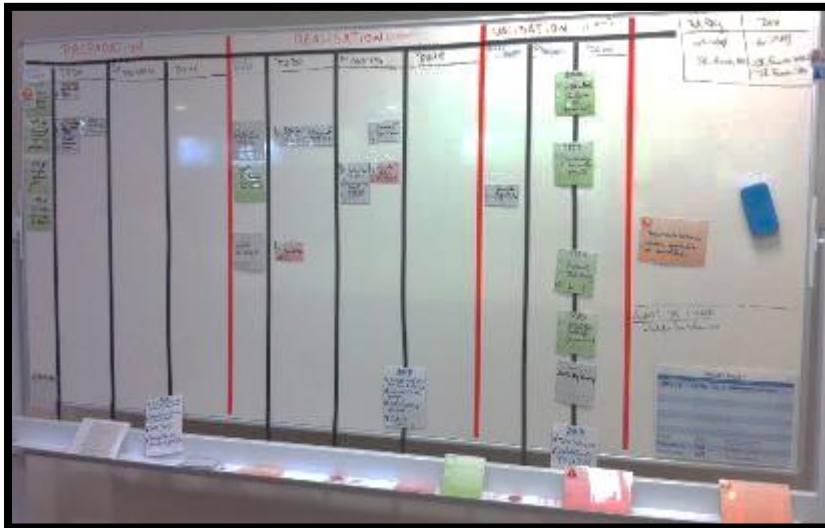
Incremental approach

- Vertical splitting across functional layers (make sense)
- Realization of useable functional items



Three Pillars of Scrum

Transparency



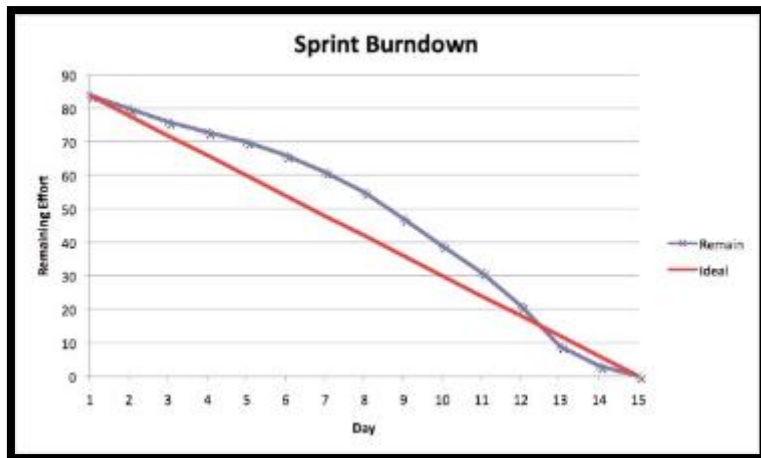
To make visible



To make right decisions

Three Pillars of Scrum

Inspection



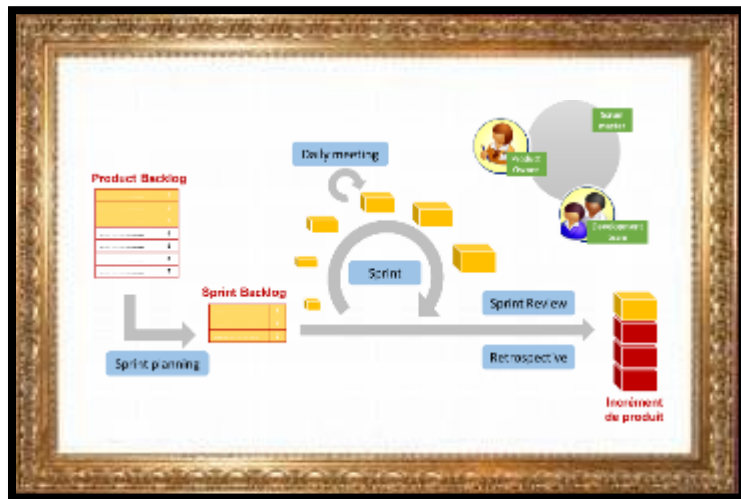
Progress



Goal / Variances

Three Pillars of Scrum

Adaptation



When we leave the Scrum framework



And there is an impact on the product

Scrum values



Scrum Values © 2017 Scrum.org

Scrum roles

The Scrum Team

Scrum Team

- Cross-functional & self-managing
- Small (typically 10 or fewer people)
- Accountable for creating a valuable & useful Increment
- No hierarchies



Developers



Scrum Master

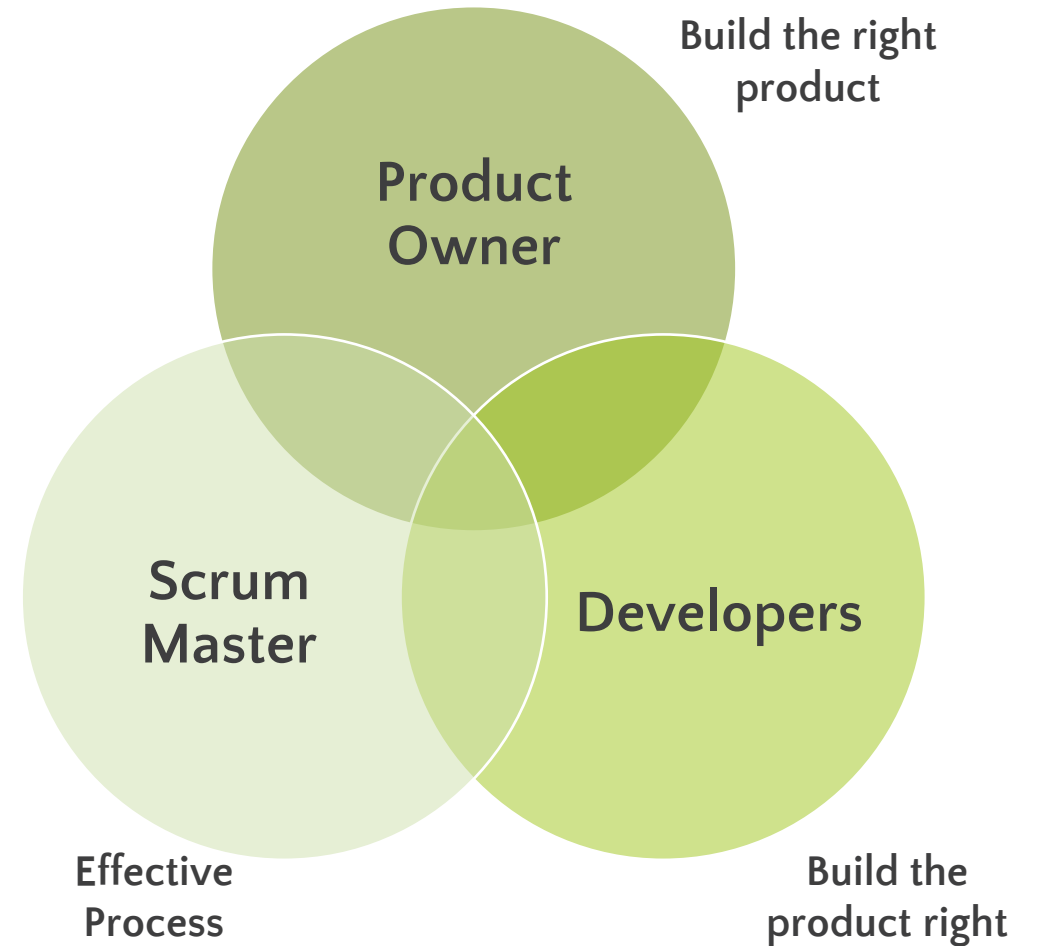


Product Owner

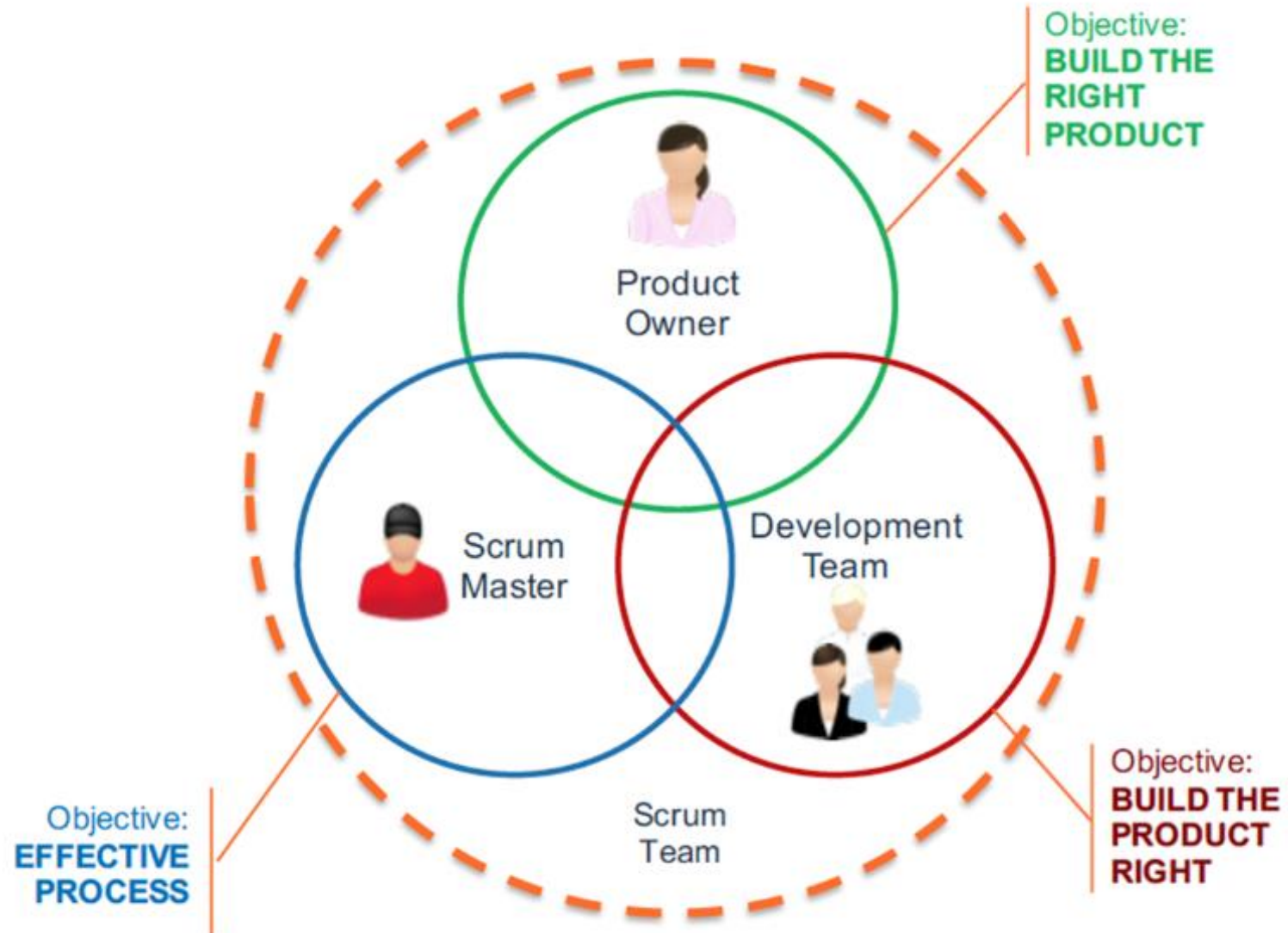


Scrum Team : three specific accountabilities

- **Product Owner**
 - Maximizing the value of the product
 - Managing the Product Backlog
- **Developers**
 - Creating any aspect of a usable Increment each Sprint
- **Scrum Master**
 - Establishing Scrum as defined in the Scrum Guide
 - Ensuring the Scrum Team's effectiveness



Scrum roles : Objectives



Scrum roles – Test your understanding

- In charge of maximizing the value of the product and the work of the developers **PO**
- In charge of estimating work effort **Developers**
- He ensures Scrum is understood and adopted **SM**
- He is for the Scrum team the representative of the stakeholders who express the product requirements **PO**
- Maximum 10 members **Scrum Team**
- It is possible to create a subteam in the scrum team **No**
- Facilitator of the self-organization of the team and is the guardian of the adopted practices **SM**
- It ensures that the "Product Backlog" is available, clear and shows what the team will work-on soon **PO**

Scrum roles – Test your understanding

- He verifies the product crafted by the team and provides his validation **PO**
- He helps the developers to eliminate impediments **SM**
- He orders the Product Backlog items to better achieve the objectives **PO**
- Set of professionals who deliver at each sprint a "done" and deliverable/useable increment of the product **Developers**
- He ensures that Product Backlog items are understood by the developers **PO**
- Responsible for the Product Backlog **PO**
- Self-organized and multidisciplinary **Developers**
- A single person, not a committee **PO**
- he helps to change interactions with Scrum team to maximize.... **SM**

Scrum master stances



Scrum master stances

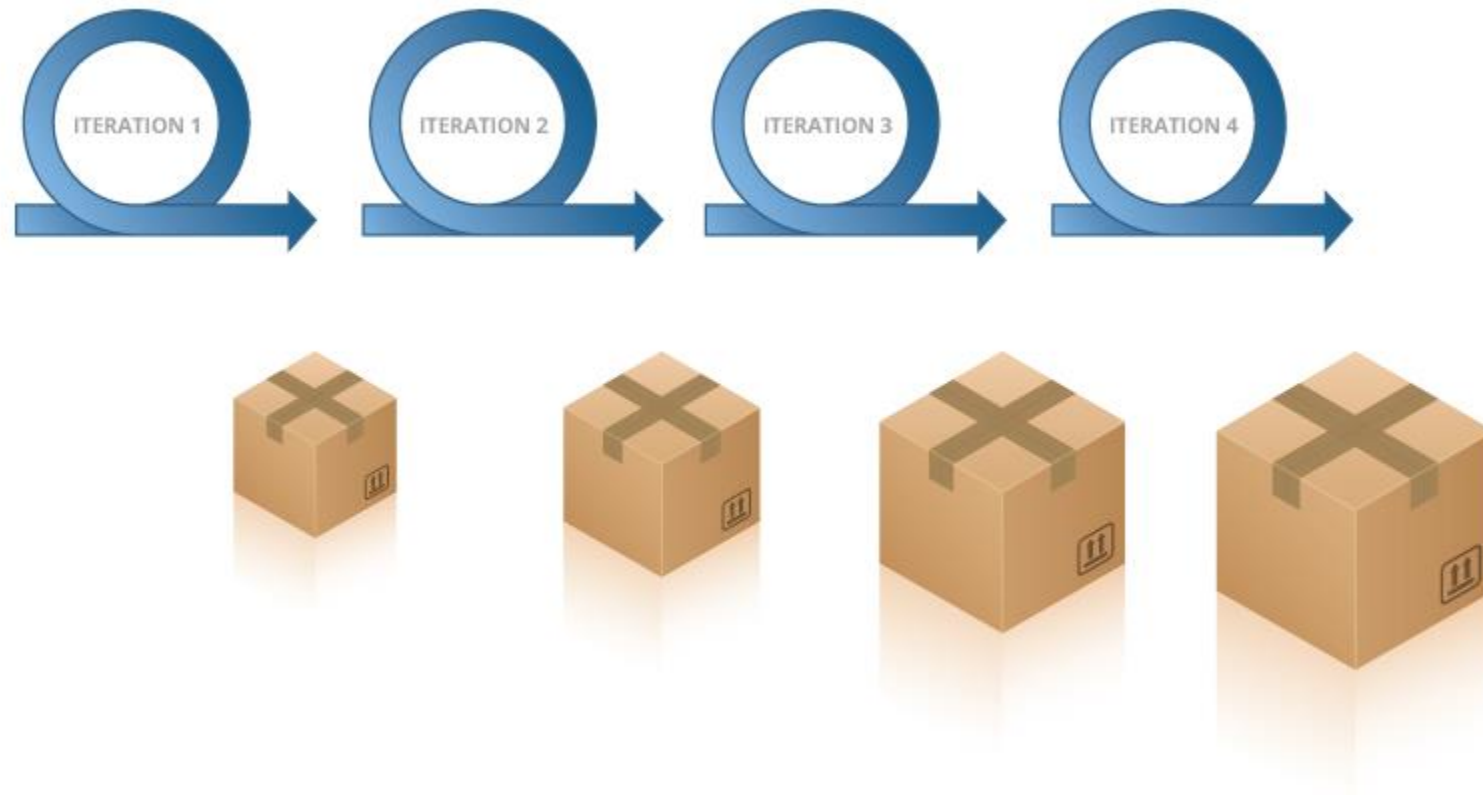
The Scrum Master Acts as a:

- A **Servant Leader** focusing on the needs of the team members and the people they provide value to (the customer) with the goal of achieving results in line with the organization's values, principles, and business objectives.
- A **Facilitator** by setting the stage and providing clear boundaries in which the team can collaborate.
- A **Coach** coaching the individual with a focus on mindset and behavior, the team in continuous improvement and the organization in truly collaborating with the Scrum team.

