Due to the pandemic situation we are currently experiencing, we received the final decision by Motostudent to postpone the final event of the 2019-2020 edition. Initially, it would take place in October of this year, but it was delayed until the Spring of 2021, on a date yet to be announced. Although these aren’t the news we would hope, the team remains excited and motivated to complete the prototype! The project is still depend on strict deadlines to be ready on time, and the various reports intended for delivery at MS1 have likewise been drawn up with a lot of work by all members in all departments.

The virus also didn’t stop us from investing in the team’s future! With the beginning of this semester, a new recruitment phase was opened, the start of which, due to the new distance learning regime and preventive measures taken by Técnico, had been postponed. Even so, we decided to carry out recruitment also from a distance.

Although different from the usual, these weeks have been going well, with recruits having finished the first two phases of recruitment. Moreover, team-building activities were carried out so that they would have the opportunity to get to know each other better, something that is more difficult in this video call regime. Entering a new project is already challenging in itself, and the unique circumstances bring a new obstacle to overcome! Will they keep up with the challenge? We hope so!
One of the main tasks of the aerodynamics team during the confinement period was the conclusion of its parts. For that, we carried out several studies of Computational Fluid Dynamics (CFD) to confirm not only the aerodynamic stability of the bike, but also to guarantee the cooling of the batteries, engine and controller.

With the beginning of quarantine, it was necessary to postpone the manufacture of the pieces, so, the aerodynamics team took the opportunity to continue their optimization. Thus, transient simulations began to be carried out, which allow studying in more detail all aspects of the flow, especially the rotation of the wheels.

After completing the seat and deposit CAD, our aerodynamics team is now studying the best method of fixing the fairing to the prototype. This is a very important aspect, since it is essential that it can be assembled and disassembled in the shortest possible time, without adding too much weight to the motorcycle.
Structures

The last few months, our Structures team have been working together with the rest of the areas.

Regarding Electronics, the structural supports of several elements in the area, namely the Dashboard, were planned out and decided. As for Propulsion, the battery box prototype was elaborated, which will now be tested. In addition, the machining of the frame and swing arm is complete and we will soon be able to proceed with welding. The rack and chain-pinion-rack system were also designed.

The Structures team will now focus on the production of some prototype pieces, such as foot rails, shafts, rack, among others.
In terms of Telemetry, we are currently designing the plate to ensure that possible human errors that arise in the future do not compromise its operation. As far as the Dashboard is concerned, all tests performed went well, and we are already completing the final board.

Finally, regarding the BMS, the team is still in the welding phase, to be able to finalize the motorcycle’s electrical scheme. After this task is completed, the final testing phase follows to guarantee the quality of the entire electronic system, which should not be neglected! Step by step, we are getting closer and closer to seeing the final result!

In terms of this area, the team has been, in recent months, welding and testing the different plates. As the work was done away from the workshop, these tasks proved to be more challenging than usual.
In these three months that have passed, in Propulsion, we took the extra time to finalize and review all the reports executed so far. This allowed us to make sure that all the work already done was well documented, and that future team members would easily understand it.

In terms of batteries, working together with the Structures team, we were finalizing the design of the battery box and deciding which connectors to use in the wiring.

Finally, regarding the controller, all of our research has been completed, and we already have all the equipment in our hands. When it arrived, it was time to start working on the drivetrain. Now we are focused on the engine integration process, provided by the competition, with the controller.
In the last few months, we have been very busy completing the final sections of the Business Plan, which is vital for achieving a good ranking in MotoStudent and which mostly tests the team’s management skills.

One of these sections was “Operations and Logistics”, where we tried to answer questions related to the team’s displacement to professional competitions, which parts of the prototypes to be built by the team or purchased, among many others. Another completed section was the “Marketing Plan”, which addresses various topics from the specification of the product we have to offer to our customers, to our advertising plan.

These are now crucial sections, such as the entire Financial Plan, to ensure that the formation of a professional racing team can be found to be economically sustainable.
After several weeks in the uncertainty of the beginning of the National Speed Championship 2020, on May 18th the start of the championship was announced, whose first race would take place at Autodromo do Estoril from June 5th to 7th. With a great effort and dedication of the team specialized for this Championship, it was then possible to have the motorbike ready to compete. In a complicated situation like the one we are facing, which limits access to both workplace and resources, it is worth highlighting the help that our team received from Mago, who gave us his workshop to work and helped us in the preparation of TLM01i.

Since the 2019 edition of the Championship, some changes have been made to TLM01i in order to improve its performance on the track. The big news this year is, without a doubt, the new engine, provided by Motos VR and Yamaha Motor Portugal. With a new engine, it was also necessary to make some changes to the bike in order to adapt to it, namely, a new shape for the bike tank and new racks and sprockets, made now with a smaller pitch and sponsored by RMC Engrenagens. Two custom radiators were also made for the new engine, with the support of Sousa dos Radiadores.
TLMoto was then present in the first round of the National Speed Championship 2020, at Autodromo do Estoril. With us we had the pilot who will accompany us throughout this season, Bruno Salreta, a young driver of 15 years who, although young, already has several participations in national championships, namely the first place in the National Supermoto Championship 2019, in Minimotard class X. In this first race, not everything went as expected. Transmission problems stopped us from completing the qualifyings and achieving the minimum time limit per lap imposed by the regulations of the Portuguese Motorcycle Federation, costing us the qualification for the race of this round.

After a lot of work, and full of motivation, we arrived at Portimão, on June 19th, ready for another race. On the first day of this second round, we managed to lower our time from 2:22 to 2:15, with the free practices and qualifyings, which allowed us to qualify for Sunday’s race. This 7 second time decrease in just one day was the result of a lot of work developed with our pilot, Bruno Salreta, who has evolved his riding, never neglecting the reliability of the bike. On the second day, we were able to maintain qualification and participate in the final race, where we reached third place, a result that left us very satisfied.
FOR THE NEXT RACES WE WILL CONTINUE THE DEVELOPMENT OF OUR PROTOTYPE, WITH THE AIM OF CONTINUING TO IMPROVE FROM RACE TO RACE. ALL THE TEAM WORK AND RESULTS OBTAINED WOULD NOT BE POSSIBLE WITHOUT THE SUPPORT OF THE COMPANIES THAT WE HAVE AS PARTNERS IN THIS EDITION OF THE CHAMPIONSHIP. FOR THAT, WE THANK THEM A LOT.
For this edition of the National Speed Championship, we are proud to present TLMoto’s new partnership with Motos VR and Yamaha Motor Portugal. These two highly important companies in the world of motorcycling gave our team a Yamaha YZ250-F motorcycle, of which we will use the engine on TLM01i for CNV 2020. This engine has already won several national championships of Premoto3 and, therefore, we believe it will provide a great development in the performance of the bike and, consequently, a better classification in the races.

We cannot forget to thank Motos VR and Yamaha Motor Portugal for the great support they provide, and a special thanks to Vítor Cândido, one of the owners of Motos VR, not only for having provided this partnership, but mainly for everything he has made for the development of motorcycling in Portugal. In addition to all the support it has provided to numerous riders, both from the CNV and other motocross races, enduro, among others, it also organizes, together with Yamaha Motor Portugal, the Yamaha Trophy, an All-Terrain competition that started in 2004 and joins every year more than 200 pilots from all age groups.

It is partnerships like these that allow our project to grow every season and allow us to develop our prototypes more and more!
DO YOU WANT TO KNOW SOME MORE?
VISIT OUR SOCIAL NETWORKS AND GET IN TOUCH WITH OUR STORY!

tlmoto.tecnico.ulisboa  TL.MotoStudent  @tlmotostudent