

# SCRUM WITH KANBAN HELPS FORMULA STUDENT TEAM AT UNIVERSITY OF APPLIED SCIENCES AND ARTS HILDESHEIM/ HOLZMINDEN/GÖTTINGEN CROSS THE FINISH LINE



Mobility Concepts

August 2021



## CASE STUDY



Blue Flash Mobility Concepts is an organization within the University of Applied Science and Arts Hildesheim/ Holzminden/ Göttingen. They are an extracurricular team at the University that participates in the annual international competition, [Formula Student](#), where students build race cars and race them against time and a number of other mechanical parameters. Students volunteer to be a part of this project and multiple departments within the university participate. Additionally, the students are judged on their ability to build a business using their car, and deliver a business plan.

## Challenge

Every year, a group of students called Blue Flash at University of Applied Sciences and Arts prepare for the Formula Student competition. Due to the annual change in team leadership, Blue Flash had a very hierarchical and rapidly changing organizational structure. Blue Flash consisted of many small teams of 1-4 people, with a total of 35 team members, causing difficulty with communication and cross-team collaboration. Among other things, this manifested itself in the fact that many teams worked by themselves in silos. No one wanted to take responsibility in their team, so the leaders of each team worked 60 hours per week. Kanban was used in part, but primarily at the team - management level. The teams needed a better way of working together in order to build trust and transparency across the teams.

## THE UNIVERSITY

Blue Flash Mobility Concepts is an organization within the University of Applied Science and Arts Hildesheim/ Holzminden/ Göttingen who hold an annual extracurricular team competition.

## Solution

In March 2020, they decided that an agile way of working would be best for them to help solve some of their challenges amongst teams. They held an agile kick-off event hosted by their main sponsor. Following this event, an agile coach participating in the event helped with their transition.

They decided to use Scrum because they wanted to improve cross-team collaboration and empower the teams to self-manage. They felt Scrum was the best way to do this.

They organized into 2 Scrum Teams. Team A consisting of 1 Scrum Master and 13 developers who managed the construction and building of the car, while Team B consisting of 6 Developers and 1 Scrum Master focused on sponsoring, social media and finance. There was a single Product Owner for the Scrum Teams as they considered this a single product.

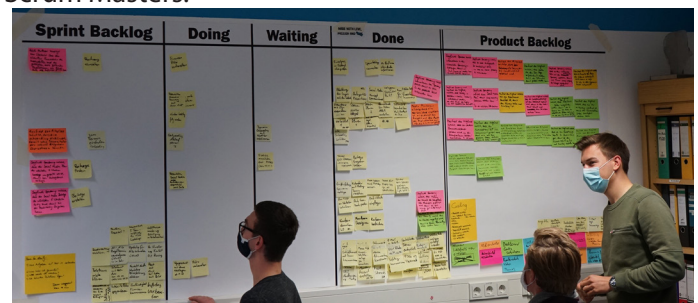
After the kick off, they worked with an agile coach who supported them for 6 months in his spare time and gave several workshops on weekends. This helped them and then team members also earned their Scrum.org Professional Scrum Master I (PSM I) and Professional Scrum Product Owner I (PSPO I) certifications to validate their knowledge.

“The preparation as well as the certification test helped us learn more about Scrum and how to apply it, said Moritz Borchert, Scrum Master. We understood which mistakes we’ve made in the past and which mistakes to avoid in the future.”

In addition to Scrum, they pulled in elements of Kanban to enhance their overall process, incorporating thinking around flow while using Scrum. They used a Kanban board containing Product Backlog Items as well as the Sprint Backlog. They also used elements of Kanban to further improve their Daily Scrum meetings and to visualize upcoming or ongoing problems.

“The use of work-in-progress limits (WIP-Limits) helps us to stop starting and start finishing our tasks,” said Borchert. “These elements paired with Scrum, further improve the focus of our team.”

The teams hit a roadblock when the Covid-19 pandemic began, they had to work remotely for a while, but eventually were able to work together in person again per the rules of the University. Due to the pandemic, they needed to reduce the number of team members involved. Because of their move to using Scrum, they were able to quickly adapt to this change. The focus shifted from many new team members, to team members with needed skills and fitting personality. With fewer team members, more time could be spent on each team member and each could be trained individually. In addition, the team members took on more responsibility which helped the Scrum Masters.



The Scrum Events helped the teams build cross-team collaboration. The Sprint Reviews and Daily Scrums helped with increasing transparency and trust between the 2 Scrum Teams.

“The Sprint Retrospectives have really helped build morale,” said Borchert. “The Daily Scrum gives a great opportunity to remove impediments, and every Retro, we have something we can improve.”

During their Retrospectives the teams are sure to highlight the Scrum Values. They have built enough trust where everyone is comfortable sharing how they feel about the Sprint. If they notice that someone uses one of the values - they highlight it to keep them on track and boost morale.

Half a year after the kick-off, about 50% of the team changed due to the Covid-19 and shifts of priorities. Thus, there was a big difference in the knowledge level about Scrum which had to be compensated by the Scrum Masters and the Scrum Masters needed to train the new team members.

## Results

Prior to Scrum, the teams couldn't self-manage because the team leads were the only experts and had the most knowledge. Now that they have increased transparency and have learned Scrum as a team, the communication and commitment in the team has improved and the knowledge is now more broadly distributed in the team. In addition, the Scrum values provide a more cooperative working atmosphere, where there is more trust in the team. Team members communicate and collaborate more than ever before.

“Since the implementation of Scrum our Teams have shown a lot more motivation and the overall Product Quality has increased, as goals were set together and communicated more clearly,” said Borchert. “As a result, the team works better together and the project has had the opportunity to continue work despite the pandemic. Thanks to Scrum and Kanban, we were one of the very few teams able to build a race car despite Covid-19.”



## About Scrum.org

Scrum.org, the Home of Scrum, was founded by Scrum co-creator Ken Schwaber as a mission-based organization to help people and teams solve complex problems. We do this by enabling people to apply Professional Scrum through hands-on training courses, globally recognized certifications and ongoing learning all based on a common competency model.

Scrum.org supports people wherever they are on their learning journey from beginner to highly experienced practitioner, helping them to grow over time with ongoing learning opportunities and resources. Community members share knowledge and gain new insights from each other leveraging forums, blogs and more.