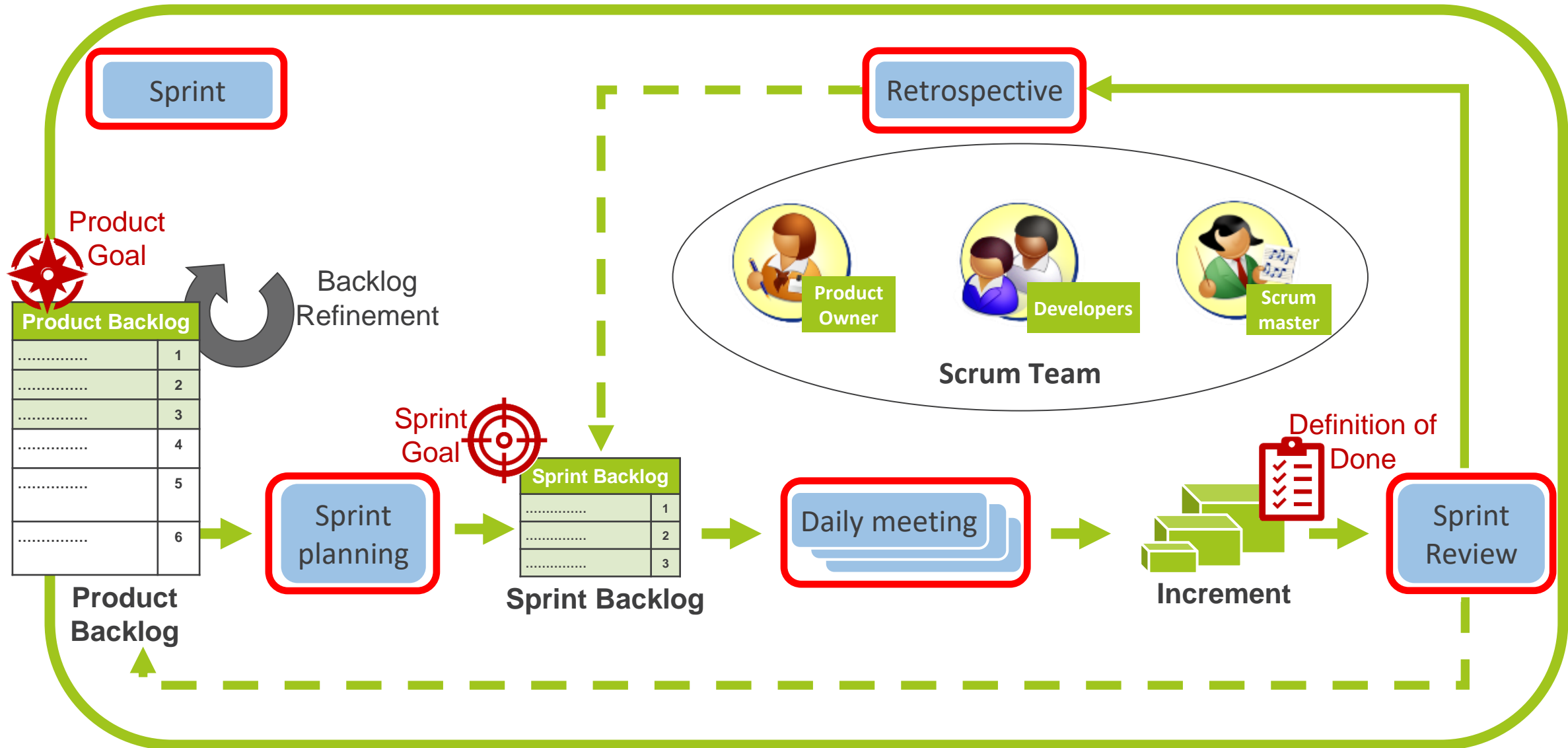
- A **Mentor** that transfers Agile knowledge and experience to the team.
- A **Teacher** to ensure Scrum and other relevant methods are understood and enacted
- An **Impediment Remover** solving blocking issues to the team's progress, taking into account the self-organizing capabilities of the Development Team.
- A **Manager** responsible for managing impediments, eliminate waste, managing the process, managing the team's health, managing the boundaries of self-organization, and managing the culture.
- A **Change Agent** to enable a culture in which Scrum Teams can flourish.

Scrum events

Scrum lifecycle



Scrum Framework



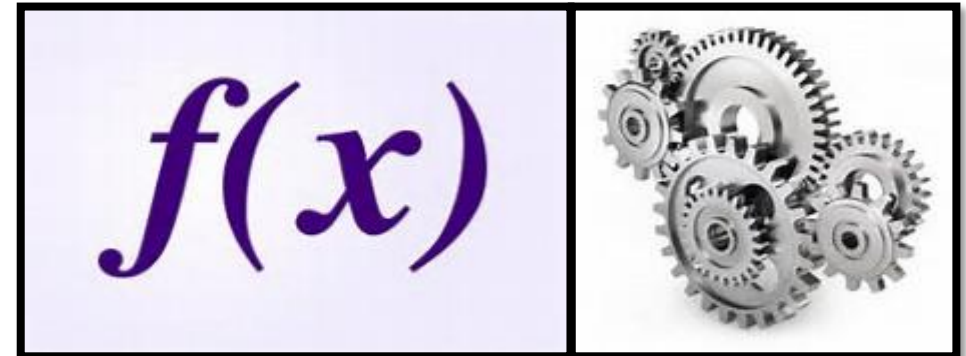
The definition of a Sprint



Realising the Sprint Goal
A “Done”, useable, and potentially
releasable Product Increment is created



Time-boxed - Max 4 weeks



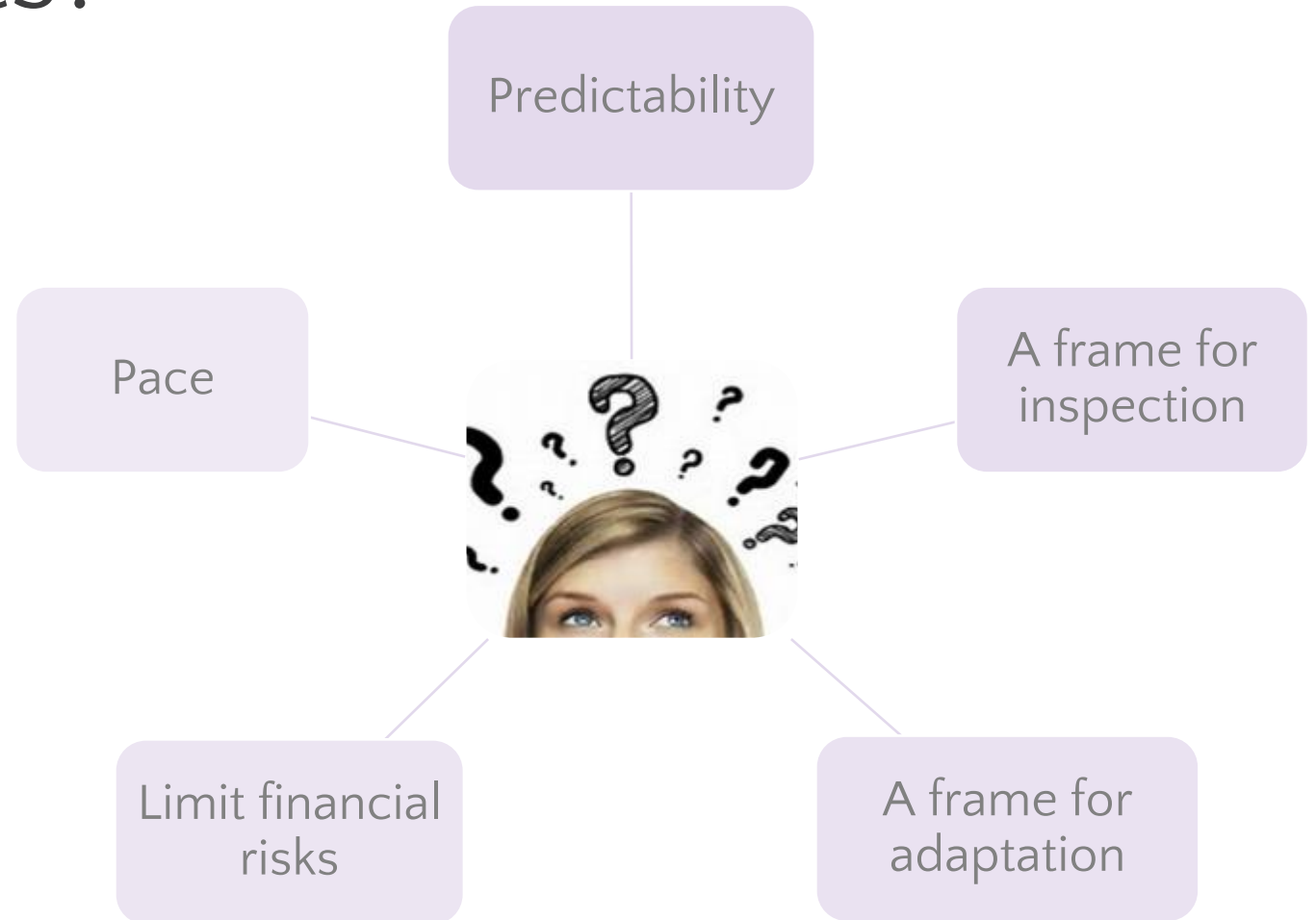
Scope

Why doing Sprints?

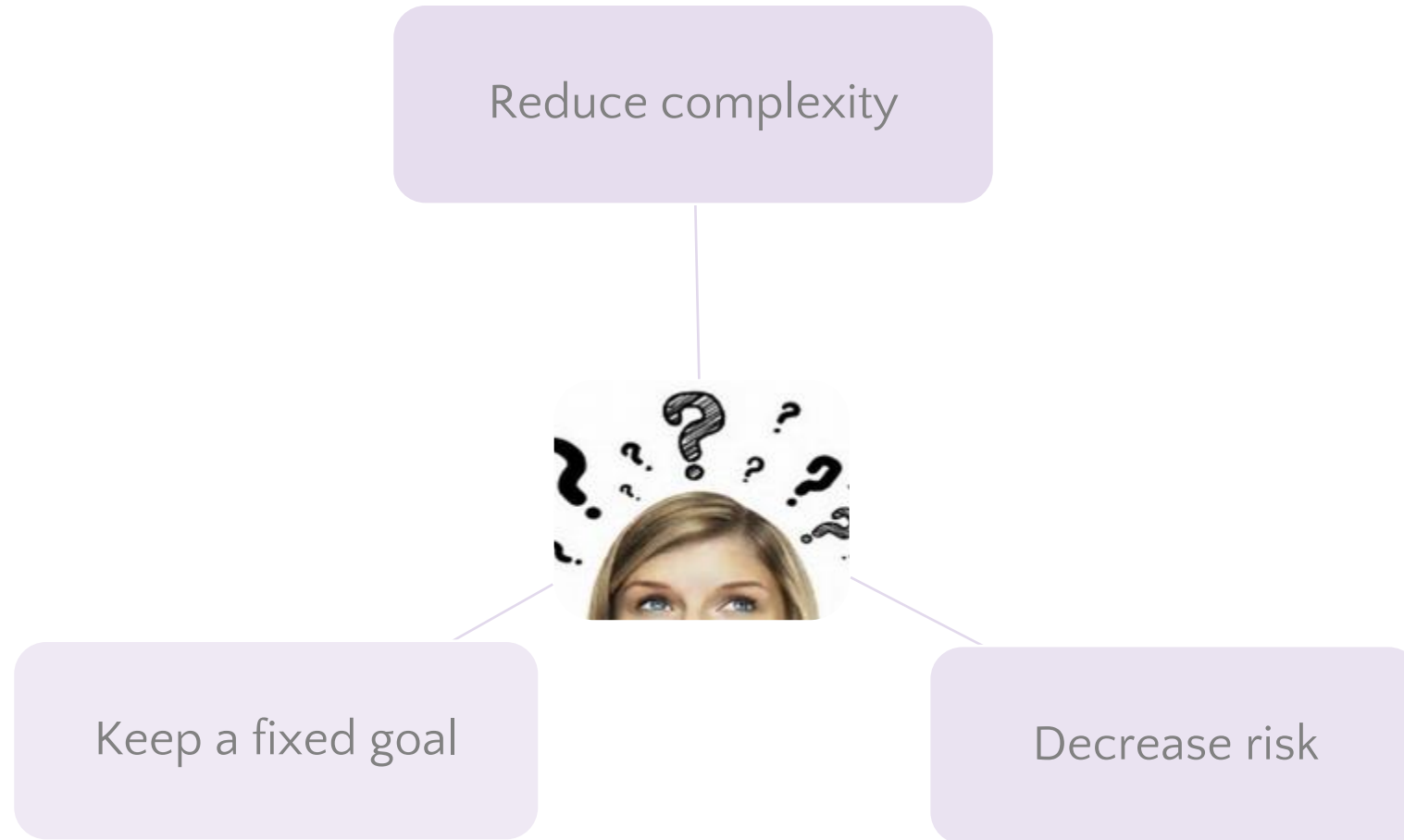


Agile processes encourage a **sustainable pace of development.**

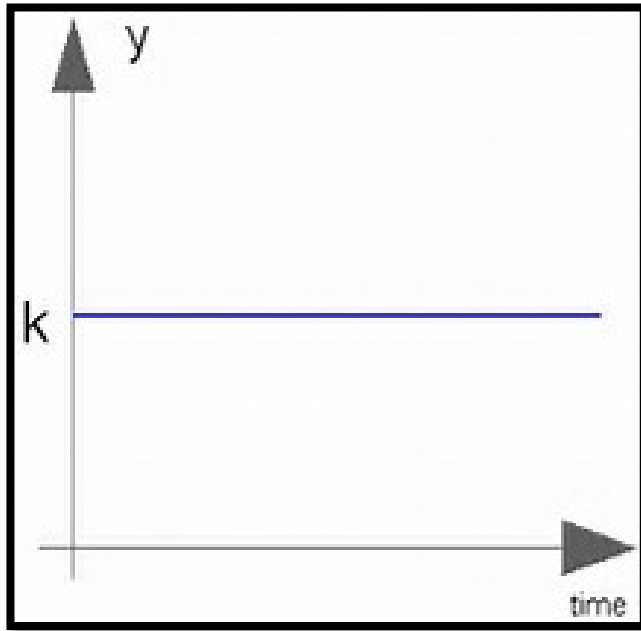
Together, the sponsors, developers, and users should be able to **maintain a constant pace indefinitely.**



Why fast sprints?



