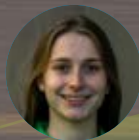


# PART 1 H2FUTURE



**Christina Keysers**  
Team Manager,  
Green Team Twente



**Charlotte Geuß**  
Technical Manager,  
Green Team Twente

This article is the first installment of a two-part series where we delve into the dynamics, challenges, and triumphs of the Green Team Twente. In this instance, we talked to **Christina Keysers (Team Manager)** and **Charlotte Geuß (Technical Manager)** to find out how they are harnessing talent to drive their team to success, what are the biggest lessons learned from previous years, and what they strive for in the future.

**L**ed by a diverse and talented team of students, the Green Team is revolutionizing the automotive industry with hydrogen fuel technology. As a young and multidisciplinary team, they are not only challenging the conventions of automotive engineering, but also navigating the complexities of collaboration, motivation, and innovation in a fast-paced and competitive environment.



### Can you introduce the Green Team Twente and give us a brief overview of your project?

**Charlotte:** Green Team Twente is a student team building a hydrogen race car for the Formula Student competition. Formula Student is a worldwide engineering competition, but currently, we are the only hydrogen-powered team. Currently, 30 students work together to design and build this racing car. By creating a race car that is driven by hydrogen, we hope to contribute to the development of hydrogen in the

transport industry and inspire other industries to make the transition to a greener future.

### How many people are part of the team and how do their skills and backgrounds come together for this project?

**Christina:** The team currently consists of 30 students from various disciplines. Following a specific course of study is not a requirement for obtaining a particular position in the team. The ability to adapt and learn quickly, as well as demonstrating incredible motivation for joining, is. Nevertheless, the diversity of backgrounds offers a broad

range of knowledge that the team can make use of; however, individuals often tend to orient themselves toward the field of study they have chosen.

From mechanical engineers to industrial designers, electrical engineers, creative technologists, mechatronics- or technical medicine students, there is nearly no technical discipline that cannot be found in our team.

### What are some of the biggest challenges your team has faced while working on this project and how you've overcome them?

**Charlotte:** I think one of the biggest challenges in the year is the time pressure: Within ten months getting



a team, starting, doing research, designing, building, and testing the car to be able to race in the end.

We trade time as a resource just as valuable as money or other material resources, so when making a decision we always consider how long something is taken, whether it fits in our planning, and how we can solve it taking up as little time and money as possible. Therefore, we have a strict plan the team has to follow, but the team members are super motivated and driven to work on this project and to reach our goals, so they also like spending some extra time on it if necessary.

**The entire progress, from research to design to construction, to testing, to racing- it all takes place within one year.**

### **How do you manage and distribute tasks and responsibilities within a diverse team?**

**Christina:** We do have a management team, consisting of 5 members: a team manager, a technical manager, a communication manager, and two external and finance managers. This team is generally responsible for overseeing the tasks and processes of the entire team. The team manager serves as the point of contact for the

team in case they face any difficulties. Each technical sub-team has a chief engineer who serves as a connection between the technical team and the technical manager. Technical sub-sub teams are assigned to specific parts of the car. The communication team's responsibilities are divided by the communication manager. The external and finance managers ensure that the project receives sufficient support from external sources, both financially and in terms of knowledge. Such a well-defined structure ensures a clear distribution of tasks and responsibilities across various levels within the team- what makes managing such a diverse team possible.

### **How do you keep your team motivated, especially during setbacks or challenges?**

**Charlotte:** The nature of the project is fast-paced and motivating. The entire progress, from research to design to construction, to testing, to racing- it all takes place within one year. All knowledge obtained during this year from partners, documentation, or advice from the past year is practically applied in the work of our members—a satisfying and motivating aspect, as the acquired knowledge proves valuable and useful at every stage.

Setbacks are natural, and creating a safe environment for all team members is essential to ensure that motivation does not fade throughout the year. Everyone in the team needs to know that they are not alone in the process and that there is a helping hand to reach out to. Constant reminders of the team's goal and creating a feeling of teamwork contribute to maintaining motivation.

The combination of the project's nature with a good focus on team building and a supportive environment seems to be the most effective when you want to maintain motivation in the team.

### **How have the learnings from previous years influenced your approach to this year's car?**

**Christina:** The teams from previous years have been an enormous help to us in achieving our goals. They assist us not only through the documentation they provide but also in their role as an advisory board, offering support for important decisions that need to be made for the team. Drawing from their own experiences, they help us set and achieve realistic goals.

### **In what ways has the Green Team Twente contributed to your personal and professional development?**

**Charlotte:** During the half-year with Green Team Twente, I and all my teammates developed a lot. Since it was, for most of us, the first real experience with a full-time job, there was a very steep learning curve in the beginning. Making big decisions, staying rational in difficult situations, and being able to adapt quickly and be flexible are necessary for such a big, multidisciplinary team with such a fast-forwarding project. Like most members of our team, I became way more comfortable and self-assured about expressing my opinions and making choices. My human-centered skills and understanding of how people work, what they need, and what can influence their manner of working improved a lot as well. All of this was not only formed by the courses we received from partners or the university, which were offered to improve our professional and hard skills but also by just being there and working in such an environment. All these points can also be reflected in the personal aspect of life, I guess we all just matured a lot within the last half year.

## How does your team build on existing knowledge and stay updated on the latest technological advancements?

**Christina:** Our partners are leading hydrogen companies supporting us with knowledge and technology. We can always ask their experts for help. But we of course do most of the research ourselves by reading papers about the subjects and following courses offered by the university, our partners, or external parties.

## What strategies do you use to attract new people and expertise?

**Charlotte:** When searching for new team members, we strive to be known by students. We want them to know who we are and what we do. Sharing our team members' experiences with genuinely interested people often convinces them that a year in a student team like Green Team is one of the most fun ways to gain such valuable and practical experience. Keeping people up to date about the progress during the year is important to spark enthusiasm. To achieve this, our communication team is constantly busy informing the outside world about our progress and promoting Green Team Twente. When the application deadline comes closer interest activities get organized to inform everyone interested with all necessary information. Convincing people that prolonging the student life with a gap year on a student

team is extremely enriching for your professional and personal development, initiative and motivated people get attracted.

## How do you see the future of Green Team Twente?

**Christina:** In the future of Green Team Twente, I see a Formula Student competition with a dedicated hydrogen racing class. This class would include real competitors using hydrogen technology. After the initial years of launching the competition, I see a rise in competitiveness. Currently, each year takes huge steps in car development. However, in a few years, these advancements will shift towards optimization rather than innovation, allowing us to focus on fine-tuning and constructing a very cool racing car. I see us helping several countries participating in the Formula student competition to take the step of setting up a hydrogen class as well. I see us actively engaging with schools, universities, and exhibitions, providing comprehensive education about hydrogen technology and its applications. There are a lot of steps that need to be tackled towards making the world aware of hydrogens' possibilities- in the future of Green Team, I see a group of motivated students who face this challenge.

## Now, about hydrogen...

From mechanical engineers to industrial designers, electrical engineers, creative technologists, mechatronics- or technical medicine students, there is nearly no technical discipline that cannot be found in our team.



Join us in the next edition of InnovatieNU to find out how a team of students at the forefront of innovation is using the power of hydrogen to fuel the future.