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Innovation and Sustainability 2020
Sustainable Education and Research in Europe



International Scientific Conference
Bucharest, Romania, 30th October 2020

Introduction: The importance of Sustainable Education and Research in Europe

Cristian Mustatã

Chief Editor

University POLITEHNICA of Bucharest

We live in a context in which teaching and research were pushed into an online version in order to protect our health. This process could not be planned and humanity adapted education and research to this new context.

Thus we realize that sustainable education is needed more than ever to help humanity to adapt to unforeseen situations and contexts in the future. Many types of innovations can contribute with sustainable implications.

So both research and education are needed in a sustainable manner hand in hand to ensure a better future in Europe and in the whole world.

I express my gratitude to all our authors, which brought their thoughts about Sustainable Education and Research in Europe in the present volume of the conference.



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Scrum for Organizational Change

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ABSTRACT

This article holds information about the structure of managing the decisions, risks, actions within the Scrum framework. All the processes, roles, events, benefits and challenges are described in order to give the reader an open view over this method of organizational change. Although the information found in this paper suggests that this framework is more suitable for IT developing teams, it is assured that its structure can be adopted by projects from other industries. Once a scrum team is established, it will evolve by adopting their needs in line with the process of this framework.

Keywords: Framework, Scrum, Events, Organization, Roles, Process, Team.

INTRODUCTION

Scrum is a framework for team collaboration on developing products. Scrum helps teams work together, allow teams to learn through interactions, to coordinate themselves when working on an issue, and to focus on their wins and losses to progress continuously, as well as to develop learning, an aspect of great importance in the enterprise context (Alexe and Alexe, 2013).

This system offers individuals the opportunity to produce high quality goods productively and creatively by addressing adaptive challenges, in line with the needs of the team members (Mustata, 2017). This increase in efficiency is good for the customers who receive a high quality result, as well as for the team members as more efficiency is good for their work-life balance (Mustata and Niculescu, 2016). Since the early 1990s, it has been used for handling complex product creation.

Software teams are the ones that frequently use Scrum framework (Rubin, 2013), but it can be

practical in different types of teams and specializations. Often thought of as a set of meetings, tools, and roles that help teams' structure and manage their work, Scrum is a useful and adaptable form of project management. (Web-1)

It is a sub-group of agile:

- Agile is a collection of ideals and concepts representing the everyday experiences and practices of a group. Agile itself is not prescriptive or specific.
- The Scrum framework follows agile values and concepts, but provides more definitions and requirements, particularly with regard to certain practices in software development. (Web-2)

THE ROLES OF THE SCRUM TEAM

Scrum Teams and their related tasks, events, objects, and rules consist of the Scrum system. Each component serves a specific role within the system and is important to the success and use of Scrum. The Scrum Team consists of a Product Owner, the Development Team, and a Scrum Master.

The Product Owner

The Product Owner is both the representative of the clients who use the fine product, but also of the parties involved in the development process. It is the connection between the product development team and the business side involved, focusing more on the business side. The Product Owner is the one who updates the Backlog, cleans, and manages it, thus translating the vision of the project to the team.

The Development Team

The Development Team is a group of professionals with the requisite technical skills who collectively create the project with the stories they commit to at the beginning of each Sprint.

The Scrum Master

The Scrum master is the person who leads the team and directs them to comply with the framework's rules and processes.

The Scrum master oversees the project's elimination of impediments and is responsible for keeping Scrum up to date, supplying the teams with coaching, mentoring, and training if they need it. (Web-3)

EVENTS IN SCRUM

In Scrum the events are used to create regularity. Each event has a certain time limit, so these Scrum events are predefined in duration.

The events are the ones described below:

Stories

A story is a backlog item that gives users, stakeholders and even the team itself meaning.

Within a sprint, a story is supposed to be finished so that they must be as tiny as possible. The Product Owner manages these Stories, and the Scrum Master together with the scrum team and stakeholders contributes to the completion of the elements in the backlog.