Sprint particularities



Constant duration



No waiting time between
sprints

Sprint particularities



Fixed Sprint Goal



Non-negotiable
quality objective



Product Backlog is
refined as needed



Scope may be clarified and
re-negotiated with the
Product Owner

Specific case : Cancelling a Sprint



Cancelled because
sprint goal becomes
obsolete

- **Only** the Product Owner has the authority to cancel the Sprint



Team effort to re-
plan a Sprint

- Scrum Team



- **Stress and disturbance**
- Rare and to avoid

Sprint Planning

ATTENDEES

Product Owner

Developers

Scrum Master

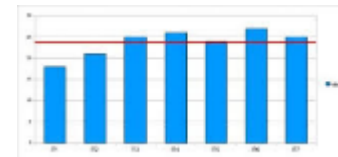


8h for a one-month Sprint

Product Backlog	
.....	1
.....	2
.....	3
.....	4
.....	5
.....	6



Product Goal



Past performance of the Developers



Upcoming capacity of the Developers



Definition of Done



Latest increment

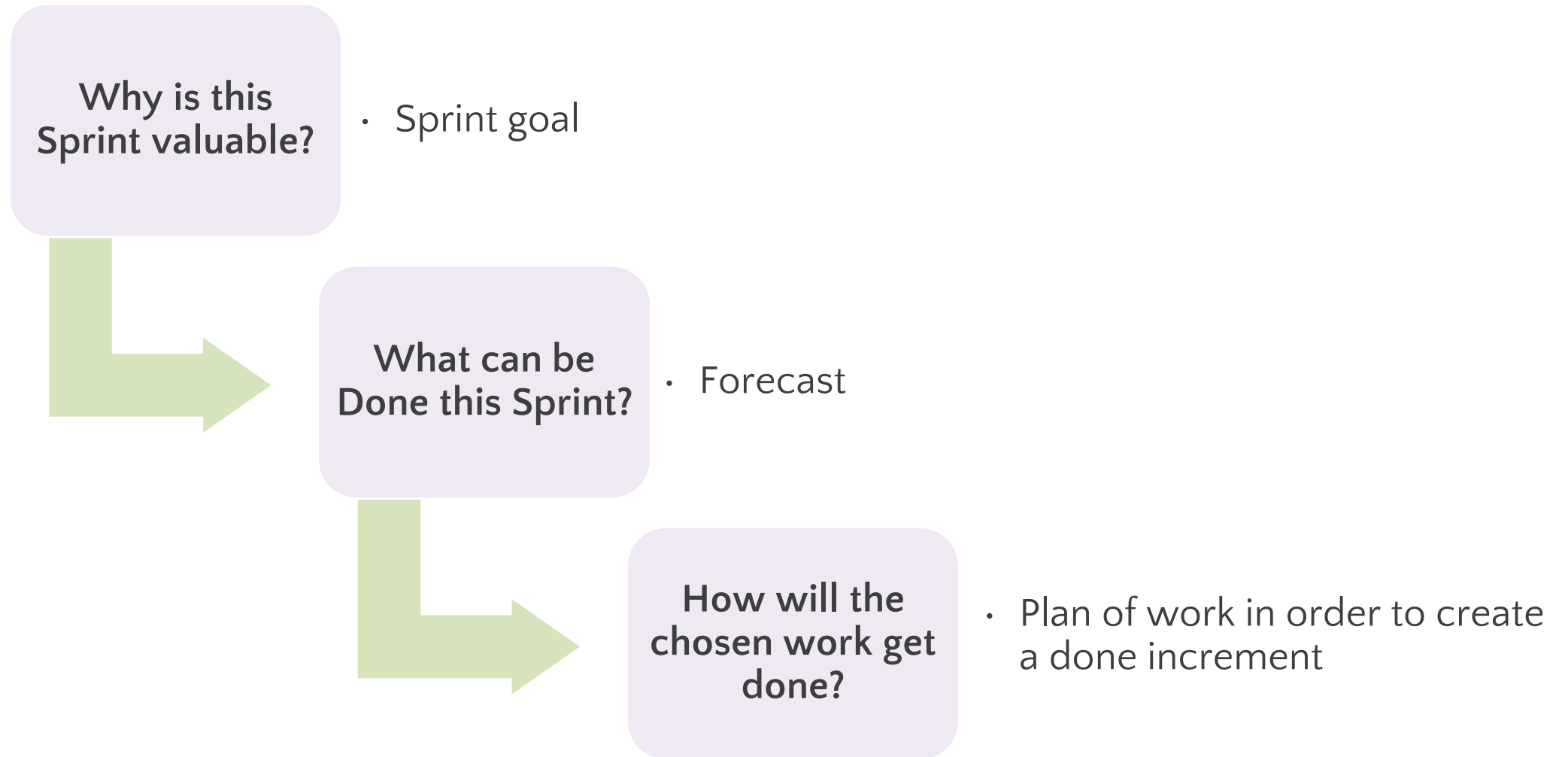


Sprint Backlog	
.....	1
.....	2
.....	3



Sprint Goal

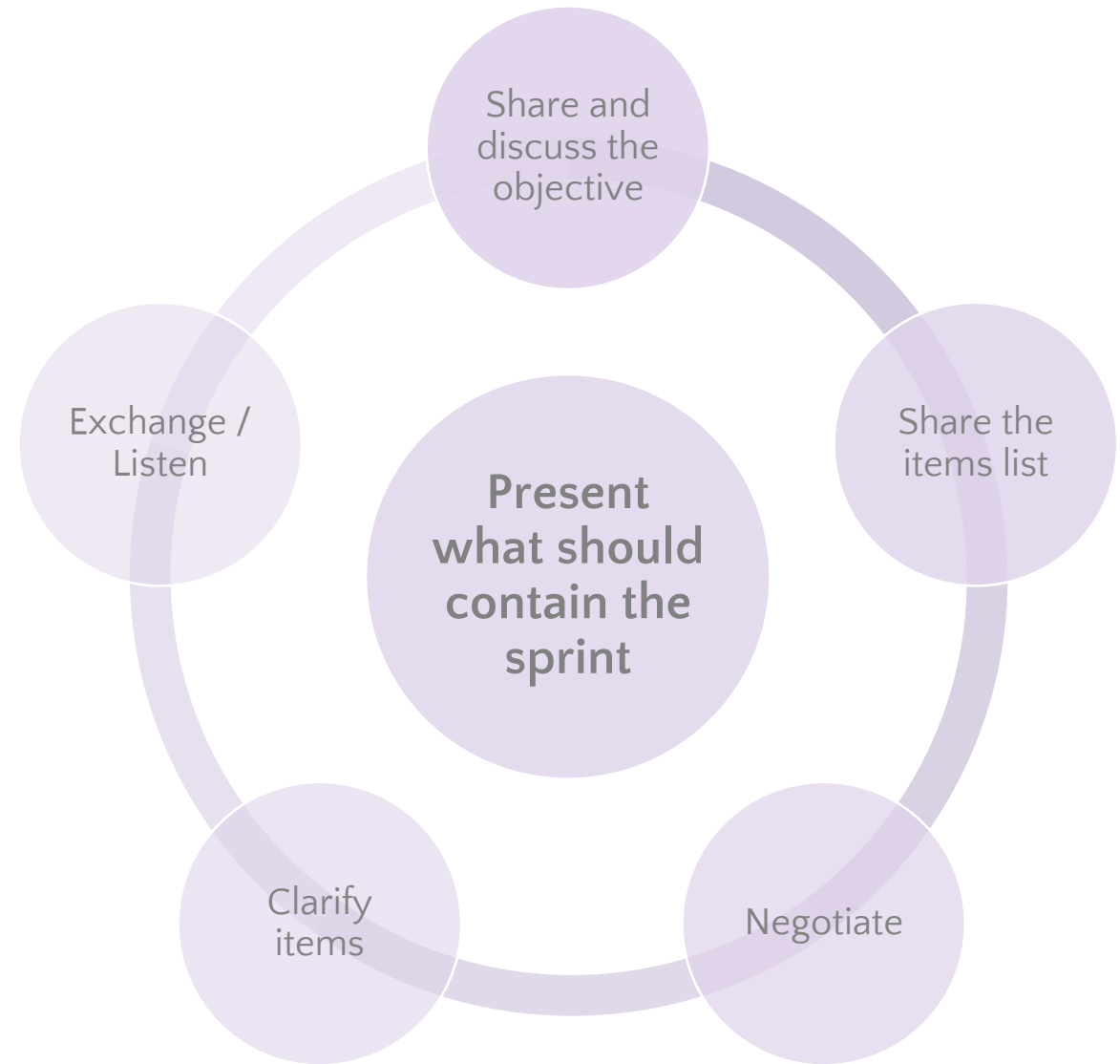
Sprint Planning : Three topics



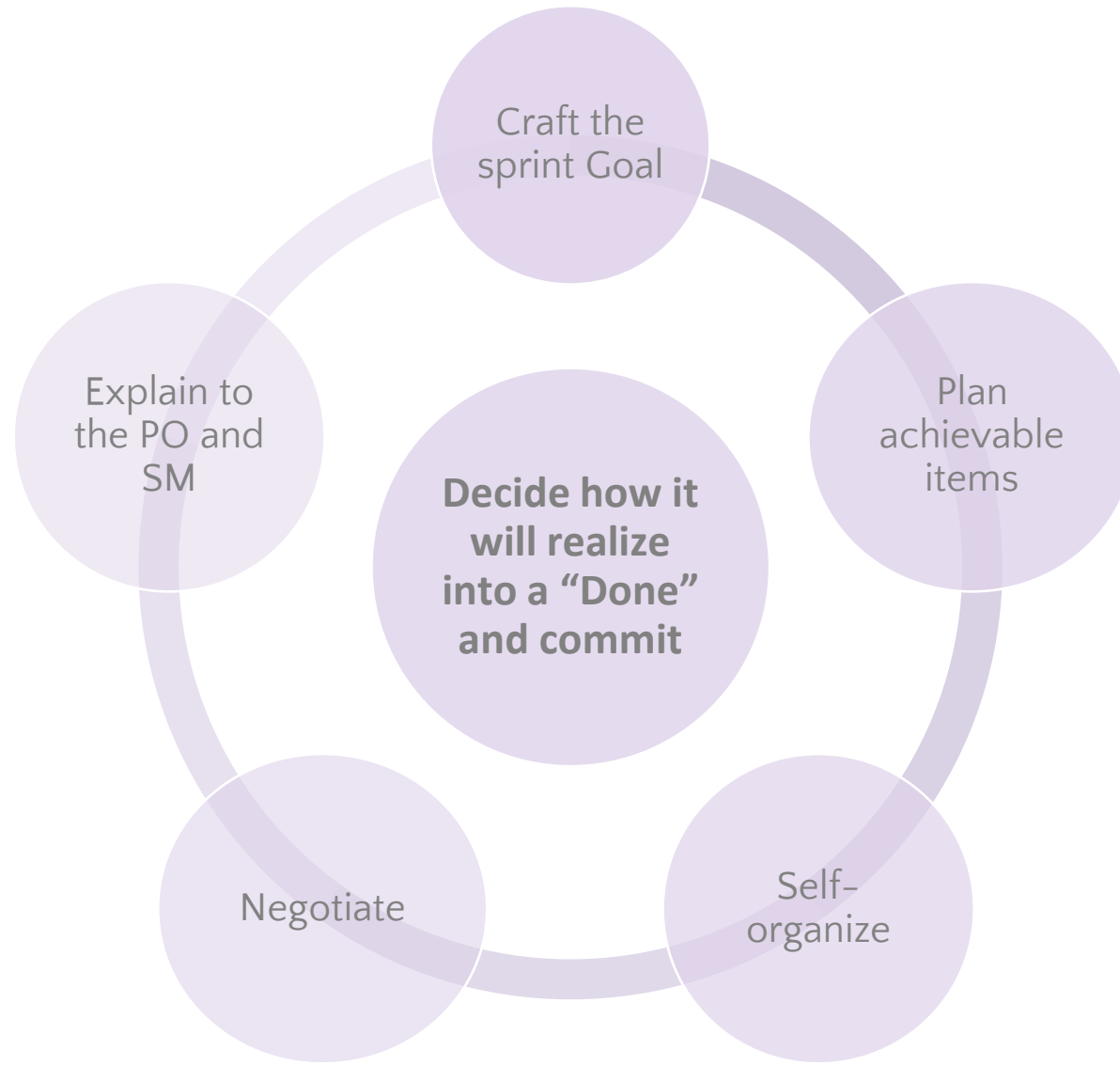
Sprint planning : Role of the Product Owner



The number of items selected from the Product Backlog for the Sprint **is solely up to the developers**



Sprint planning : Role of the developers



Why a Sprint Planning?

SPRINT STARTING :

A new Sprint starts **immediately** after the conclusion of the previous Sprint.

There are no prerequisites to start a sprint

To craft the sprint goal

To build team spirit



To minimise the variances

To facilitate the communication with stakeholders



Daily Scrum meeting



Everyday, same time,
same place

ATTENDEES

developers

(Scrum Master)



15 minutes

3 questions

1. What did I do yesterday that helped the developers to meet the Sprint Goal?
2. What will I do today to help the developers to meet the Sprint Goal?
3. Do I see any impediment that prevents me or the developers from meeting the Sprint Goal?



A plan of work for
the next 24 hours

Daily Scrum meeting : Role of the Product Owner



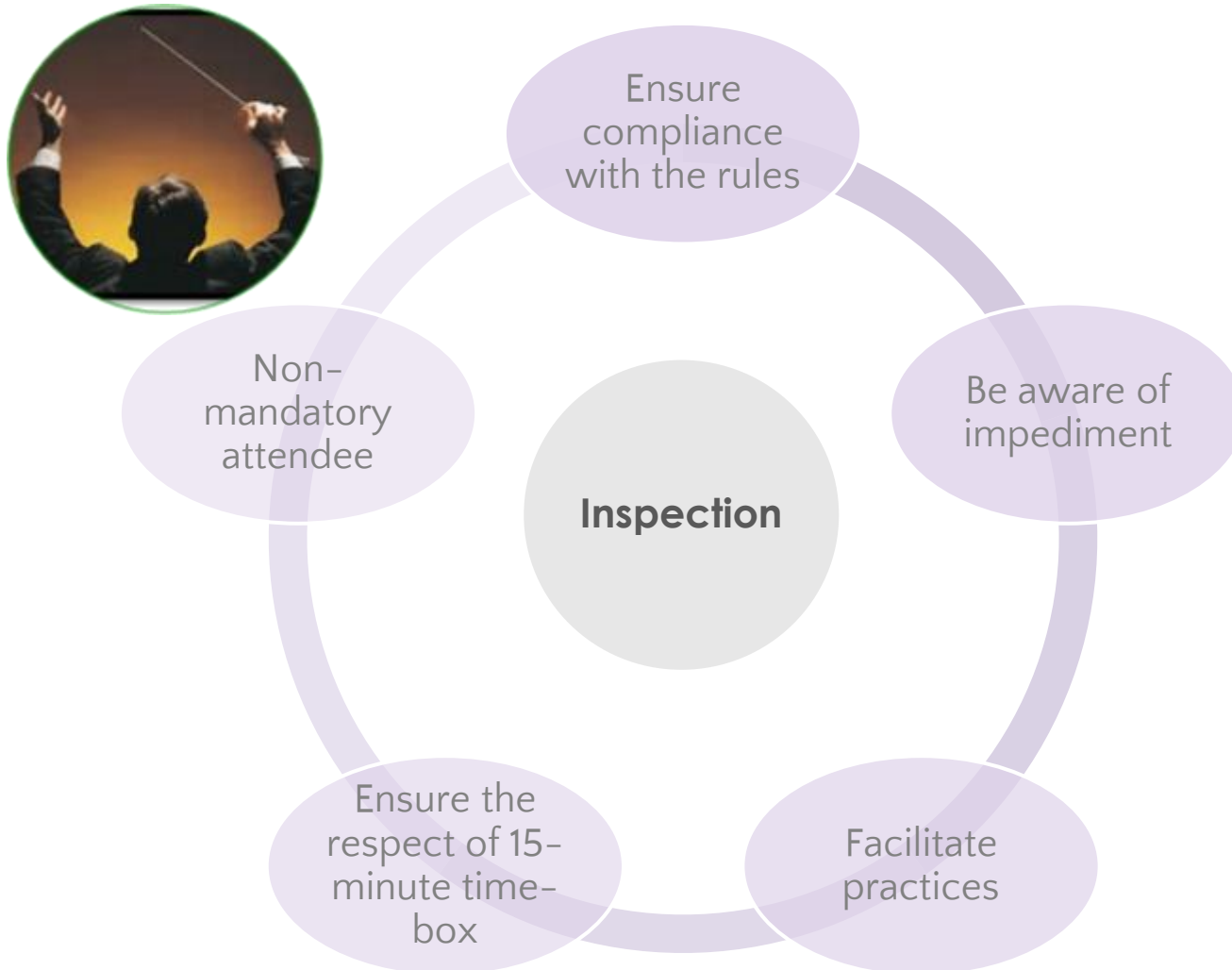
At best, he may listen

The Daily Scrum is an internal meeting for the developers.
It is done by the developers and for the developers

Daily Scrum meeting : Role of the developers



Daily Scrum meeting : Role of the Scrum Master



The Scrum Master enforces the rule that **only the developers attend the daily scrum.**

