

Agile network course

Module 1.2 Managing Teams (Scrum)

We review the origin of the SCRUM methodology and see how it has established itself as one of the benchmarks of agility.

**You
are here**

We studied the details of the SCRUM team. In agile methodologies, the team is one of the key elements, where roles are clearly defined. In the case of Scrum, the team is the central focus of the methodology.

We analyze in detail the components on which the SCRUM methodology works. The material components for decision-making and the events that drive the project's progress.

1986: Origins (Hirotaka Takeuchi and Ikujiro Nonaka)

137

The new new
product development
game

*Stop running
the relay race and
take up rugby*

*Hirotaka Takeuchi and
Ikujiro Nonaka*

In today's fast-paced, fiercely competitive world of commercial new product development, speed and flexibility are essential. Companies are increasingly realizing that the old, sequential approach to developing new products simply won't get the job done. Instead, companies in Japan and the United States are using a holistic method—as in rugby, the ball gets passed within the team as it moves as a unit up the field.

This holistic approach has six characteristics: 1. It is a team effort. 2. It is a continuous process. 3. It is a dynamic process. 4. It is a flexible process. 5. It is a creative process. 6. It is a competitive process.

The rules of the game in new product development are changing. Many companies have discovered that it takes more than the accepted basics of high quality, low cost, and differentiation to excel in today's competitive market. It also takes speed and flexibility.

This change is reflected in the emphasis companies are placing on new products as a source of new sales and profits. At 3M, for example, products less

Analysis of how innovative technology companies develop their products: Fuji , Honda, Epson, 3M, etc...

Teamwork: Joint progress

1995: First reference as a project management method

Object Oriented Programming Systems and Applications
conference .

“ Scrum Development
Process (Ken Schwaber)

Inspired by the work of
Hirotaka Takeuchi and
Ikujiro Nonaka

Designed for
software development

The primary difference between the defined (waterfall, spiral and iterative) and empirical (SCRUM) approach is that The SCRUM approach assumes that the analysis, design, and development processes in the Sprint phase are unpredictable. A control mechanism is used to manage the unpredictability and control the risk. Flexibility, responsiveness, and reliability are the results. See Figure 6.

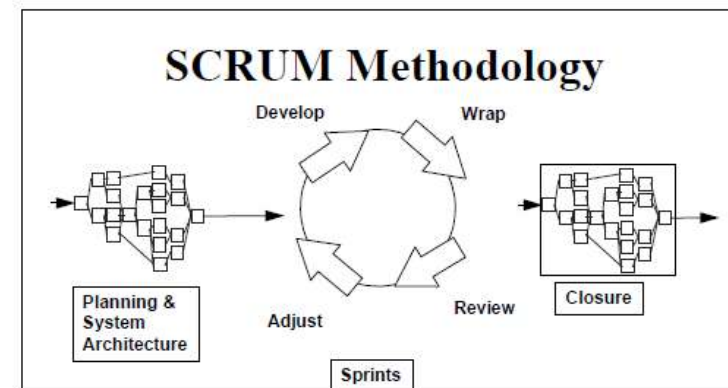


Figure 6 : SCRUM Methodology

Characteristics of SCRUM methodology are :

- The first and last phases (Planning and Closure) consist of defined processes, where all processes, inputs and outputs are well defined. The knowledge of how to do these processes is explicit. The flow is linear, with some iterations in the planning phase.
- The Sprint phase is an empirical process. Many of the processes in the sprint phase are unidentified or uncontrolled. It is treated as a black box that requires external

Inspiration

What does SCRUM seek?

- Generate good communication within the team
 - It is necessary for the entire team to communicate constantly.
 - Absolute transparency: the entire team has access to all information
 - Which doesn't mean I can modify it
- Having a “Rhythm” in the project
 - All team members are familiar with the project management model:
 - Elements for management
 - Meetings

Inspiration

2011/2013: “ Scrum guide ” (Scrum.org)

Ken Schwaber and Jeff Sutherland

They define the theoretical framework

Equipment

Events

Documents

There are many variations

Depending on the company,
the product, the customer, etc.

