

# AMZ News

A NEW BEGINNING



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**alvier** in Formula Student Germany

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### Retrospective

As the pandemic has halted all Formula Student events for more than a year, we were thrilled and eager to get back on the racing track of the most prestigious Formula Student events to show what we worked on for the last two years.

Our electric division started off the competition season promisingly in July with FSN (Netherlands), where we placed 5<sup>th</sup> overall in the electric category, winning 1<sup>st</sup> place in Skidpad and achieving a 2<sup>nd</sup> place in both the Business Plan Presentation and Engineering Design.

We then embarked on FSCH (Switzerland), where we won the Engineering Design event. While the event was constrained to being held online, due to the situation at the time,

we really look forward to participating in their first on-site edition in the coming summer!

The last week of July brought us the first overall podium of the season, with the electric team placing 2<sup>nd</sup> in the overall category at FSA (Austria). In fact, at the Redbull Ring, not only were we able to impress the judges in the static disciplines by winning the Engineering Design event and a podium in the Business Plan Presentation and the Cost and Manufacturing event, but we also successfully finished in 3<sup>rd</sup> place our first Endurance of the season, placing equally in the Efficiency discipline.

In August, it was then time for the driverless team to join the electric one in our last two competitions of the season. At FSEast (Hungary), both cars achieved amazing results. FSEast being *pilatus*

*driverless'* premiere of its competitive season proved to be fruitful, with a brilliant performance in the static disciplines. A podium in the Business Plan Presentation and in the Engineering Design events lead to the 4<sup>th</sup> place overall success. *alvier* instead, our electric car, won the overall competition placing 1<sup>st</sup> in the Autocross, Endurance and Efficiency events and placing 2<sup>nd</sup> in the Engineering Design event.

Our competition season ended with the FSG (Germany) competition. There, *pilatus driverless* proudly received the 3<sup>rd</sup> place overall from this prestigious event. Despite a consistently good performance in the various disciplines, *alvier* did not achieve the overall result we initially aimed for. In fact, our Endurance run unfortunately resulted in a DQ as an unprecedented oil leakage





**pilatus** in Formula Student Germany

© FSG

prevented us from passing rescruti and claiming the Endurance win. Nevertheless, our consistent podiums for both teams in the respective Engineering Design events showed us that the judges really appreciated the innovative ideas and novel concepts we presented.

Recalling this season's success only underlines the extraordinary performances of both teams. Every single team member is proud of their learnings and the constant pushing to get the most out of the experience.

In addition to competitions, with the ease of the pandemic also PR events became possible again in person, which will allow us to transition back from online presentations towards live events.

After a year of exclusively online presence, we were honoured to exhibit our electric car at the fair for industrial automation – SINDEK – on the last few days of August at the BERNEXPO. Featured at the booth of one of our most important sponsors, LEMO, we loved explaining our project to the public and were impressed by the interest visitors brought to us. Shortly after, we took part

in a mock-up race against the Lausanne Racing Team, our Formula Student friends from EPFL, which was meant to present the new tube of the Gubrist Tunnel. Next up was the ELMAR Exposition in Museum of Transport in Lucerne, as well as two events with our Main Sponsor, EKZ. To close the month of November, we present our car at Umweltarena in Spreitenbach, at the occasion of the annual presentation event of Computer Controls, another valued Main Sponsor specialised in electronic equipment.



## The New Team

It is once again the time of the year when we proudly announce the new team. However, this year we are thrilled to merge both the development for a driverless system and the design of a new prototype into one single product, in order to fit the new format of the races.

Throughout the first weeks of September, the new team worked by the side of their respective predecessors in order to gather and build on previous years' lessons learned as well as valuable information. Simultaneously, a number of new ideas and concepts were collected and discussed in the so-called basecamp. Soon it was clear that there will be plenty of innovative and creative ideas in the new season as well.

At the general assembly on October 26<sup>th</sup>, a vote determined the name of the new car. With the first ten cars named after Swiss alpine passes, and the following four bearing the name of a famous Swiss mountain, we are extremely excited and proud to announce that the 15<sup>th</sup> car in AMZ history, and the first merged prototype, will be named *bernina*.

## Road to 2022

With the new team standing and ready to start, in September it was time to determine the timeline and the goals for the season of 2022.

From September until the end of October, all ideas concerning the new car were considered, evaluated and analysed based on their feasibility.

A thorough analysis and evaluation of the performance of *alvier* preceded the presentation of the general concept for *bernina* towards the end of October. From then on, the hardware team embarked onto the design phase, set to last until December.

The software team instead settled in during the second half of October, and it is now in the middle of finalising the choice of sensors to mount and algorithms to implement.

By the end of the year, the planning of this seasons' race car will be finalised, and the 15<sup>th</sup> AMZ car will exist as a detailed virtual model, before moving onto the manufacturing phase.

With a lot of dedication, our passion and hard work, we are sure that *bernina* will belong to the strongest contenders in the events of the coming summer.

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