Sprint Review

ATTENDEES

Product Owner

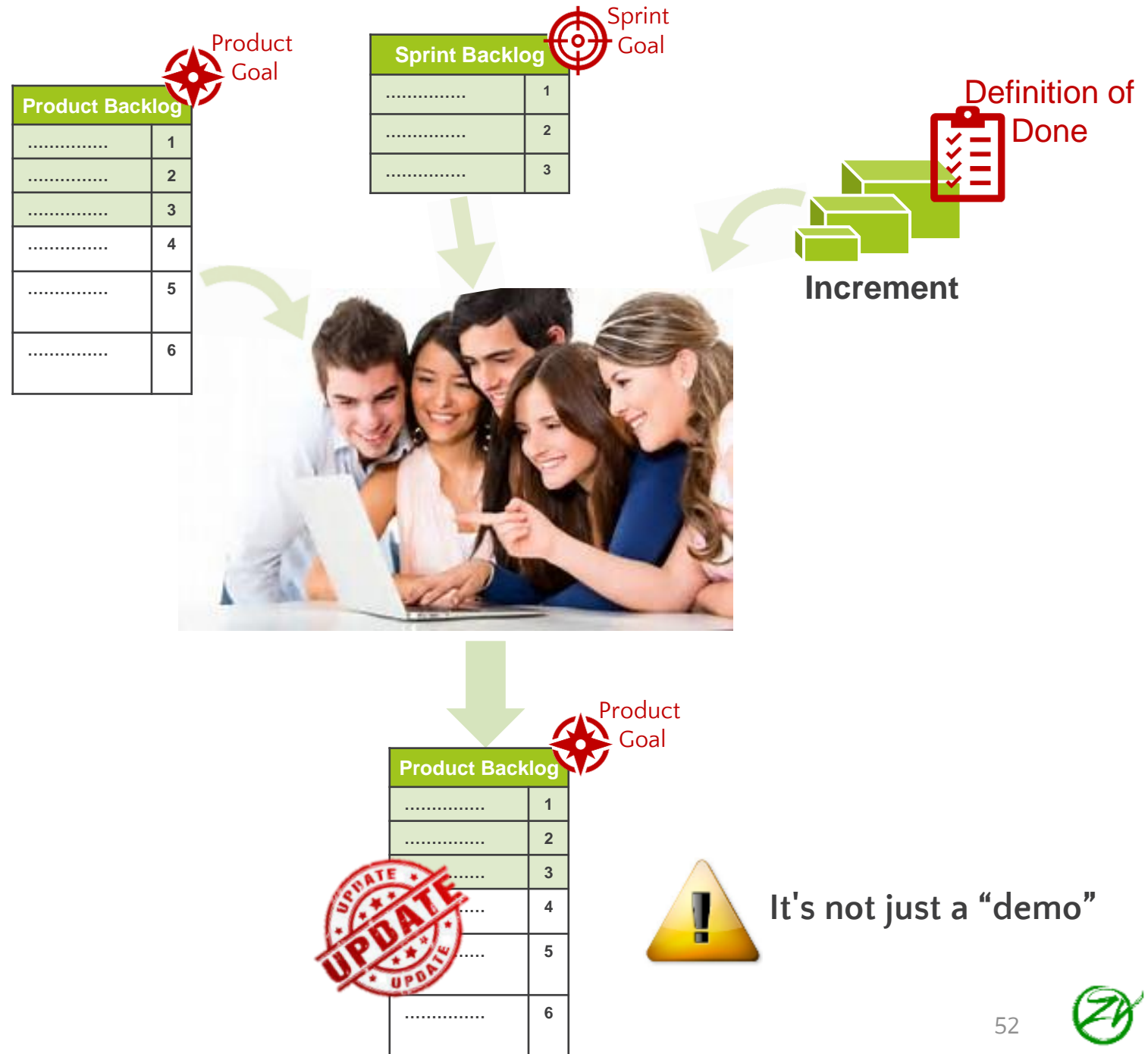
Developers

Scrum Master

Stakeholders



4h for a one-month Sprint



Sprint Review : Role of the developers

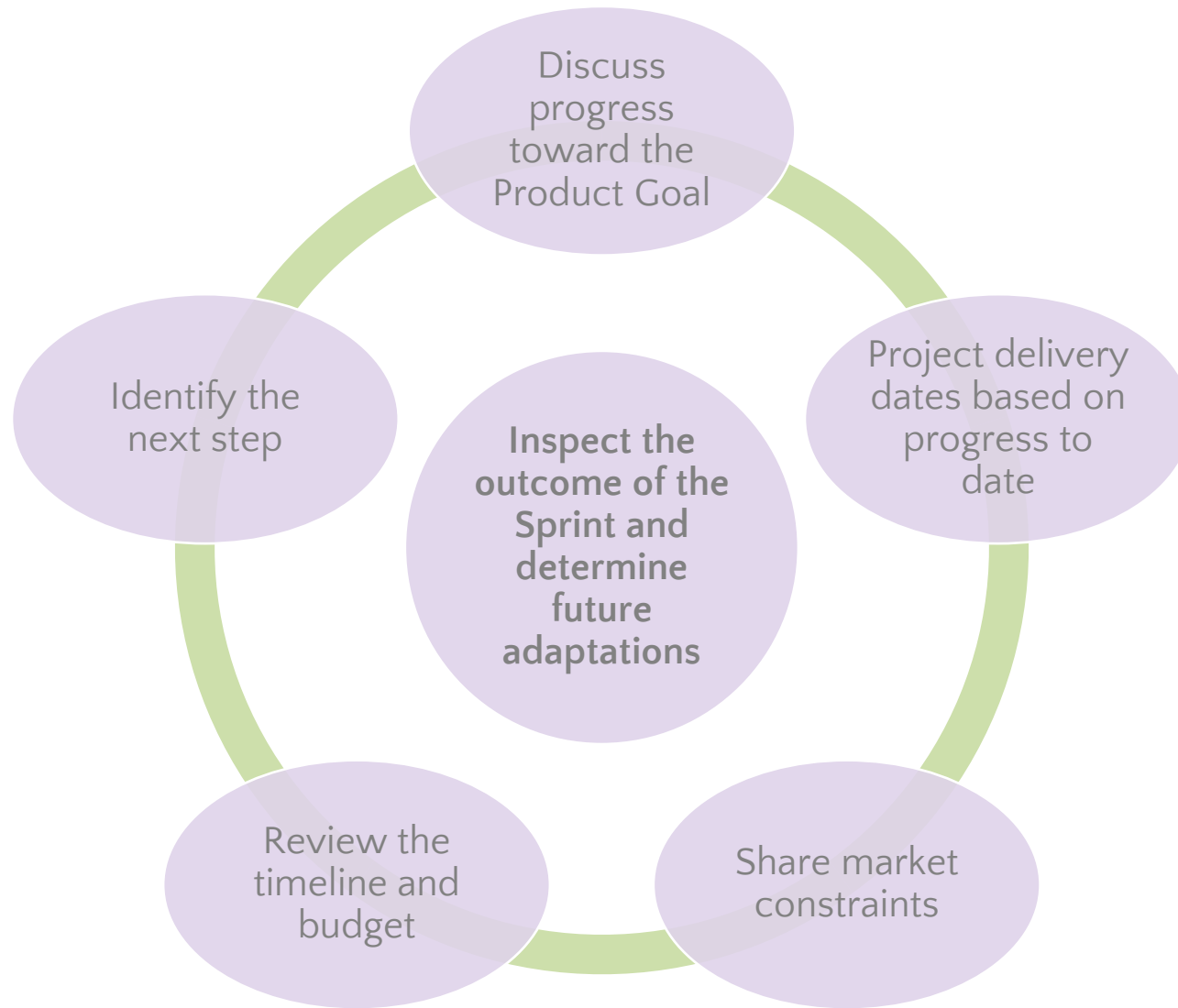
Focus : Sprint progress & Increment



This is an informal meeting, **not a steering committee**, and the presentation of the Increment is intended to **elicit feedback** and **foster collaboration**



Sprint Review : Role of the Product Owner



Focus : Increment & projection

Retrospective

Progress of the previous sprint

- People
- Relationship
- Process
- Tools

Product
Increment



ATTENDEES

Product Owner

developers

Scrum Master

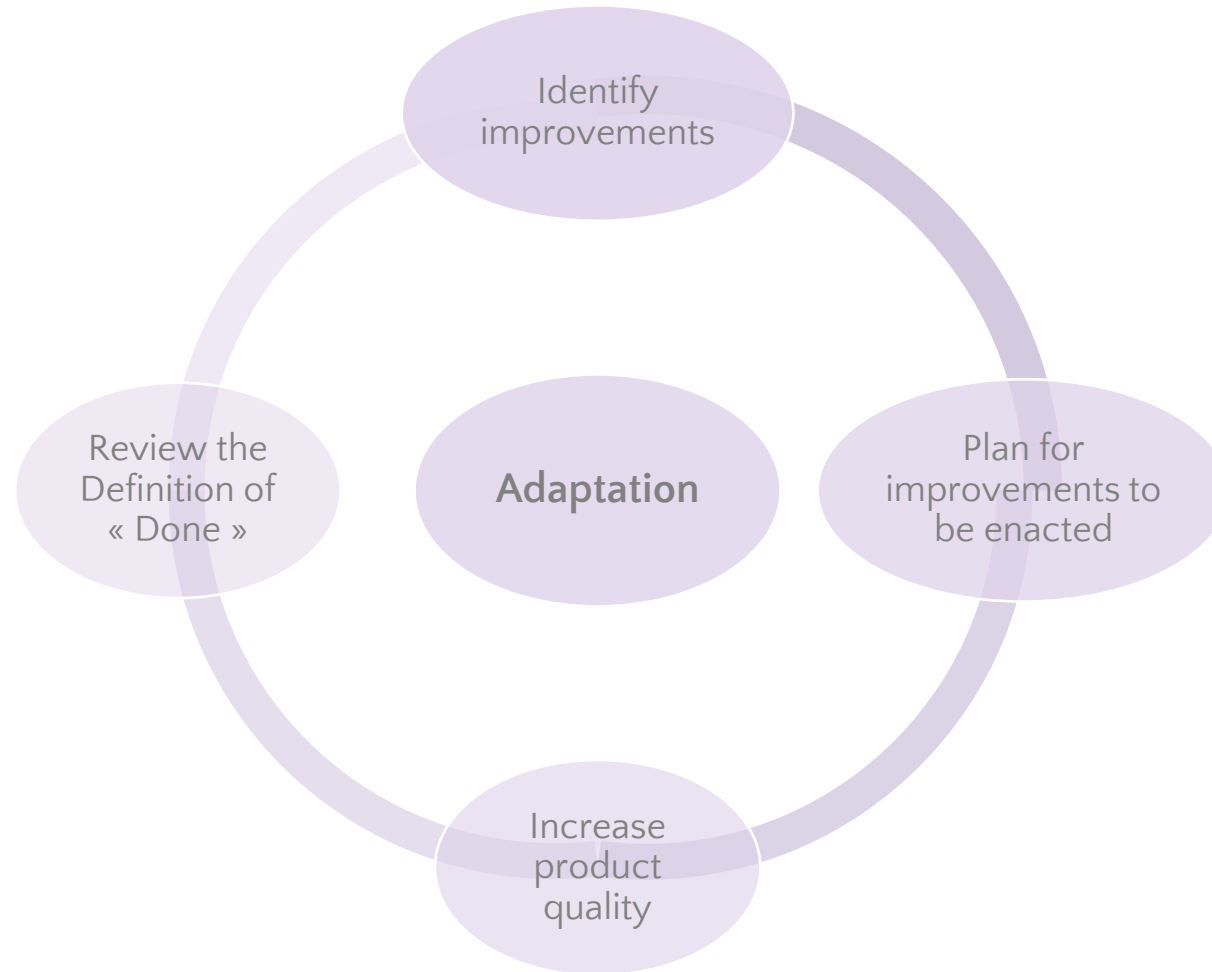


3h for a one-month Sprint



- Identify and order the major items that went well and potential improvements
- Improvements plan to be implemented for next sprint

Retrospective : Role of Scrum Team



Retrospective : the Scrum Team

The most impactful improvements **may even be added** to the Sprint Backlog for the next Sprint.



Retrospective : Points of attention



Attendance of the entire
"Scrum team"



Allow time for implementation of
improvements



Focus on improvement

Who are the participants of events?

	Sprint Planning	Daily Scrum	Sprint Review	Retrospective
Product Owner	✓	?	✓	✓
Scrum Master	✓	?	✓	✓
developers	✓	✓	✓	✓
Stakeholders	✗	✗	✓	✗

Backlog refinement

ATTENDEE

Product Owner

Stakeholders (if
necessary)

Scrum Master (*optional*)

developers



This event is not a SCRUM event

- But allow to collect information in order to **update the Product Backlog**

Backlog refinement : Why?

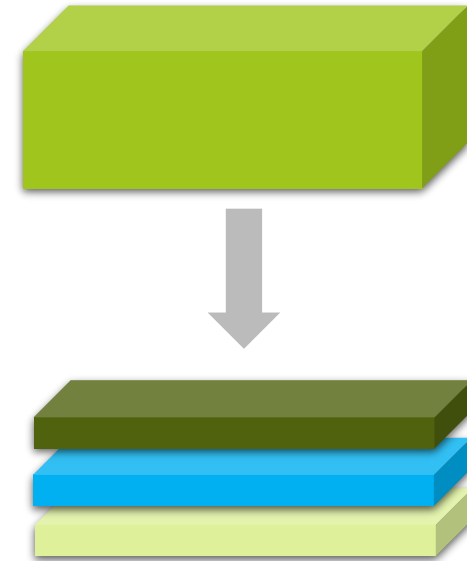
Cutting into digestible elements

Product Backlog	
.....	1
.....	2
	
.....	6
.....	7

Ensure that it's up to date
for the next Sprint
Planning Meeting



Items estimation



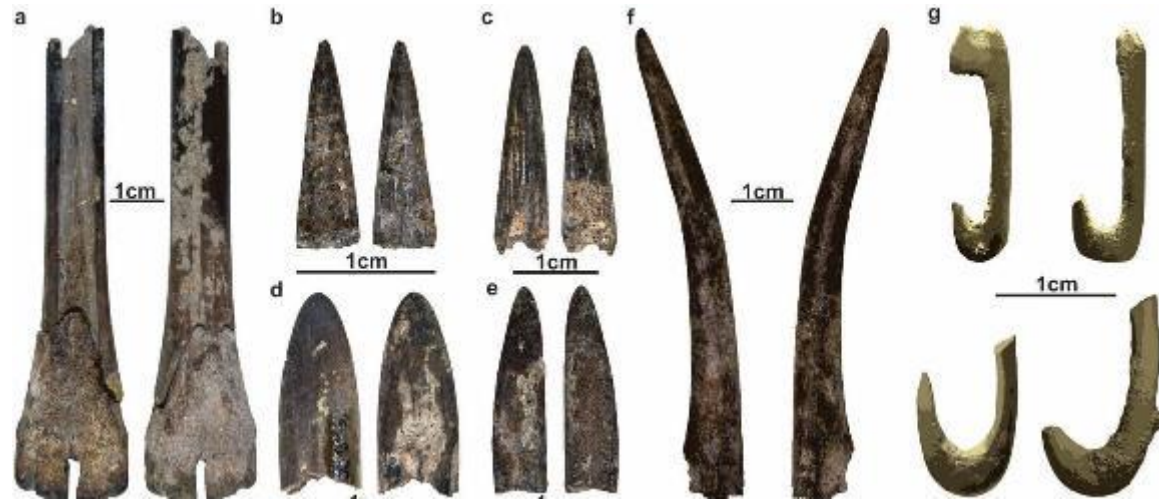
Splitting into digestible
elements

Scrum Artifacts

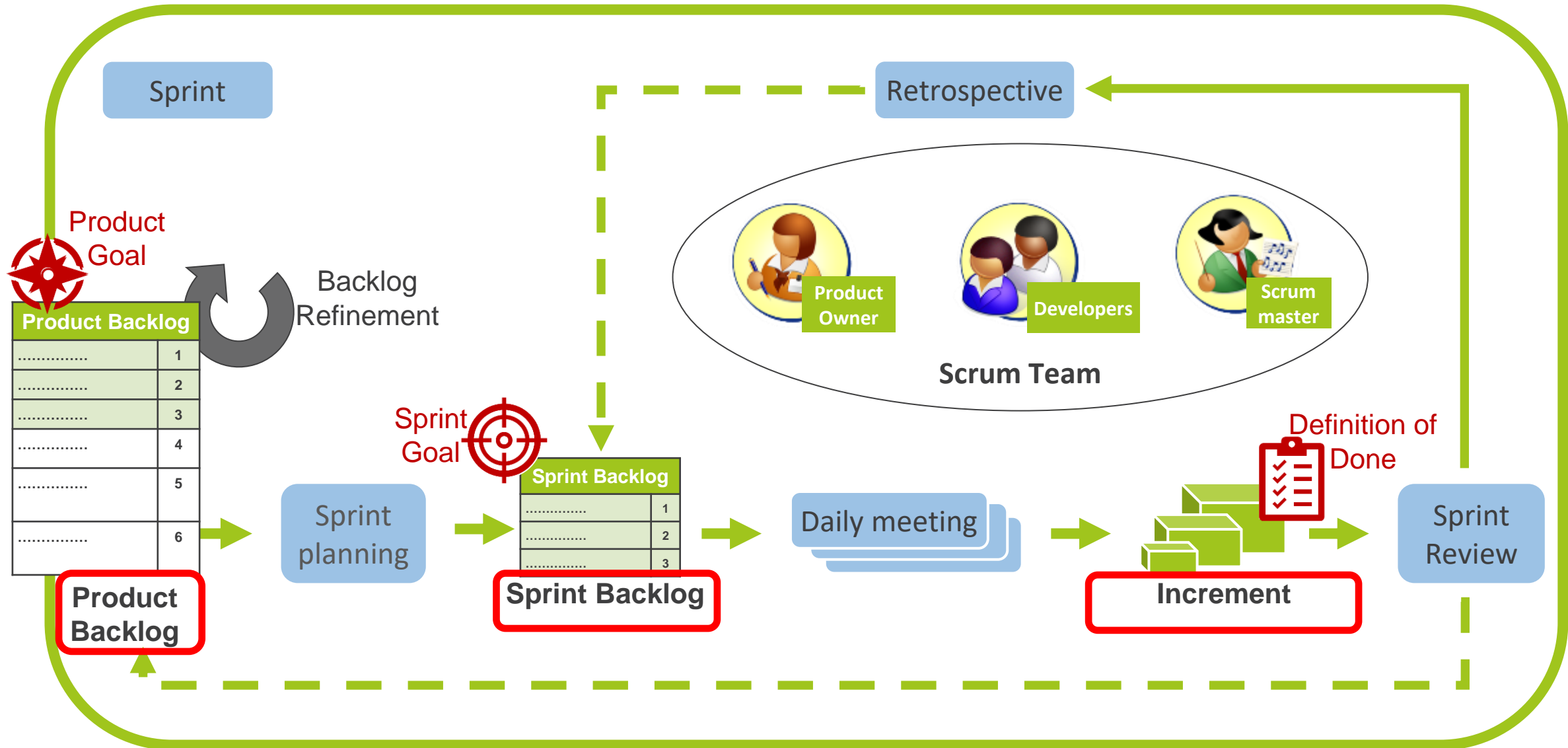
Artefacts

Scrum's artifacts represent **work** or **value**.