And many more tools

Cards , Boards

Software

The Scrum Guide™

The Definitive Guide to Scrum:
The Rules of the Game



July 2013

Developed and sustained by Ken Schwaber and Jeff Sutherland

www.scrumguides.org

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**You
are here**

Overview

Equipment

Structured: roles

Empowered

Events

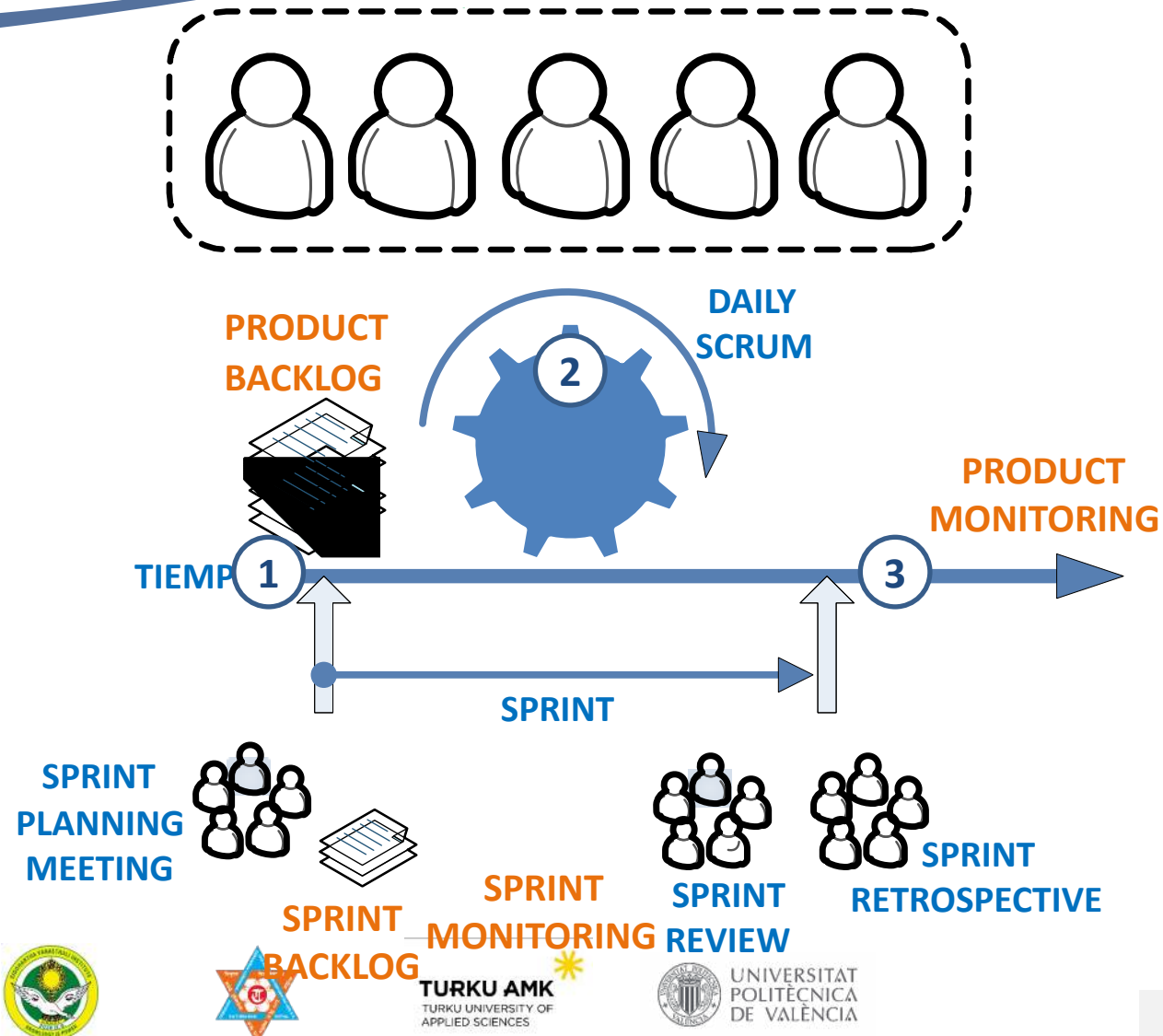
Sprint: container

Defined duration

Artifacts

They represent work
or value

Transparent



The Team

Product Owner

He is responsible for the product

He is the only one who manages the
Product Backlog

Primarily, their work consists of

Define the elements of the Product Backlog

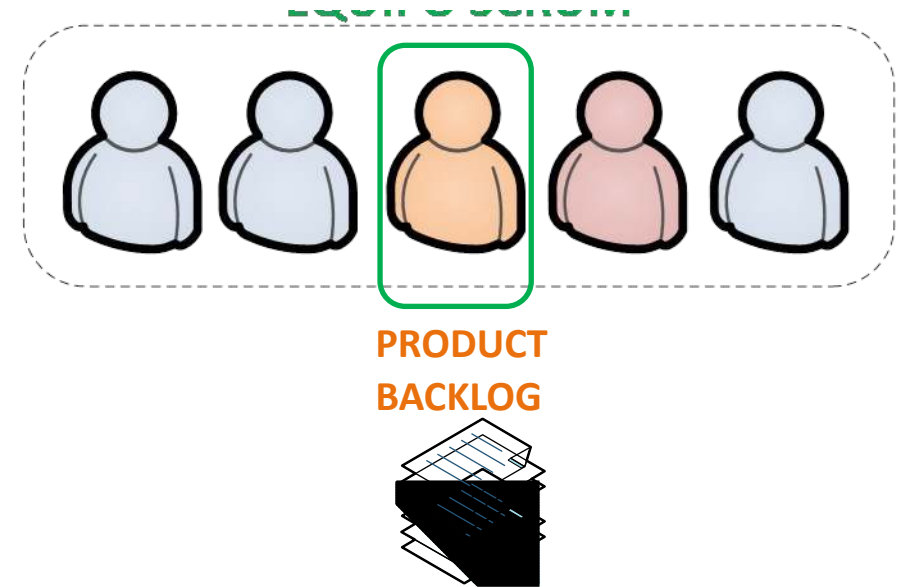
Order the elements of the Product Backlog to
achieve goals efficiently

Optimize the value of the work performed by the Development Team

Ensure that the Product Everyone knows about Backlog

Ensure that the Product The backlog clearly specifies what needs to be implemented.

Ensure that the Development Team fully understands the elements of the Product Backlog



The Team

Team members

Professional

It acts directly on the
product

Responsible for the increased development of the element that
results at the end of the sprint

Join the development team

A component can be specialized

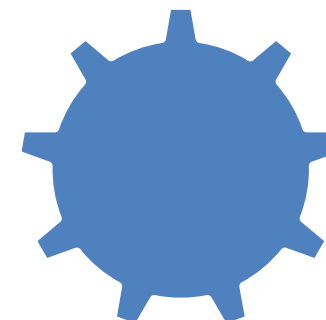
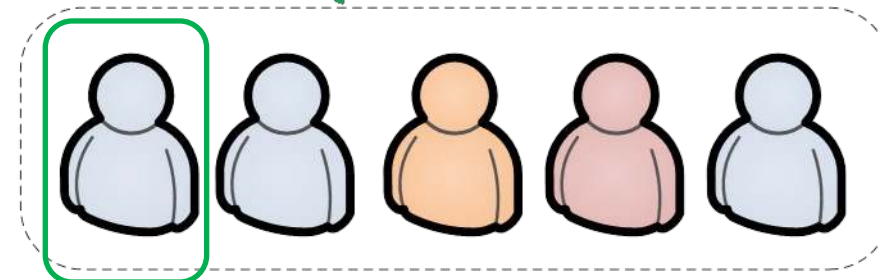
But that doesn't make him responsible for the elements
he is an expert in.

The responsibility lies with the team.

There are NO sub-teams

There is no one component more important than another.

EQUIPO SCRUM



The Team

The development team

Self-organized

They must have the power to make all necessary decisions regarding the **operation** of the team (not regarding the product elements).

Egalitarian

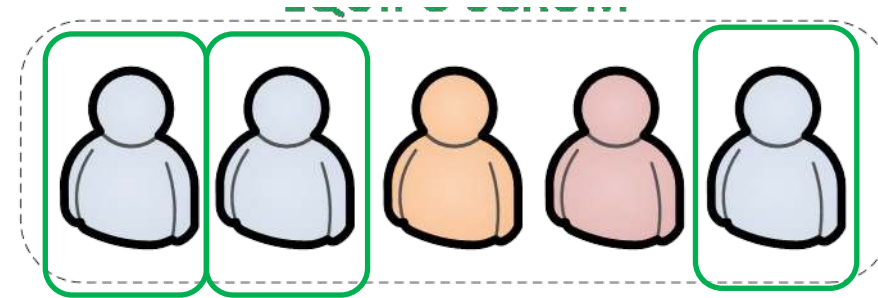
There is no hierarchy within the team, neither by qualifications, nor by experience, nor for any other reason.

Without exception, this rule is fixed.

Empowered

Ability to make all decisions related to product **development** (not about the product elements)

The decision must be transparent to the entire SCRUM team.