A User Story must provide the team with a context and a vision of the final product, so it must contain as many details and relevant information as possible. After analysing this information, the team members can provide a clear estimation regarding the completion of the story. This is an agile approach that helps teams write down what they communicate verbally, thus eliminating confusion or different perspectives on looking at and drawing conclusions about the final product.

Tasks

Tasks are the work required to complete a story. For a story to be closed, we must keep in mind that all the tasks contained in that story must be completed. These tasks do not have a long duration, they are written in such a way that they can be completed in a few hours (no more than 12) and are assigned, depending on their content, to those members who have the necessary expertise to solve them.

The Scrum Board is the one that manages the stories, tasks, bugs, and other types of work that appear in a scrum team. The Scrum Board is necessary for an easier follow-up of these tasks and it is composed of: (Web-4)

- Stories
- To do
- In progress
- QA
- Done

SIZING OF THE TEAM

In a organization that has many employees and that uses the Agile Methodology along with Scrum Organization it can be difficult to form large teams. Development teams should be created with the goal to best collaborate and create a releasable product by the end of a Sprint. Team members should understand each other and motivate each other in order to provide an end-product to not have drawbacks because of misunderstandings.

Researcher have shown that when the team size is around 7 ± 2 it creates the deepest

trust and is the most effective to complete a significant amount of work, meaning a Development Team is expected to have at least 5 people, and 9 at most. (Web-5)

SCRUM MEETINGS

In order to organize the team and for them to have clarity and visibility upon the project, they are required to participate to certain meeting that occur before and during the Sprint.

The type of Scrum meetings are the following:

- Daily standup

The daily standup meeting is a meeting that occurs every day and it usually last for 15 minutes. The team members answer questions such as: What did you do yesterday? What are you going to do? Is there any blockage? in order to see the progress and how well the development is going.

- Sprint planning

The daily standup meeting is a meeting that occurs every day and it usually last for 15 minutes. The team members answer questions such as: What did you do yesterday? What are you doing today? Is anything impeding your progress? in order to see the progress and how well the development is going.

- Sprint review

The daily standup meeting is a meeting that occurs every day and it usually last for 15 minutes. The team members answer questions such as: What did you do yesterday? What are you doing today? Is anything impeding your progress? in order to see the progress and how well the development is going.

- Sprint retrospective

The daily standup meeting is a meeting that occurs every day and it usually last for 15 minutes. The team members answer questions such as: What did you do yesterday? What are you doing today? Is anything impeding your progress? in order to see the progress and how well the development is going.

“It has a lot of value because it’s about our processes and internal improvement,” Dahlberg said. (Web-6)

- Product backlog refinement

“It has a lot of value because it’s about our processes and internal improvement,” Dahlberg

said.

The Product Backlog Refinement meeting is where the team evaluates stories and tasks for better clarity. It lasts for 2 hours and occurs between sprints and this is where the tasks are estimated in story points and/or how many days it would take to complete. (Web-6)

BENEFITS AND CHALLENGES

This methodology and organization in a company can be very benefic (Sapathy, 2016). It works very well in an IT company but it is suitable for team that work in other industries such as marketing or event planning as well (Schwaber and Sutherland, 2017). It helps the company organize itself better and helps teams complete their projects more efficiently. Through the scrum meetings, the time is used accordingly to the project, making the development teams working on a faster pace. Larger projects can be divided in smaller tasks and sprints which makes the project easier to manage.

Like every framework this methodology has some disadvantages. For example, large teams cannot adopt this type of organization because it can get challenging, this is why it is recommended a team of 5 to 9 members. The chances of a project failure are high if the team members are not very committed or cooperative. (Web-7)

CONCLUSION

Given the benefits of Scrum organization, companies manage to organize their teams better and to deliver a complete project. It increases productivity and boosts employee morale. There are different articles and books about Scrum and its benefits and one of the most important is the Scrum Guide which contains the definition of Scrum framework, roles, rules, events that bring this concept together (Schwaber and Sutherland, 2017).

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