They are designed to **maximize transparency of key information**.



Scrum Framework



Artefacts : Product Backlog



Product Backlog	
.....	1
.....	2
.....	3
.....	4
.....	5
.....	6
.....	7

Content

- Ordered list of everything that is known to be needed in the product (requirements, enhancements, and fixes)

Transparency

- It is the only source of work of the developers for any change on the product

Update

- The Product Backlog exists as long as the product exists, and can be updated at any time

Artefacts: Product Backlog



Product Backlog

It is composed of item, which can be detailed with :

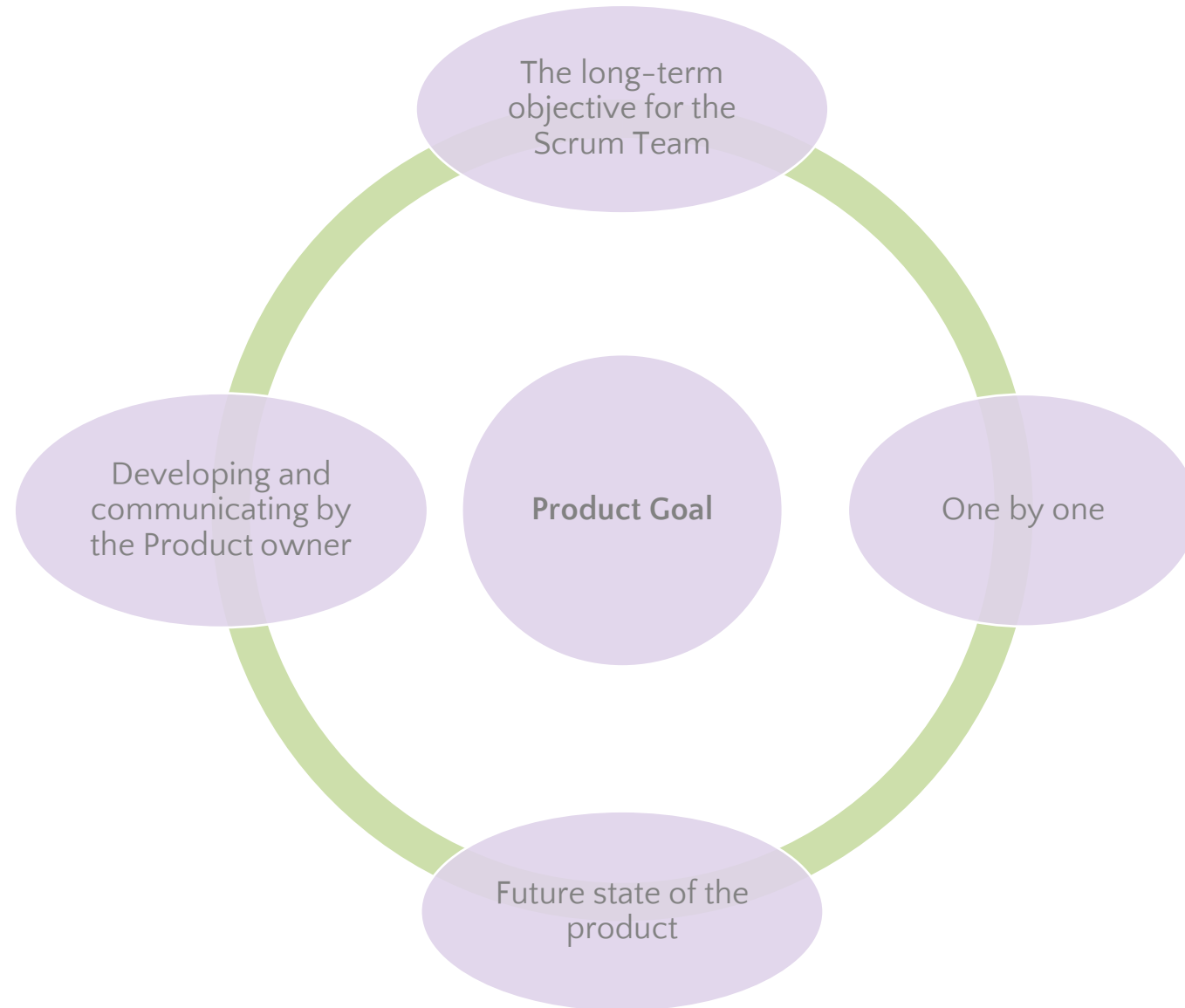
- a description,
- an order
- a size
- ...



A diagram illustrating a Product Backlog. It consists of a vertical stack of four green 3D cubes of increasing size, positioned to the left of a table. The table, titled 'Product Backlog', has two columns: the first for item descriptions (represented by dotted lines) and the second for item numbers (1 through 7). The table is styled with a green border and alternating row colors (light green and white).

Product Backlog	
.....	1
.....	2
.....	3
.....	4
.....	5
.....	6
.....	7

Artefacts : Product Backlog Commitment – Product Goal



Practice : Draw a star

Draw a 5-points star



Draw a 10-points star



5 minutes

Artefacts : Sprint Backlog



Sprint Backlog	
.....	1
.....	2
.....	3

Content

- List of items to achieve the sprint goal
- Plan for delivering the Product Increment
- Work needed to deliver a “Done” Increment

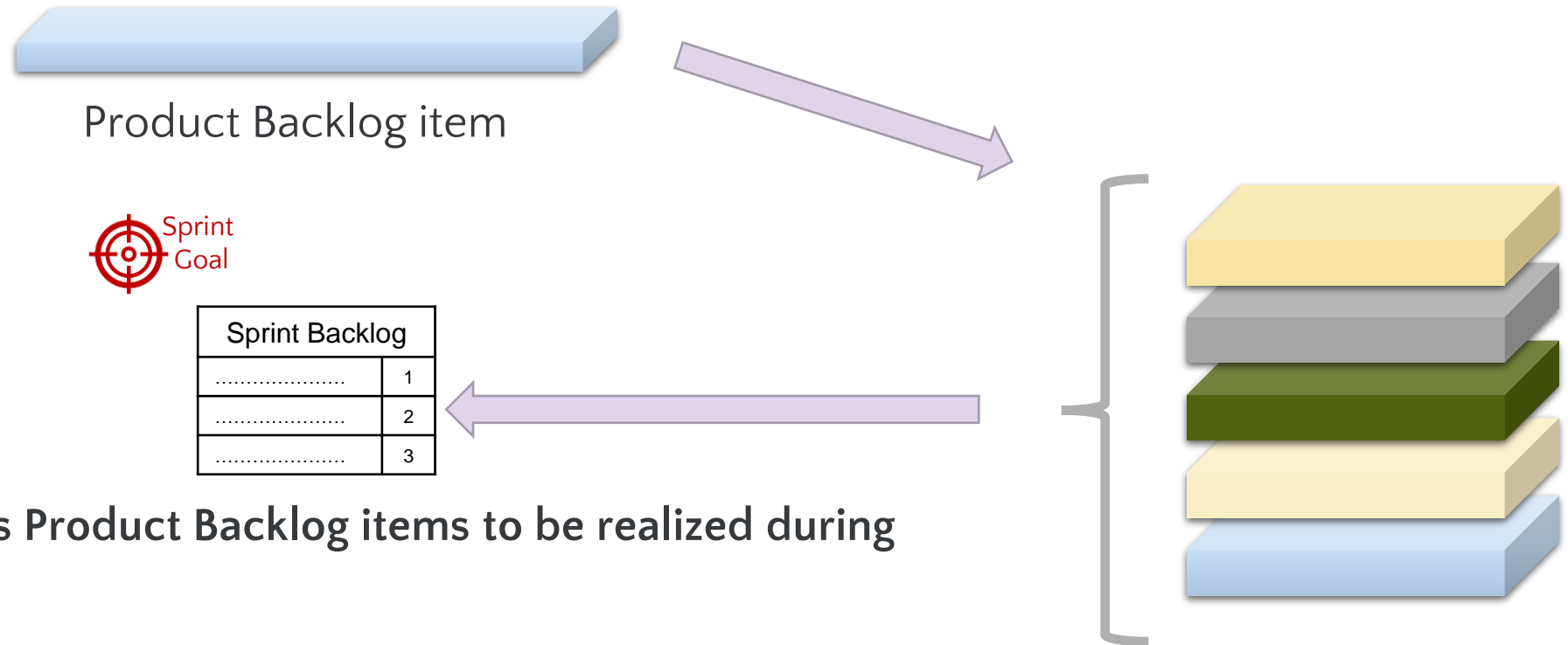
Transparency

- Visibility of all team's work to achieve the sprint goal
- It's a plan enough detailed so it can be understood in the Daily Scrum

Update

- The developers modify the Sprint Backlog throughout the Sprint
- Emerges during the Sprint and the team updates it continuously

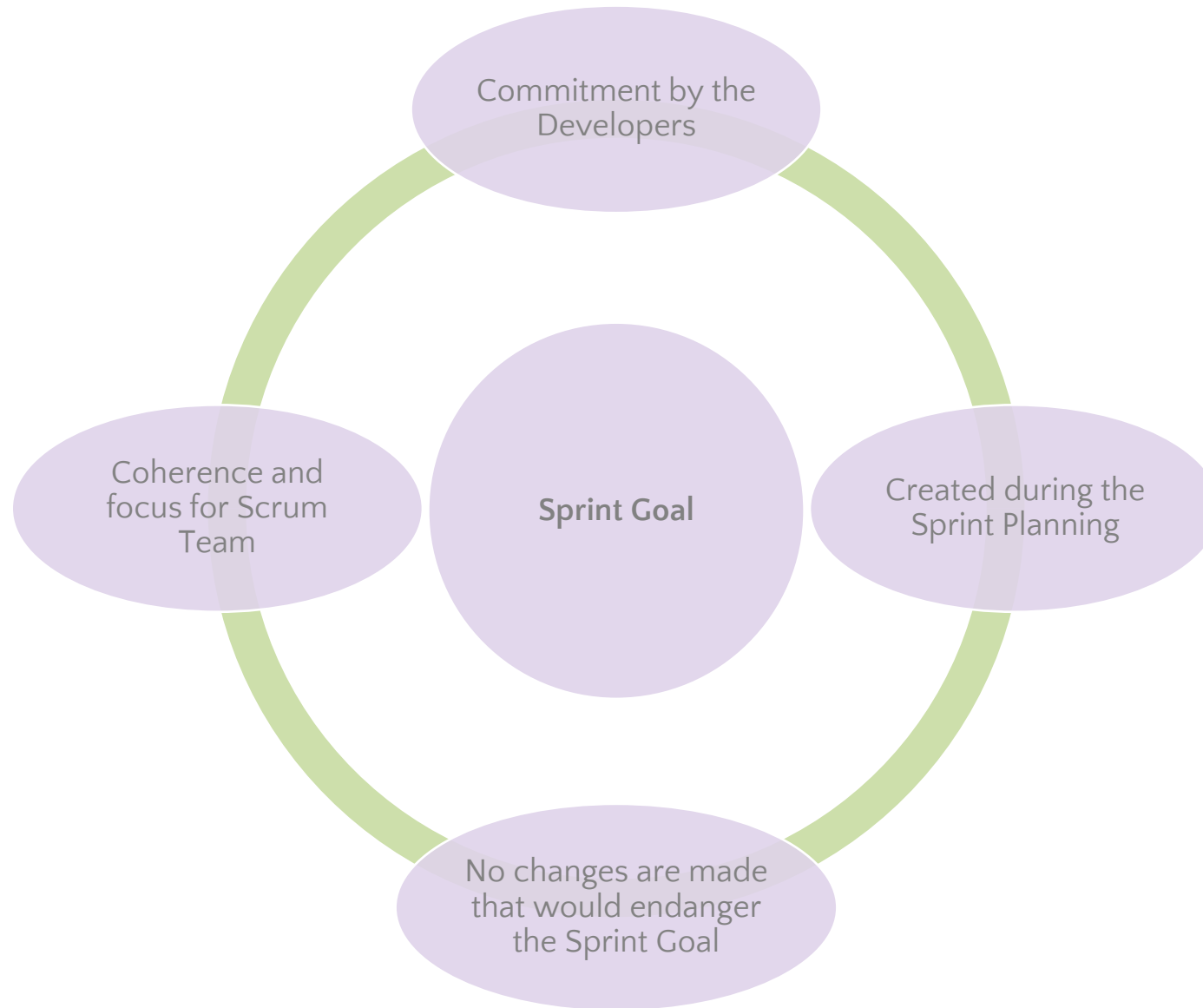
Artefacts : Sprint Backlog



Sprint Backlog contains Product Backlog items to be realized during this Sprint :

- User Stories
- Defects
- Spikes (*technical exploration of a backlog item - deepen the "how"*)
- Tests
- Technical Stories
- ...

Artefacts : Sprint Backlog Commitment – Sprint Goal



Artifacts: Increment

The Increment

- Is the sum of all the Product Backlog items **completed** during a Sprint and the value of the increments of all previous Sprints
- **The Product Owner decides to release it or not**



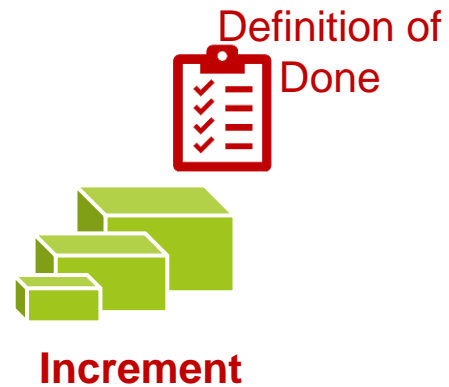
« Done » and
useable Increment



Product Owner : « We have a
new available version, do we
discuss it?»