The Team

Scrum Master

Facilitator

Responsible for ensuring that SCRUM is followed (the functioning of the entire team, not just the development team)

He is at the service of the team

He is not a leader

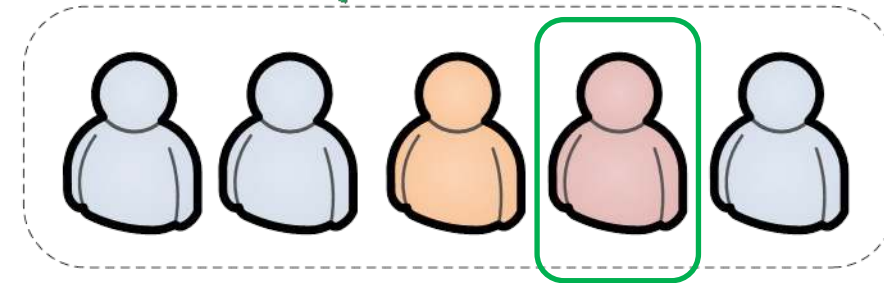
It does not order

It does not protect

It is an intermediary between all the elements

Not only between people

Also between the product, the environment, the customer...



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Artifacts

User stories

Describe the functionality from the customer's point of view

Written in natural language

Product Owner

The three Cs of user history

Card : A written description (more than just a "name") of the story, which serves as identification.

Conversation : It is created through conversation, dialogue, drawings... relaxed atmosphere (meta-information)

Confirmation : The criteria must be established by which the user will be satisfied with the end of the story

Artifacts

INVEST Model: Bill Wake (<http://xp123.com/>)

Independent.

Has to be “self- contained ” in such a way manner that does not depend on another user story .

Negotiable

By being part of a SCRUM iteration , can to change .

Valuable

Has to have courage (and be returnable) for the user .

Estimable

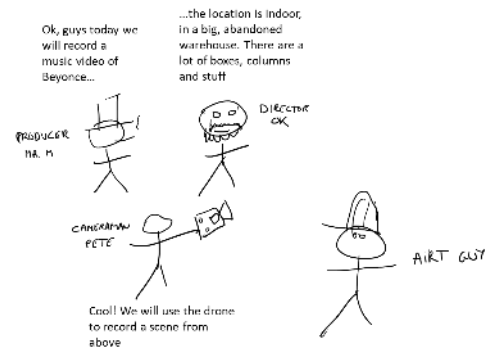
It should be estimate in a unit measurable (usually hours)

Scalable (small sized)

They must divide in such a way that be achievable and estimable at the same time .

Testable

It should be provide enough information so that it can be assessed that the story has ended



HISTORIA DE USUARIO – AIRT SYSTEM

SYNOPSIS

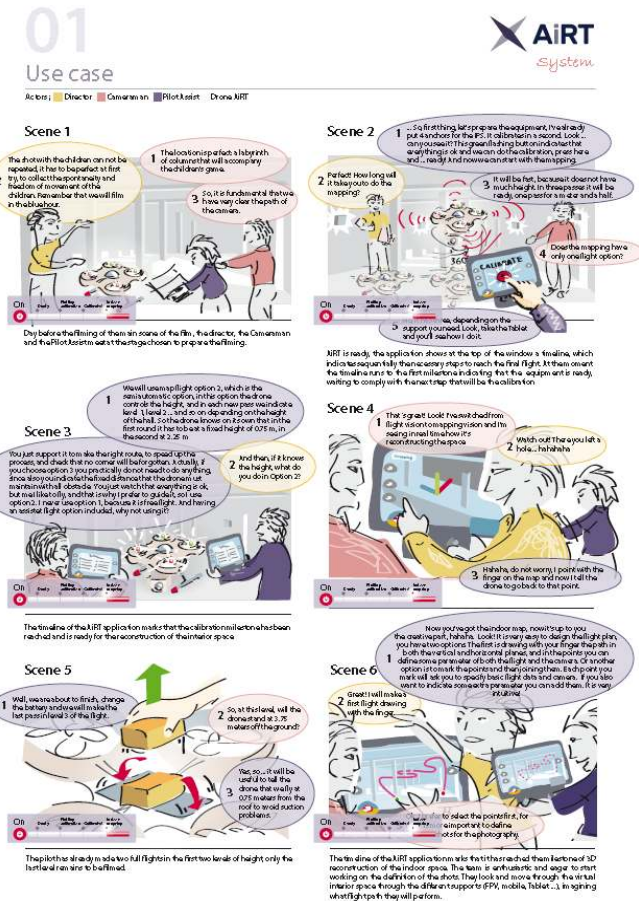
Un cineasta novel está rodando su primer largometraje. Una de las escenas principales de su obra prima se filmará en el interior de una antigua fábrica textil de principios del siglo XX. El espacio escogido como escenario, es una gran nave industrial abandonada de 1000 m² de planta rectangular porticada, que presenta dos hileras de finas columnas, típicas de las fábricas de textil de aquella época, que recorren longitudinalmente la estancia dividiéndola en tres secciones iguales. La cubierta es plana, con vigas vistas, con una altura de 4,5 metros. Presenta techos de reducidas dimensiones ubicados en la parte superior de uno de los laterales de la nave, que permiten la entrada controlada de luz natural, generando un ambiente intimista.

La escena a rodar, representa el juego entre las columnas de dos niños de cinco años, esta escena no solo será la más representativa de la película, sino que también se utilizará para el diseño del cartel, por lo que será necesario la toma de fotografías.

Se busca obtener un movimiento libre de la cámara, que acompañe la libertad de movimiento de los niños. Por tanto, se precisa una herramienta que no sea invasiva, para que los niños puedan moverse con libertad y espontaneidad, que permita la obtención de planos continuos y limpios del espacio, por lo que se descarta el empleo de rieles, grúas, y medios auxiliares que entorpezcan el espacio y limiten el movimiento libre de la cámara. Por otro lado, la grabación se deberá de realizar en la hora azul, por lo que el tiempo de rodaje será muy breve y no permitirá la repetición de tomas.



- Jose Luis Pozo Luján**
Poco presupuesto
- Jose Luis Pozo Luján**
Muchas tomas
- Jose Luis Pozo Luján**
Posibles fallos estructurales, de conservación, etc. El dron no puede chocar con techo
- Jose Luis Pozo Luján**
¿Posibles corrientes de aire en zonas concretas del entorno?
¿Levantará polvo?
- Jose Luis Pozo Luján**
Extremar las precauciones sobre los actores
- Jose Luis Pozo Luján**
¡IMPORTANTE! además de posibles rutas, también se podría necesitar la incorporación de comportamientos del tipo "seguir a las personas que se muevan", "seguir a la persona que se mueva a menor velocidad", etc...
- Jose Luis Pozo Luján**
Sería ideal disponer de un "simulador de tomas", lo que implica que antes de grabar (días antes) hubiera que tener el mapa del interior hecho para que se puedan hacer las simulaciones de las tomas.



Artifacts

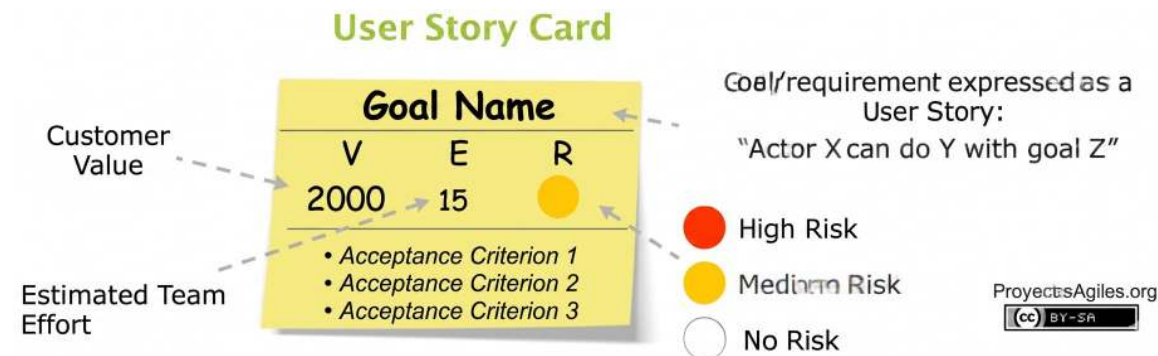
History card

Each team, project, or company can generate its own way of presenting user stories

During a project, all stories are captured in the same way.

The client knows the way we work

The Product Owner manages the cards



Artifacts

ProductBacklog

Ordered, prioritized, and estimated list of user stories

Estimating each user story is the key to creating an achievable Product Backlog.

The estimate is made by the entire SCRUM team.

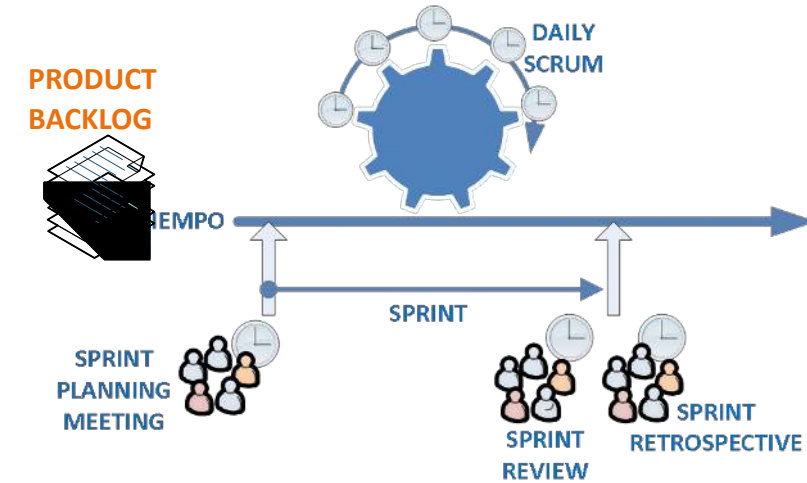
Estimation tools

MS Project, MS Excel, etc...

Very mathematical and prone to one component monopolizing the calculation while others remain silent

Planning Poker

Encourage everyone's participation: Gamification (and Visual Thinking)



Artifacts

Planning Poker

Each number on the chart represents an estimate of hours, complexity, etc.

The team determines the unit.

The stories are voted on one by one.

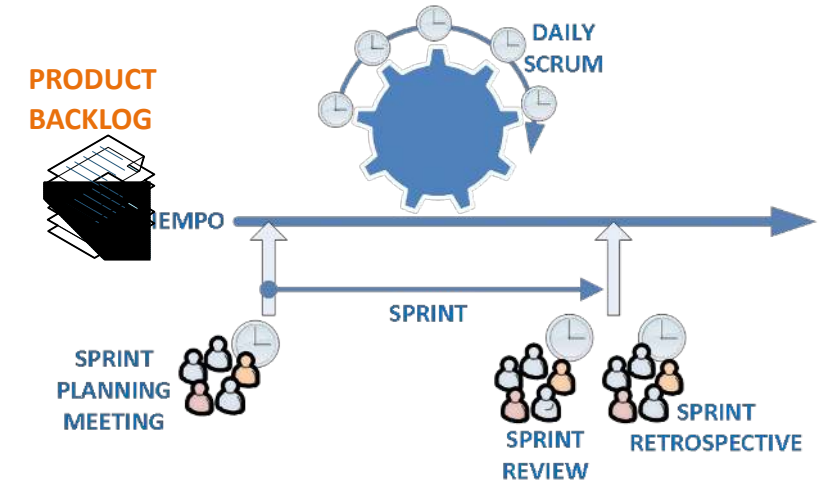
Each team member has a full deck of cards.

Everyone votes at the same time

There are variations

Highest and lowest outside: average

The biggest one wins



Events

Sprint

It is the fundamental time block
in SCRUM

Fixed duration

Generally less than a month, depending on the product

It has a very well-defined and achievable objective (Sprint Goal)

Definition

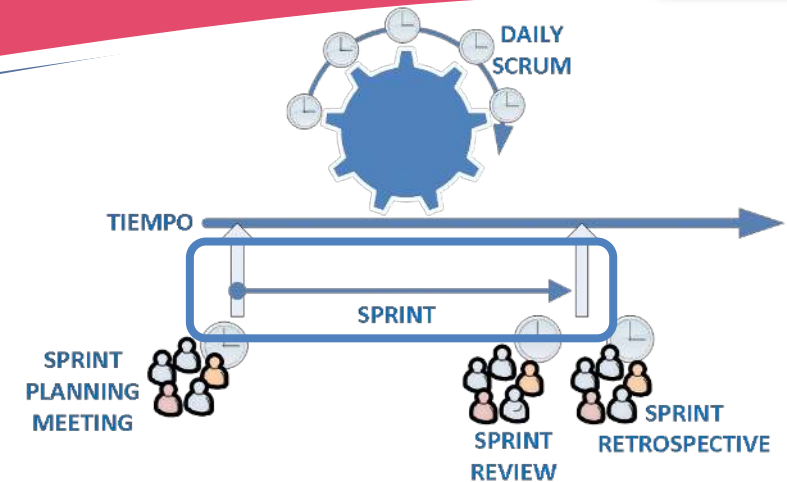
It is defined by the fact that at the end of the sprint there must be a usable product increment (finished and without errors)

There are no other blocks between one sprint and the next.