Artefacts : The increment



Content

- Sum of all the Product Backlog items **done** during a Sprint and the value of the increments of all previous Sprints

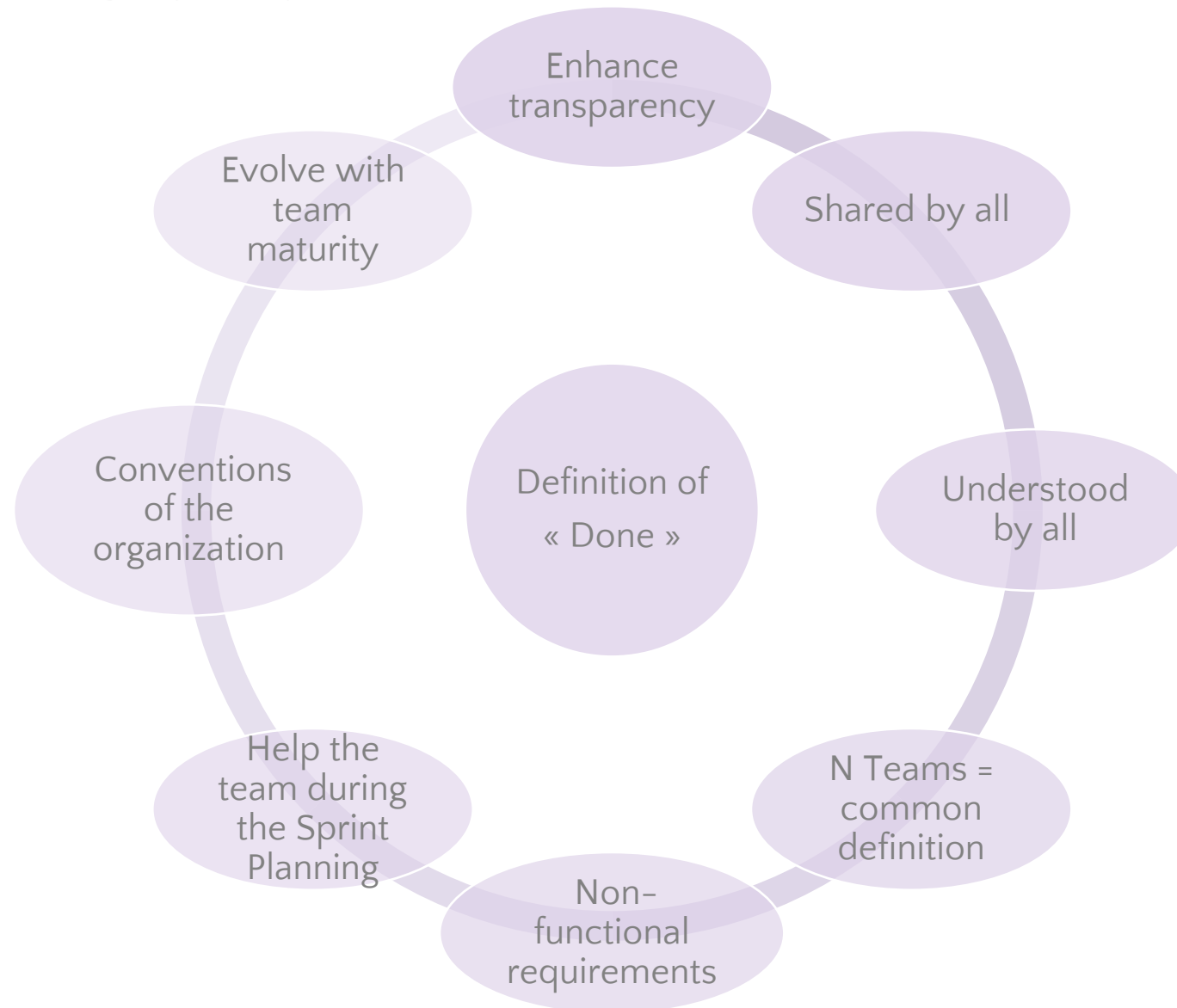
Transparency

- **Multiple Increments** may be created within a Sprint
- The sum of the Increments is **presented at the Sprint review event**

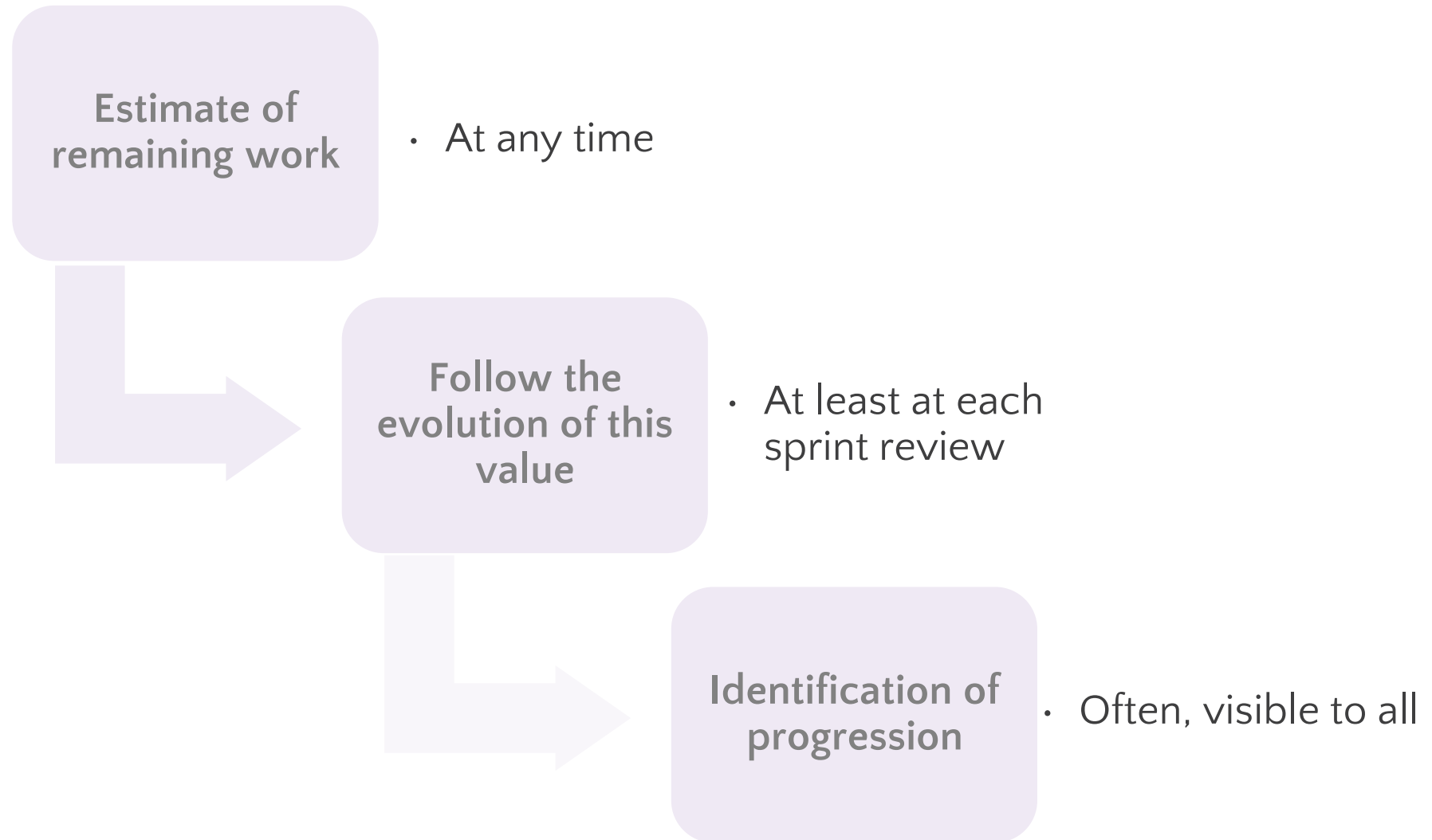
Update

- An Increment **may be delivered** to stakeholders **prior to the end of the Sprint**

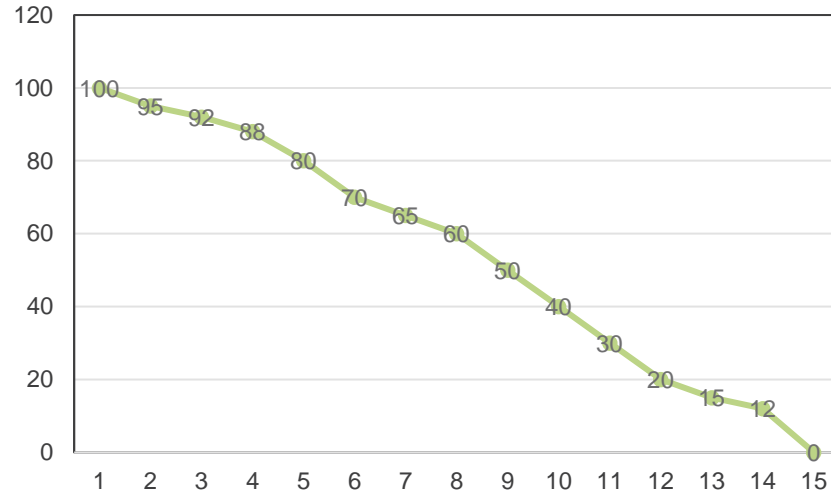
Artefact : « Done »



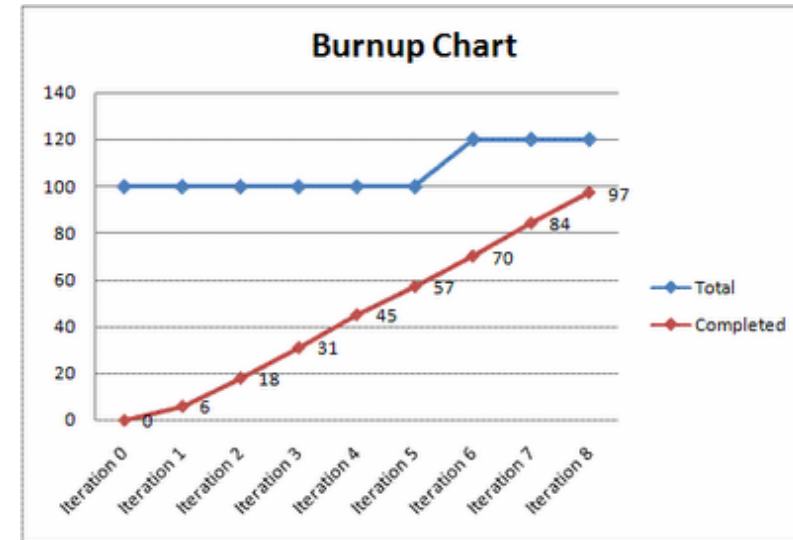
Progression



Progression



Burndown Chart



Burnup Chart

Scrum does not detail these practices but points out that:

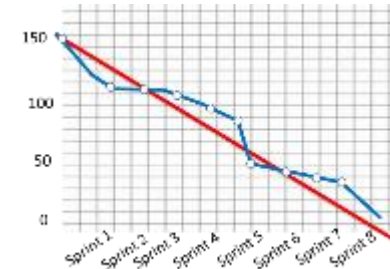
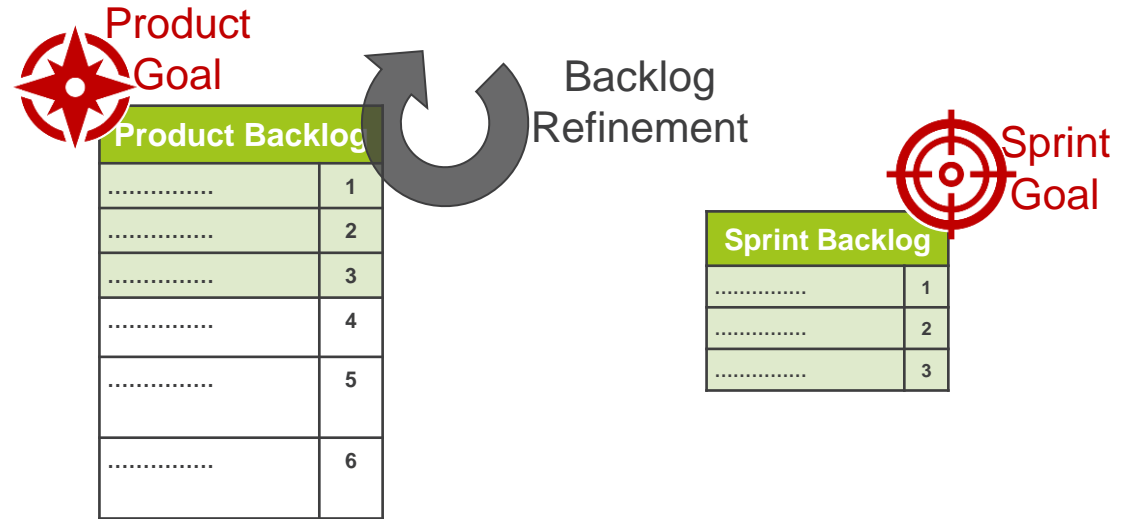
In complex environments, what will happen is unknown.

Only what already happened may be used for forward-looking decision-making

Artefacts



Scrum Master
The transparency facilitator



Transparency  For decision-making

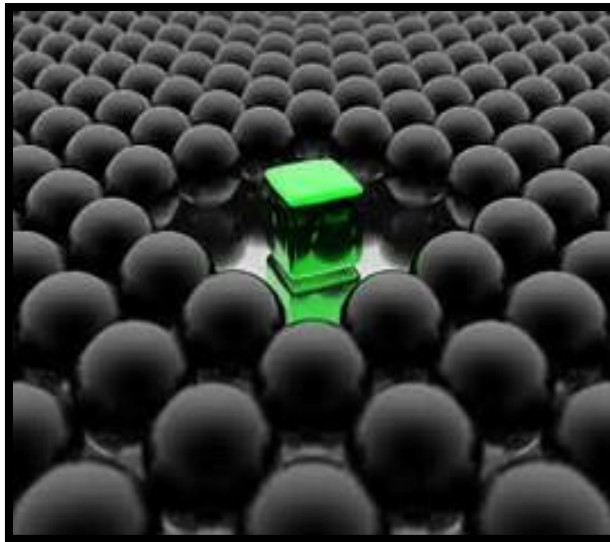
Zoom on Product Backlog

What is a product backlog?



Product Backlog	
.....	1
.....	2
.....	3
.....	4
.....	5
.....	6
.....	7

Ordered list of
product items



Only source of
requirements



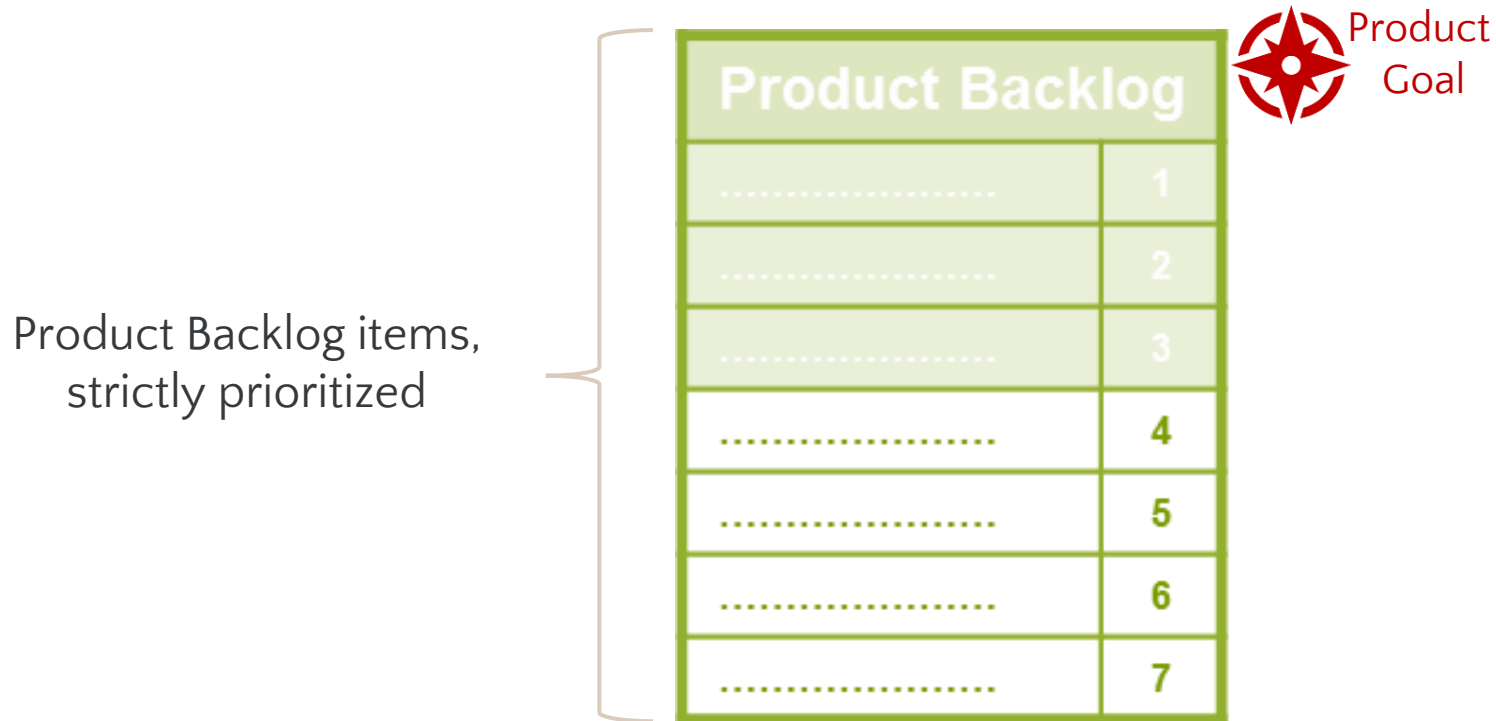
PO is responsible
of it



Never complete

What is a Product backlog?

As long as a product exists, its related Product Backlog exists



We are talking about **Product Backlog items**, not “User Stories”.
"User Stories" is not a Scrum practice, it's a practice of "Extreme Programming"

What is a Product backlog?