Main condition

The requirements should not change during the sprint

Product can cancel it Owner



Events

Sprint Planning Meeting

The whole team gets together

Not just developers

Stakeholders

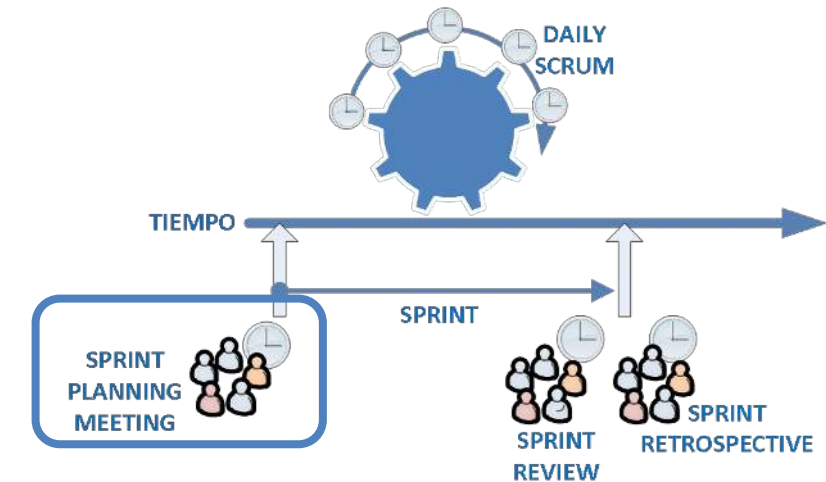
The duration is proportional to the sprint duration

The ScrumMaster is responsible for the meeting (and everything).

Meeting topics

What can be delivered in the Increment resulting from the Sprint that begins? → Product Owner

How will the necessary work to deliver the Increment be accomplished? → Development Team



Events

Sprint Planning Meeting

The Product Backlog is key

Requirements can be modified
be developed are selected.

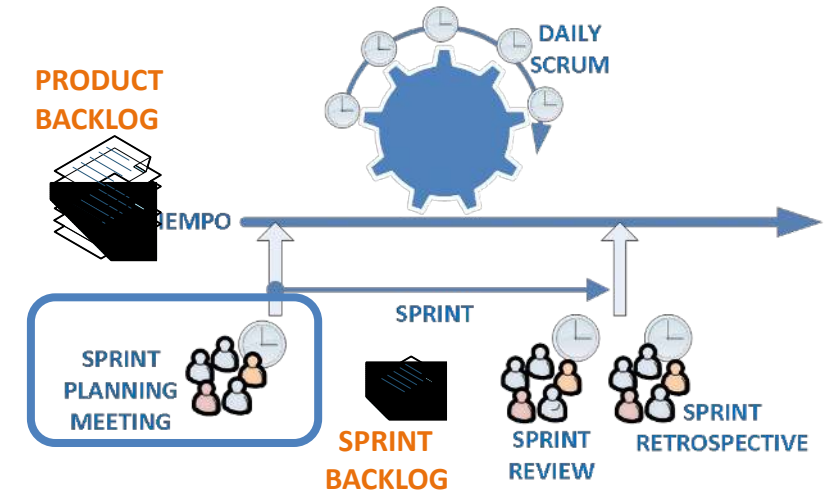
The development team is the one who
defines whether it is achievable or not.

The equipment is not modified, only
the selected elements are modified.

The selected elements make up the Sprint Goal

The elements and the plan to develop them create the Sprint Backlog

The development team self-organizes how to achieve the Sprint Goal (and the rest
of the team must understand it)



Events

Daily Scrum

Short daily meeting

The entire
development team must participate

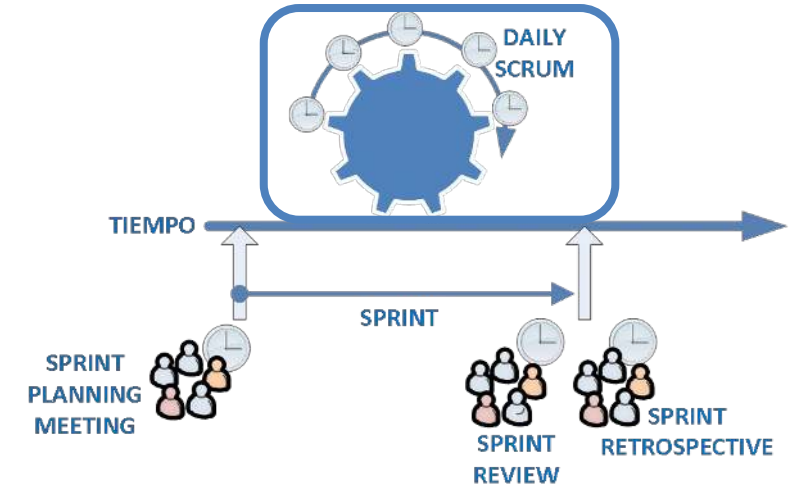
The ScrumMaster coordinates the meeting

Meeting topics

What did I do yesterday that helped the Development Team achieve the Sprint Goal ?

What will I do today to help the Development Team achieve the Sprint Goal ?

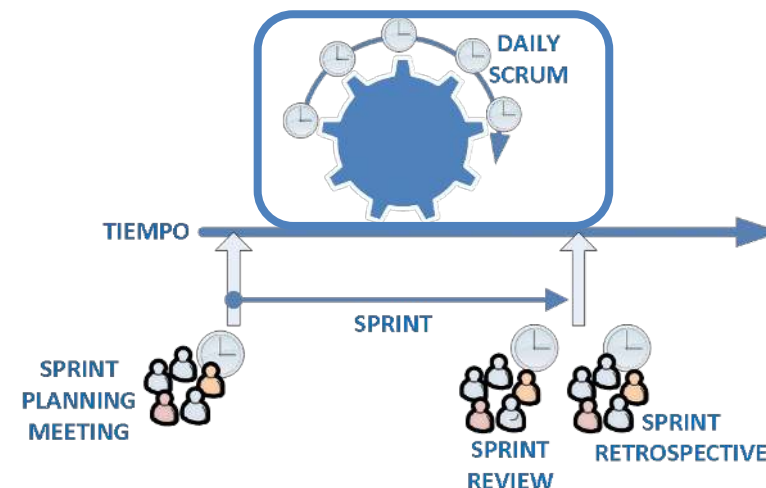
Do I see any impediments that would prevent the Development Team or me from achieving the Sprint Goal ?



Events

Weekly scrum

The philosophy implicit in the daily Scrum is used in many cases in all types of projects.



What was our progress this week?

- We have been organizing the User interface requirements to add them to the Deliverable 5.1.
- Added a more completed description, organized by features of the application, main components involved in that requirement, comments and version.
- Table in the Excel document is obsolete. Please see D5.1 document.
- We have started doing the mockup of the User Interface.
- This lets to have a first idea of the workflow between the screens, avoid conflicts, find the best location for the items in the screen, and also discover which info will be needed to receive into the application (like the current position, error events, etc.)



What will we do next week? (tasks, foreseen results)

- We will do more test with the grids
- We will fly the drone indoor with a very strong GPS. We will fly with different flying modes to test which one is going to be the best.
- Start testing the distance sensors with a drone.



What do we need from the other partners to achieve the results related to the project?

Aerotoools

- Will the calibration flight be automatic? Take-off, turn, land. Fixed height?
- Names of the types of flights (reactive, fixed height?)
- Can the FCS control the drone when the drone has to maintain a safety distance?
- Can we have a signal of critical battery level?
- Can we have a signal of "the drone has taken off / has landed" ?
- Can we have a signal of "the drone is going to power off"?
- What will the procedure be in case of emergency? Land vertically?
- Is it desirable to move the drone from the tablet with digital controls?

Artifacts

Daily Scrum , weekly scrum ,
etc.

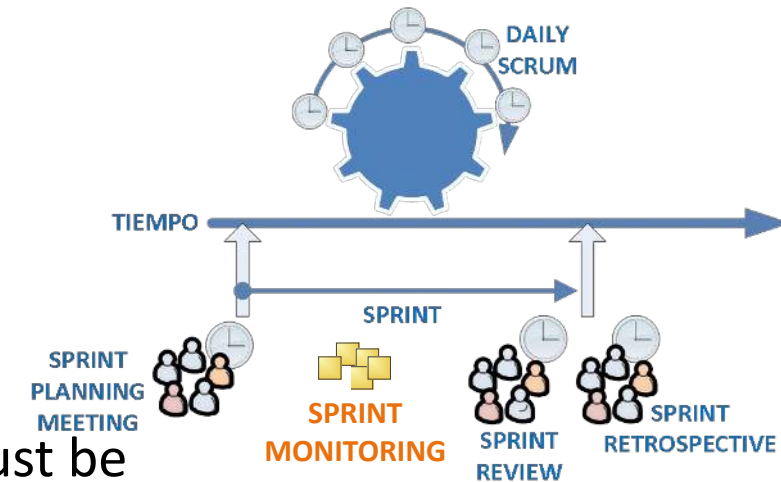
It is managed through Sprint
Monitoring

Method for selecting the tasks that the plan determines must be
performed to achieve a Product element Backlog

The entire team is aware of the Sprint Monitoring , but the Sprint
Manager and the Product Owner cannot modify it.

The entire development team must interact with the Sprint
Monitoring

Sprint monitoring should allow for efficient visualization of
the development status.



Artifacts

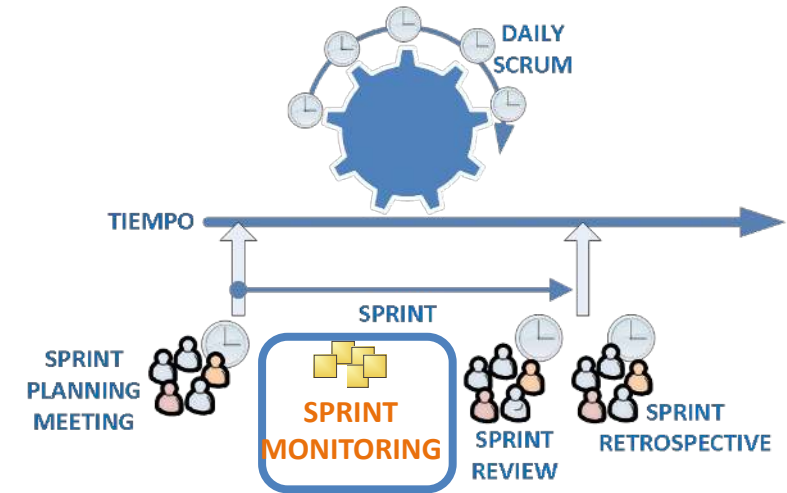
Sprint board

Vertical axis

It contains the stories of the sprint
They are associated with the tasks to complete the stories

Horizontal axis

The phases that the tasks can go through are listed.



Story	To Do		In Process	To Verify	Done
As a user, I... 8 points	Code the... 9	Test the... 8	Code the... DC 4	Test the... SC 6	Code the... DC 8 Test the... SC 8 Test the... SC 6
As a user, I... 5 points	Code the... 8	Test the... 8	Code the... DC 8		Test the... SC 8 Test the... SC 6

Events

Done (Finished, completed, completed)

In Scrum it is very important to know what it means for a sprint task to be completed.

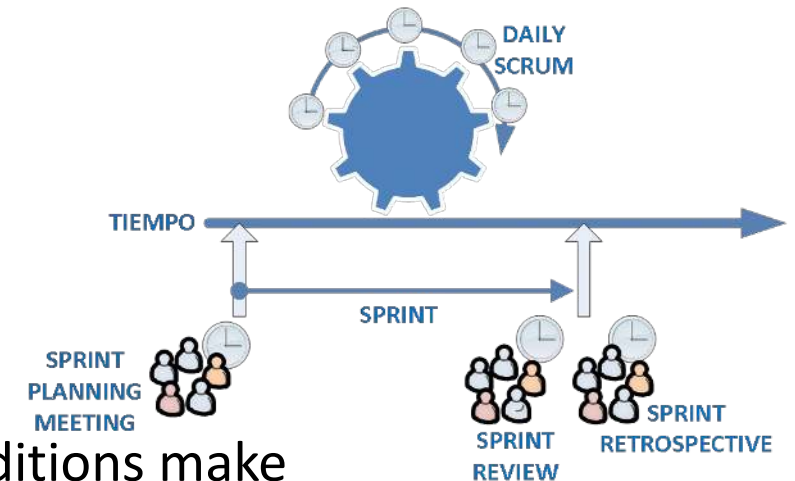
The entire development team needs to know what conditions make a task "done".

The entire team needs to know what conditions make an item "done".

Some techniques

Test Driven Development : the tests that the element has to pass are known.

Use of standards: they allow us to know the tolerances and values that should be measured.