1 produit = 1 Product Backlog = 1 Product Owner



Product Owner

X1



Produit

X1



Definition of Done



Product Goal

Product Backlog	
.....	1
.....	2
.....	3
.....	4
.....	5
.....	6
.....	7

Developers : Xn



The Product Backlog and the iceberg



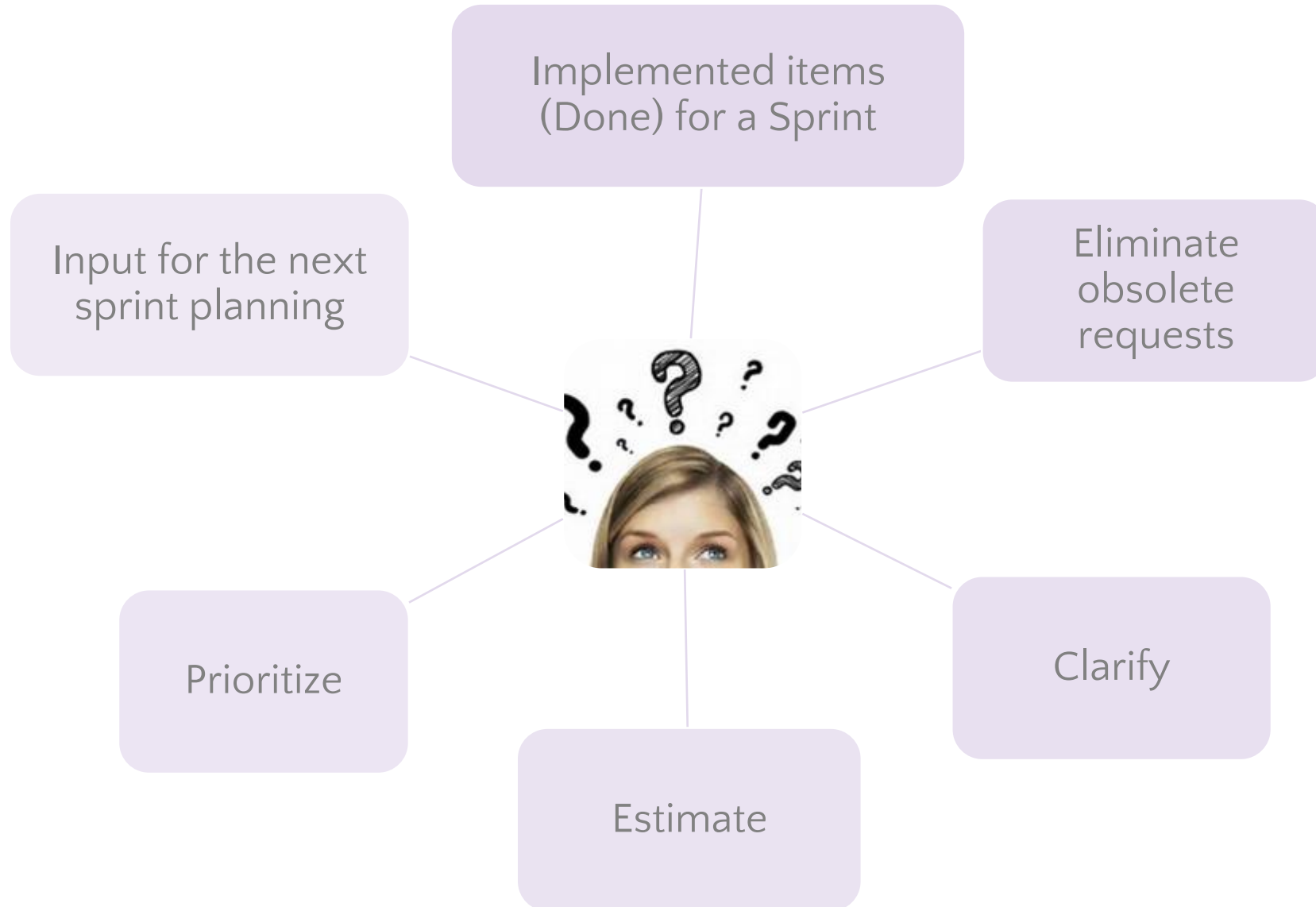
Items of Product Backlog **ready** for the next Sprints

Items of Product Backlog coarsely known **and needing to be refined** before integrating a Sprint.

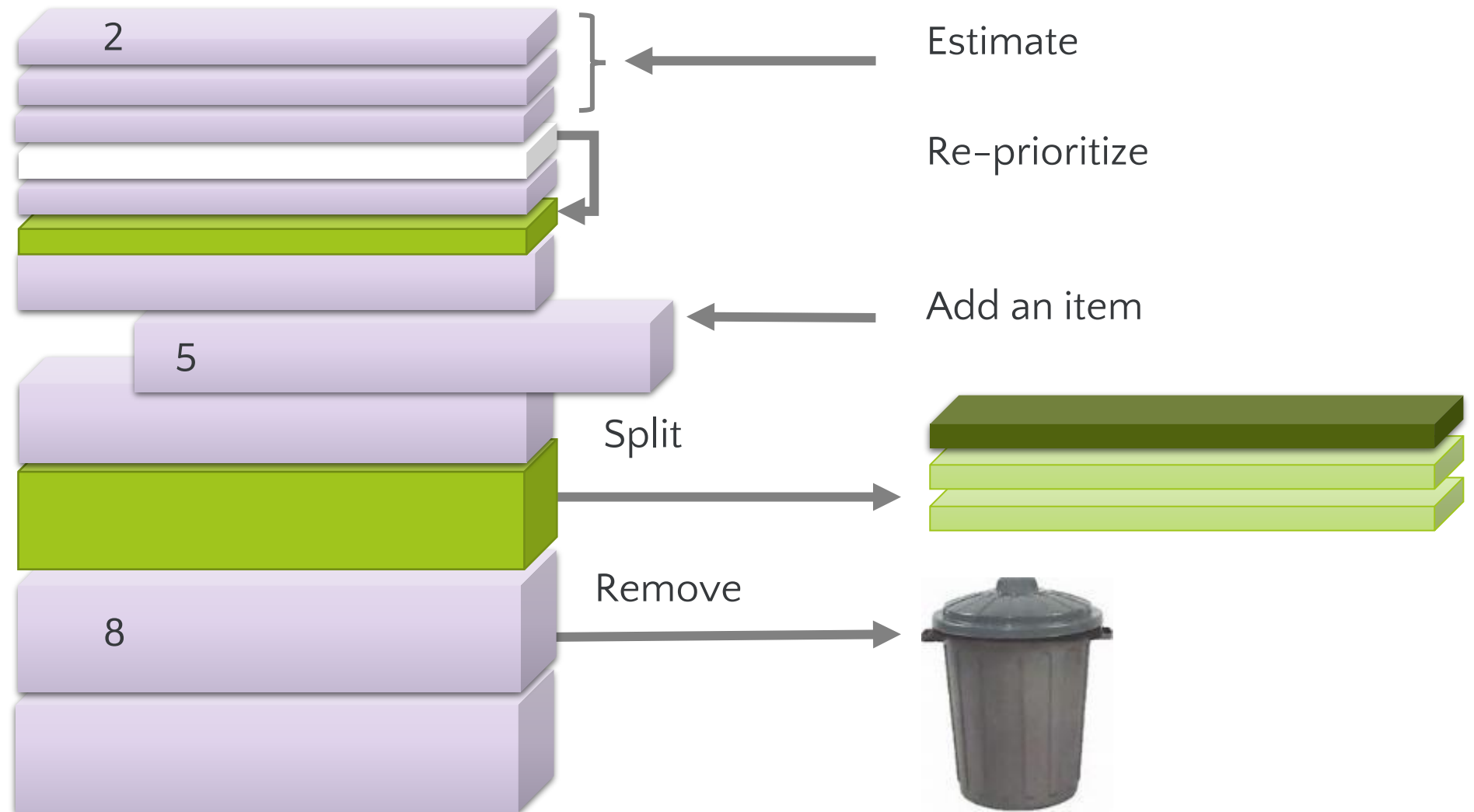


The Product Backlog is never complete, it is **dynamic**. It constantly changes to identify what the product needs to be **appropriate, competitive, and useful**.

Refinement and Product Backlog, Why ?

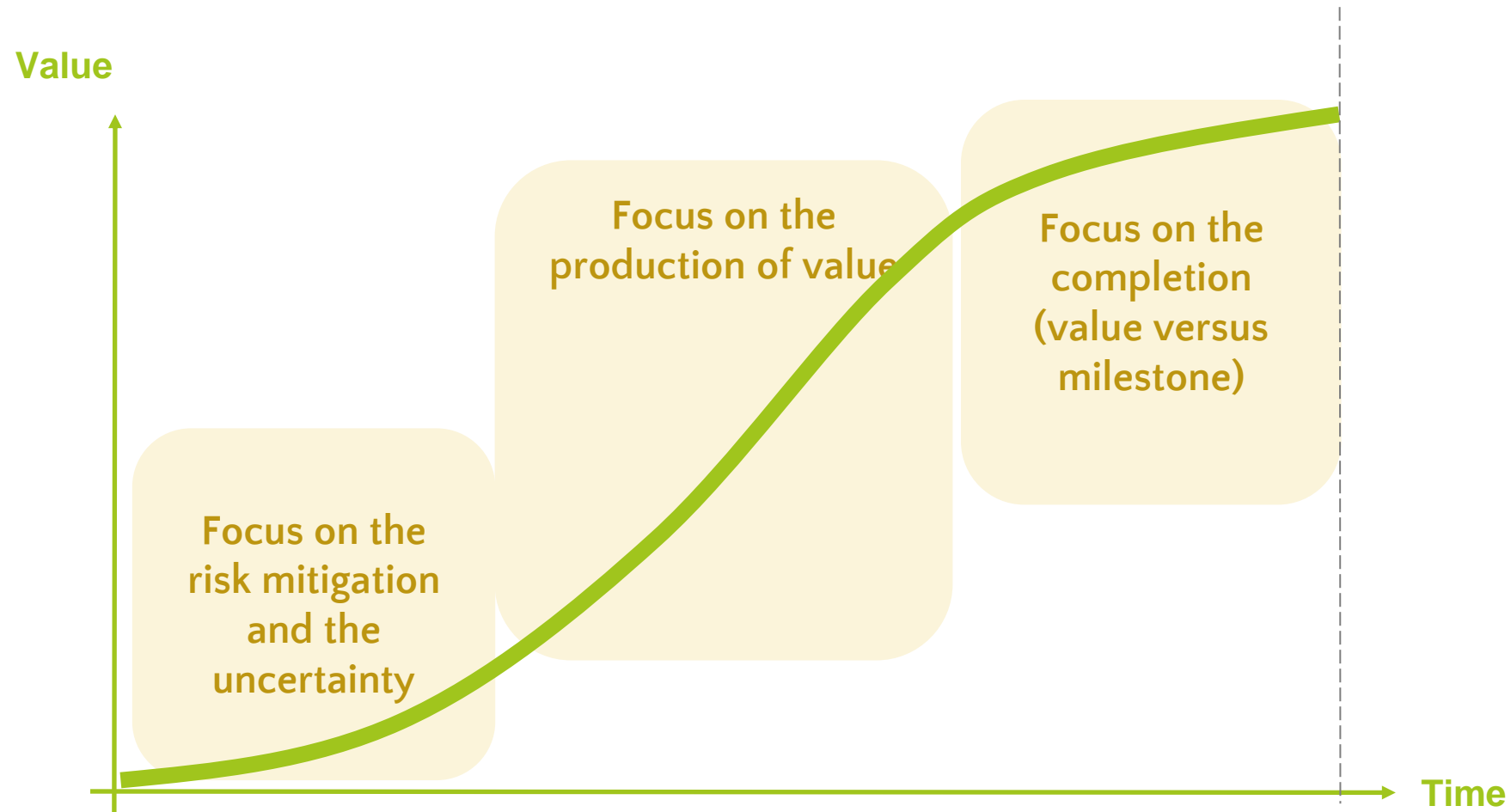


Product Backlog refinement (grooming)



<10% of the developers
schedule

Product Backlog : Strategy – Risk mitigation



Product Backlog : A colorful vision

What Color is Your Backlog
(Product and Sprint) ?

Product Backlog	
.....	1
.....	2
.....	3
.....	4
.....	5
.....	6
.....	7



Break time : What did we learn?

The concept of value

Value at the center of Scrum's concerns

Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

[1^{er} principle of the agile manifesto]

Definition of Scrum

A framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value.

To maximize the value, the Product Owner must be attentive to...



Forecast / Feasibility



Feedback



Product vision



The market

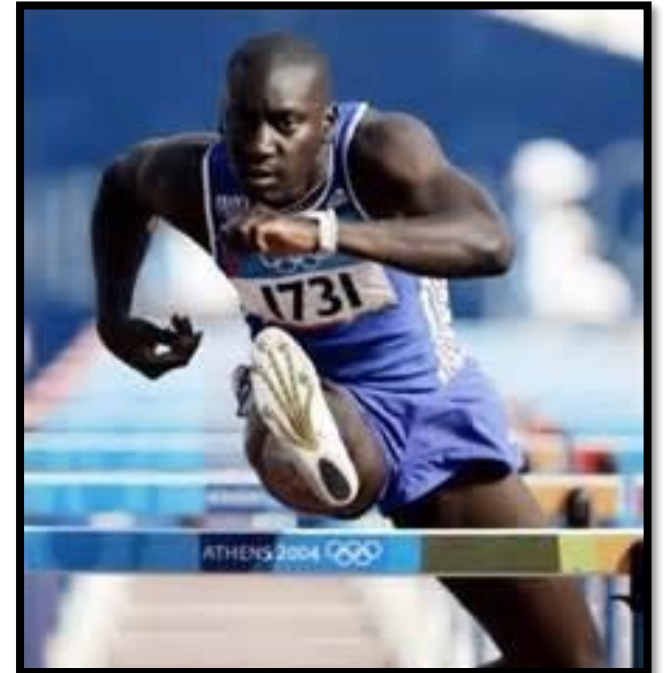
Bring added value to the customer : How ?



Ordering the items

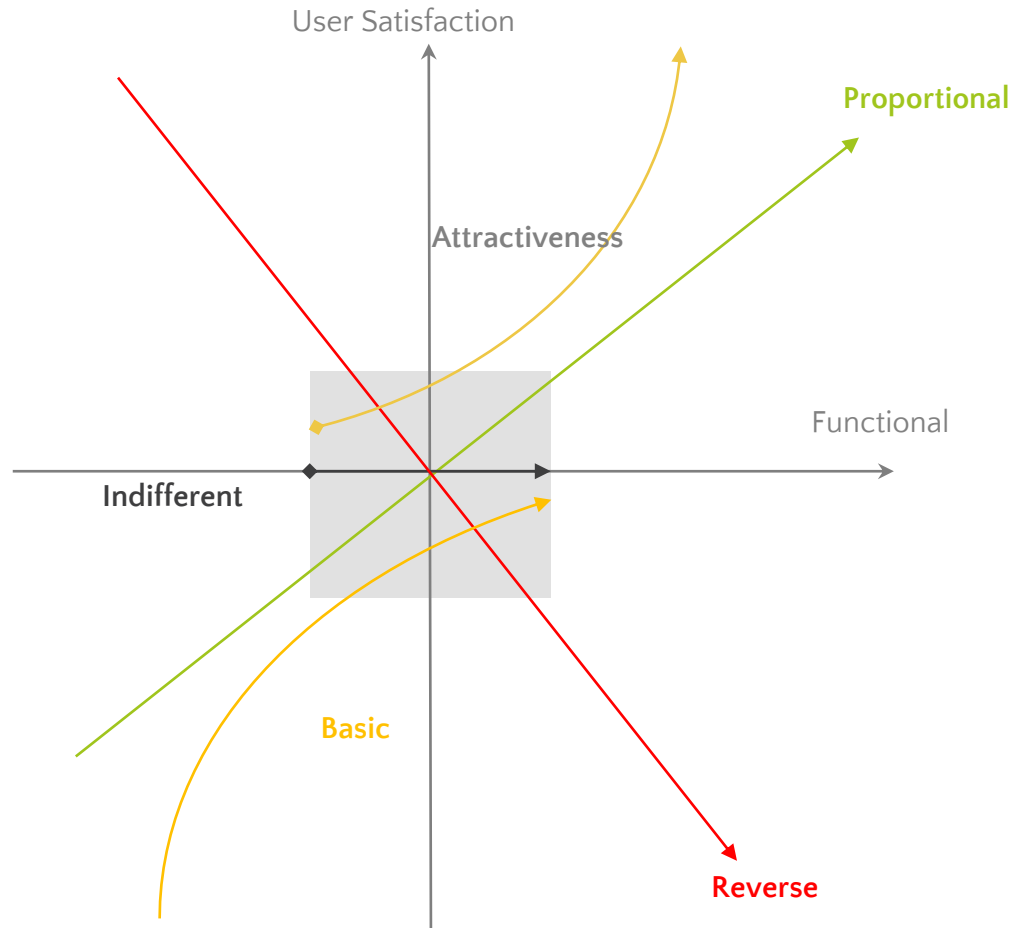


Confirming assumptions



Delivering often

How to estimate the value of a feature?



An estimation remains an assumption.

So how do we ensure the veracity of our estimates?

The value is not an absolute measurement.



The estimation of value is heavily dependent on the context of the product (financial, risks, ...).