Events

SprintReview

The moment when it is checked that all items in the Product Backlog have been completed

The entire SCRUM team participates

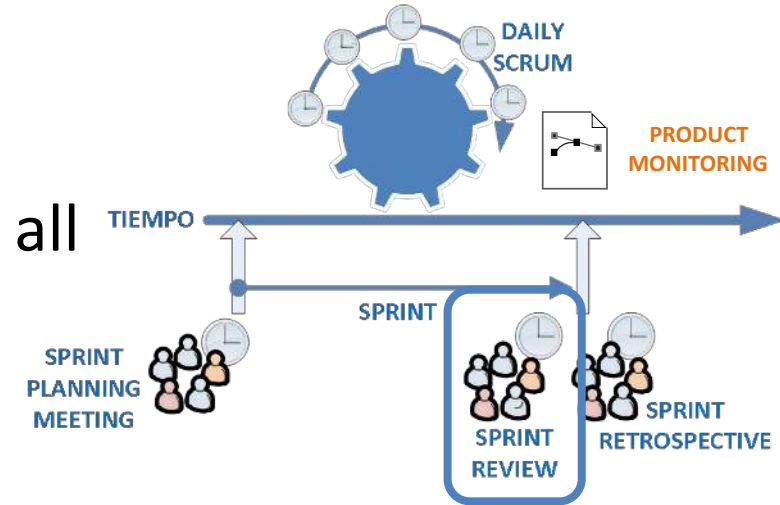
ProductBacklog

Stakeholder

The Product Owner validates the Sprint elements that have been completed

The progress of the project is monitored using some method of representing the value achieved

Generally a burndown chart



Events

Sprint Retrospective

Reflective meeting of the entire team
team improvement mechanism

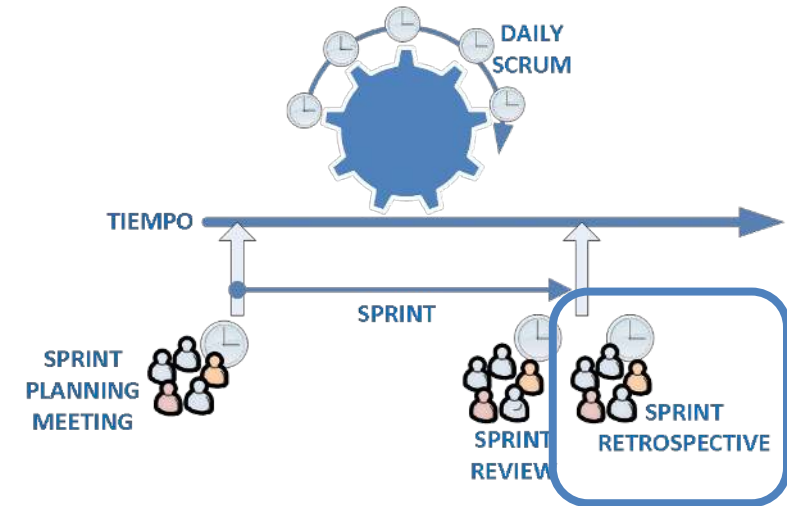
Internal operations topics are discussed.

Inspect how the last Sprint went in terms of people, relationships, processes, and tools;

Identify and prioritize the most important elements that went well and potential improvements

Create a plan to implement improvements to the way the Scrum Team performs its work

Everything is subject to review at this meeting.



Artifacts

BurnDown Chart

Work/effort pending

It shows the evolution of the sprint.

X-axis: sprint iterations (days)

Y-axis: Effort (hours or days)

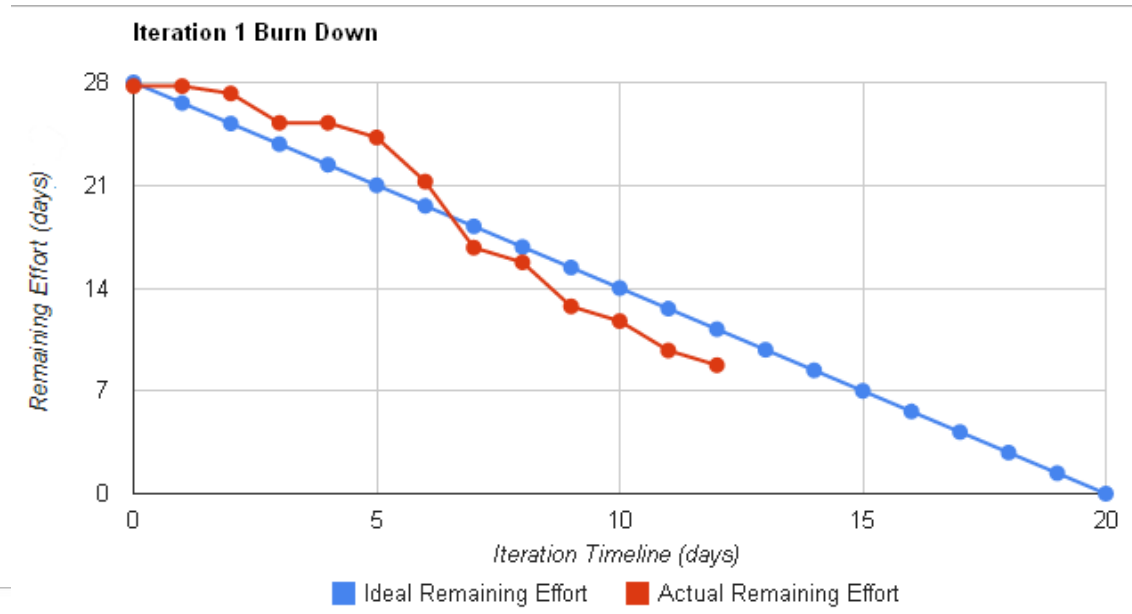
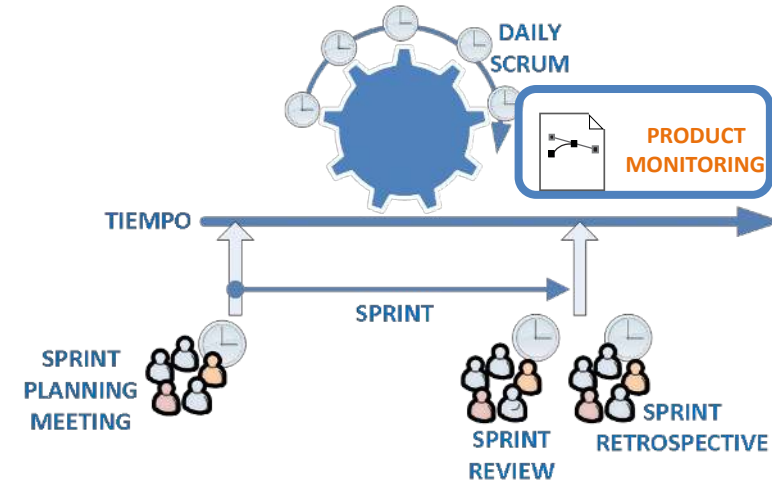
Ideal line