Validate the assumptions

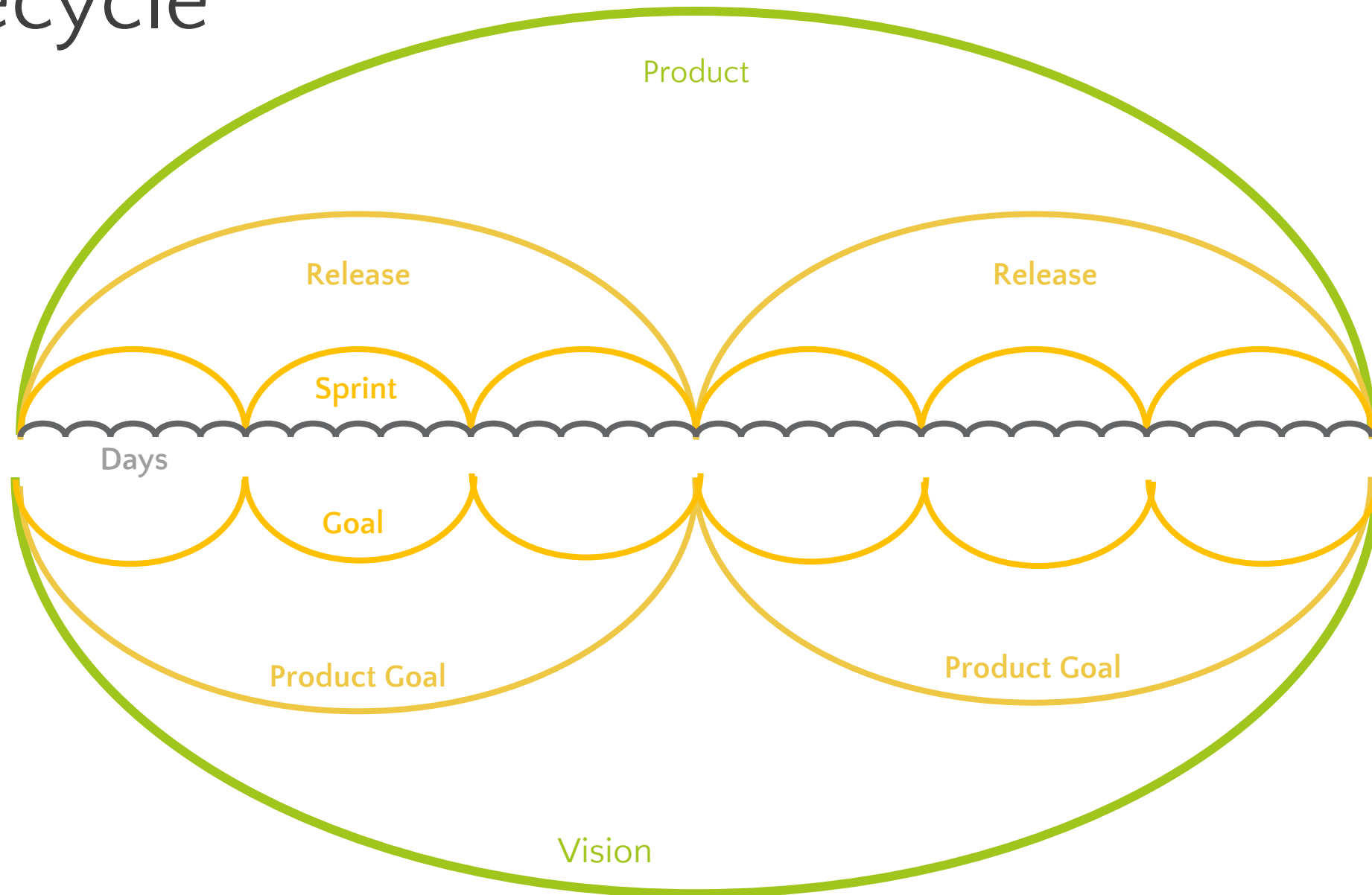
The most efficient way to validate assumptions is to deliver **frequently and regularly** product increments **to users** and **to collect their feedbacks**.

The shorter the feedback loop is, the more frequent learnings will be, and the more **numerous** and **relevant** customer requirements **adaptations** will be.



Estimation and planification

Lifecycle



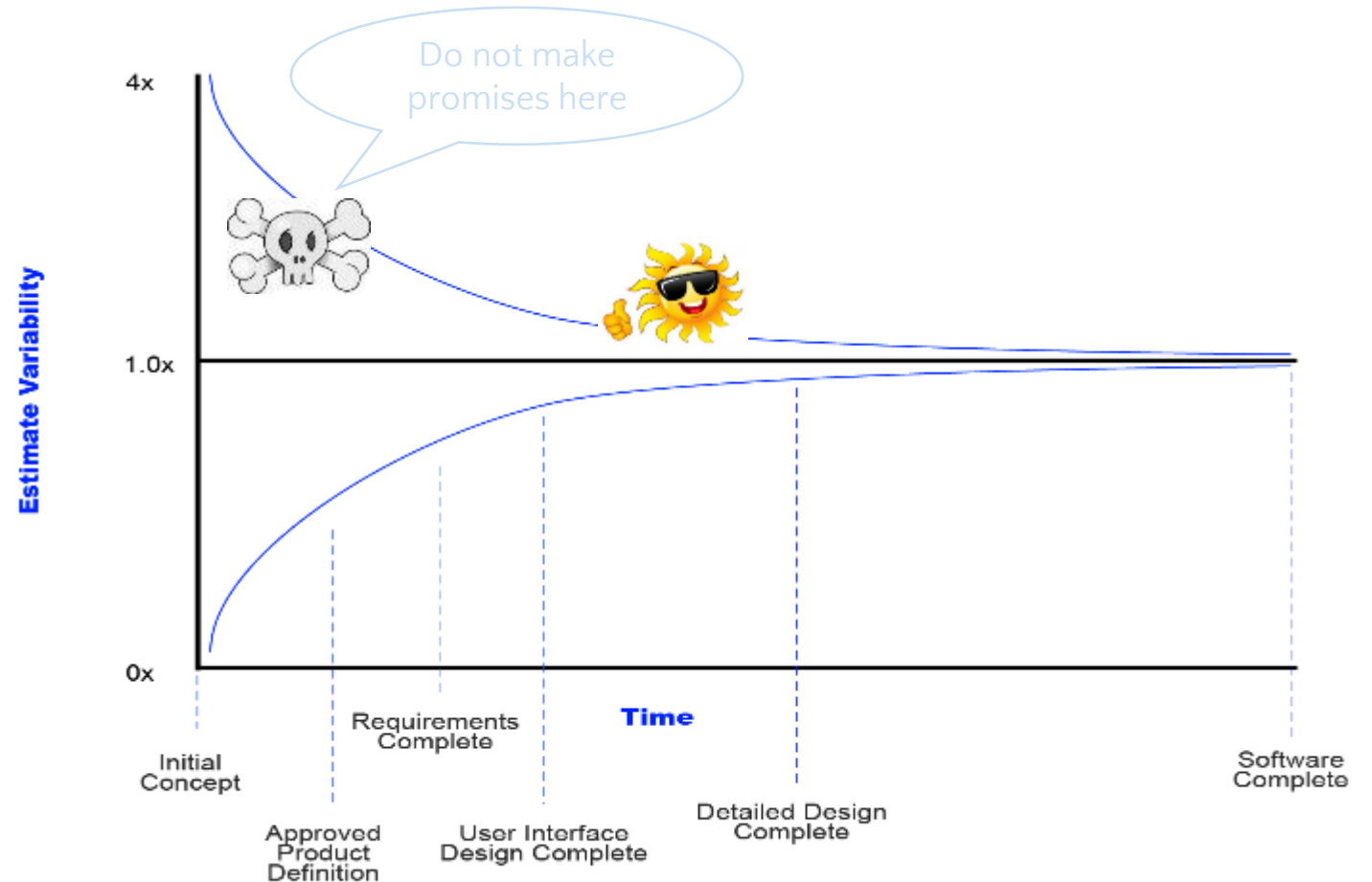
Uncertainty of estimates

We will deliver your
product in 3 years
On Friday 04/14/2020 !!!



**“Prevision is hard moreover
when it concerns future.”**
[Pierre Dac]

The Cone of Uncertainty (Steve McConnell)



Uncertainty of estimates

We do not know how long it will take!

It's our best estimate (**assumptions, not a fact**).

But if we run a few sprints, we can build something,
measure how long it takes (*a fact*),

and then we would better evaluate the size of that "thing".

Why estimate ?



Prioritization of Backlog item (by the PO)



To assist in **decision-making** : *roadmap updates...*

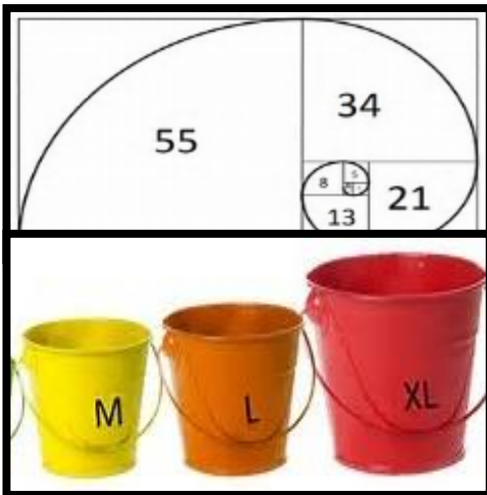


To **organize** the other dependent actions on the release



To ensure **transparency** in the decision-making.

How to estimate?



Choose a method



« Done »



Collaborative work



No temporality

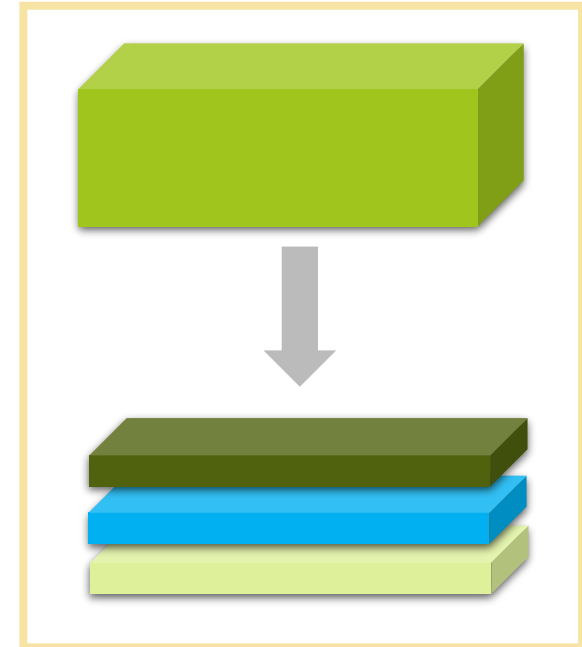
How to estimate ?



Comparison method



No clairvoyance



Split

How to estimate ?

Last Sprint (s)



Now



1
5
13
21
...



Estimate of effort
(complexity, uncertainty)

Example : Planning Poker

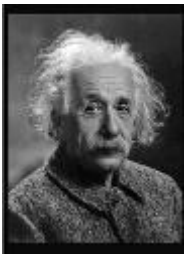
How to estimate?

The commitment \neq the estimate

Use the experience of the team, because it has done several iterations with exactly the same duration

Compare like with like : the sprints, the backlog items,...

The velocity can be used as an indicator but it won't necessarily be taken into account in the commitment



“Knowledge is acquired through experience, everything else is just information”

“[...] Intuition is nothing but the outcome of earlier intellectual experience”

[Albert Einstein]

Who estimate ?

- The **Product Owner** is the sole person responsible for **managing the Product Backlog**, but it's **the developers** who are responsible for **estimating the items** of the Product Backlog
- The **developers** decides **how** will be built the Product Backlog items **into a “Done”** product Increment during the Sprint.
- The **Product Owner** can influence the developers by **helping them understand and choose trade-offs**, but it is the people who will do the work that will provide the final estimate.



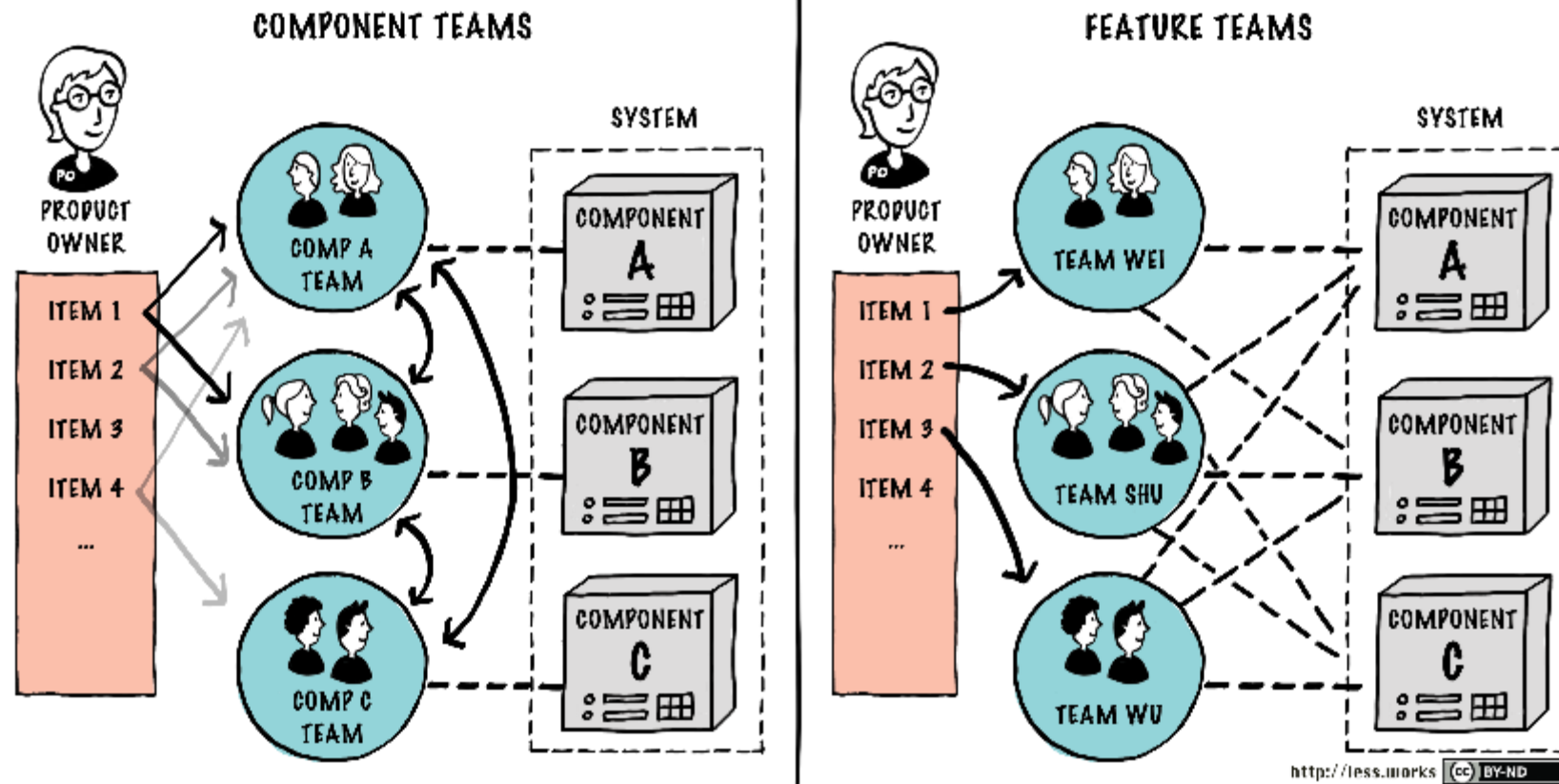
Estimates : Points of attention

Estimates are an assumption and not a guarantee

- Several sprints are necessary in order to have a common vision on the estimation of the effort – At the beginning, we do not know how to estimate well
- We do not compare the performance of two teams according to story points achieved in a sprint : it's not a management tool to optimize the team's capacity

Responsibilities of a Scrum Master

Component Team vs Feature Team



Technical Debt



A “Big Ball of Mud” is a haphazardly structured, sprawling, sloppy, duct-tape-and-baling-wire, spaghetti-code jungle. These systems show unmistakable signs of unregulated growth, and repeated, expedient repair. Information is shared promiscuously among distant elements of the system, often to the point where nearly **all the important information becomes global or duplicated**.

How to organize multiple Scrum Teams ?

Your opinion ?

Exercise : Typical first week of the Scrum Master

	lun. 5/15	mar. 5/16	mer. 5/17	jeu. 5/18	ven. 5/19
GMT+02	20				
9am					
10am					
11am					
12pm					
1pm					
2pm					
3pm					
4pm					
5pm					
6pm					

Assessment

Start assessment !

Please log in using the link which you find in the email and enter the associated code



60 minutes – 80 questions



ZEN VALUE