Hours remaining

These can be included

Remaining tasks

Tasks completed



Artifacts

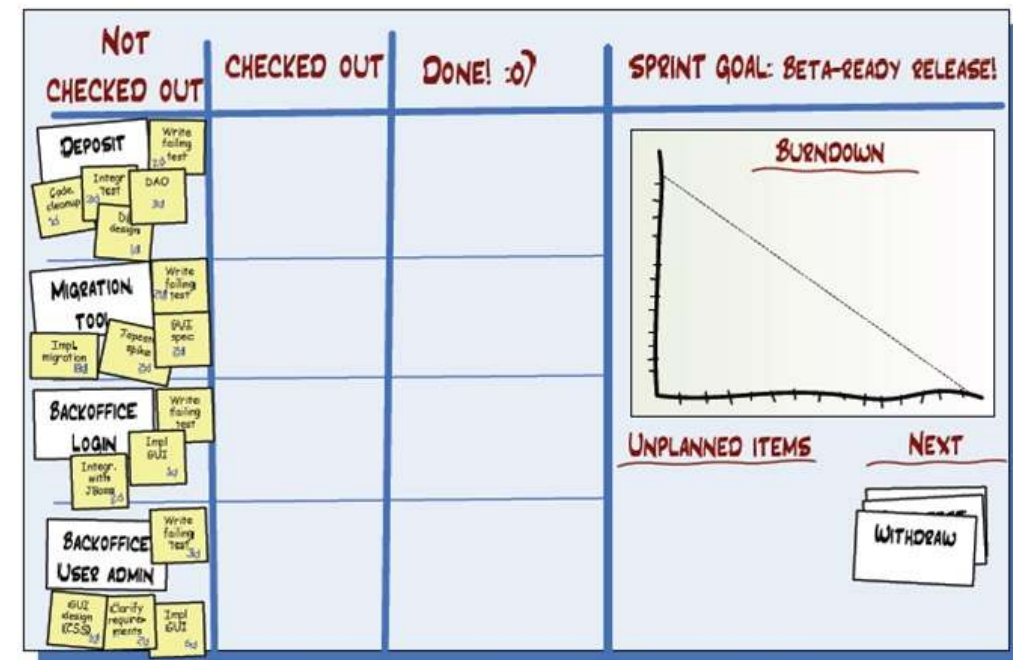
SCRUM BOARD

Unify all the information from all the Sprints

Sometimes it keeps user stories "hidden" to avoid creating "noise"

backlog artifacts and monitoring

Not to be confused with the Sprint Board



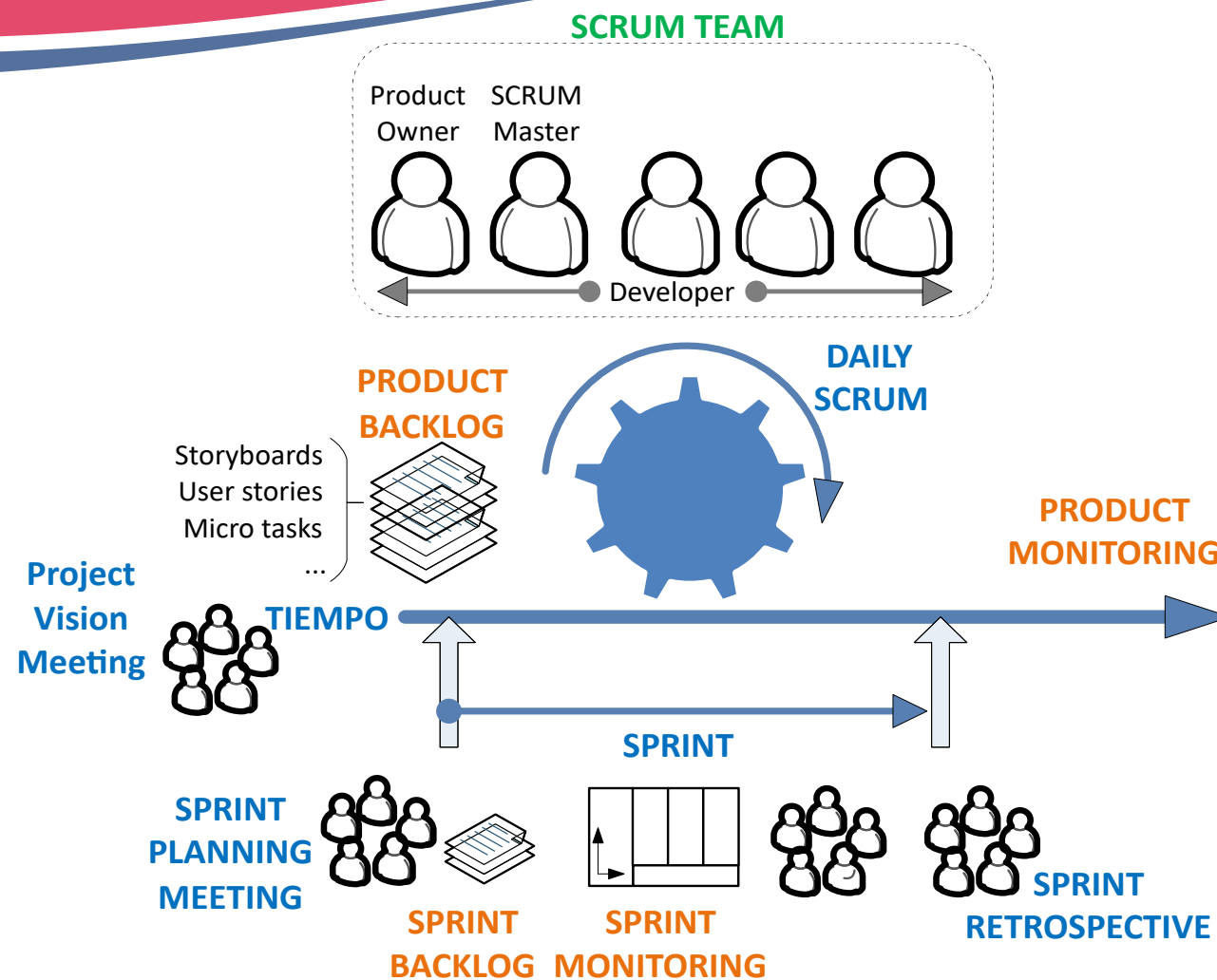
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Summary



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July 2013

Developed and maintained by Ken Schwaber and Jeff Sutherland

www.scrumguides.org

To watch

Jeff Sutherland



The art of doing twice as much in half the time | Jeff Sutherland | TEDxAix

To watch



Tips for the SprintPlanning



Tips for the DailyScrum



Tips for the SprintReview



Tips for the Sprint Retrospective

To visit



www.scrumalliance.org/



www.navegapolis.net



www.scrum.org

Improving the Profession of Software Development



www.scrumguides.org

To test

– There are many tools for managing projects with SCRUM.

- <http://agilescout.com/best-agile-scrum-tools/>
- <https://www.planningpoker.com/>
- <https://www.mountangoatsoftware.com/tools>
- <https://www.scrumwise.com/>
- ...