NEWSLETTER N°7

MARCH 2025

ELECTRICAL SYSTEM OPERATIONS

TEAM'S ACTIVITIES

DRIVERS SELECTION

QUIZZES AND COMPETITIONS

EUSS MOTORSPORT

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2024-2025 SEASON

COVER LETTER

We continue working and refining every aspect of our car. Currently, we are finalizing the **designs and starting the manufacturing** of the EM-05.

The effort and dedication we are putting in is starting to be noticed and that fills us with pride. Not only are we making progress in design and production, but we are also celebrating **the great results obtained in the quizzes** conducted last February.

At the same time, over the past few months, we have carried out the **selection process for our team's drivers**, details of which we will share below.

On this occasion, we want to introduce you to the **Electrical System** department and the **Operations** department.

All this progress would not be possible without the support of all our **Sponsors**, to whom we are deeply grateful. We are very proud that so many people are making this project a reality, a project driven by the enthusiasm and passion of a group of young individuals with the unconditional support of our sponsors.

DRIVERS SELECTION PROCESS

During February, the selection of our team's drivers took place. Being a driver is not an easy nor a safe task, so we must ensure their driving skills and technical knowledge, both in general and specifically about our car.

We have divided the selection into 4 phases. A score is obtained from each of these phases which we will later weight to obtain the final grade for each participant.

1. Theoretical Exam
2. Karting
3. Egress
4. Driver-Race communication

Theoretical Exam

Every year, Formula Student Germany publishes regulations that must all be met in order to participate. Our pilots are required to pass a theoretical exam on these regulations.

Our team attaches great importance to the phase where the theroretical exam is held, since many of the rules imposed by the competition are crucial for the pilot and other members of the team safety.

Participants must obtain a minimum score of 7.5/10 in the theoretical exam.

Karting

After ensuring that the drivers have the basic safety fundamentals, we move on to the phase where their driving skills are assessed.

For this reason, those who have passed the theoretical exam go to the karting track to compete, which helps us determine who the fastest drivers are.

DRIVERS SELECTION PROCESS

Egress

Egress is one of the tests that all pilots have to do in competitions. In this test you must get out of the car in a time equal to or less than 5 seconds. The purpose of the test is for pilots to know how to quickly get out of the vehicle in dangerous situations.

Driver-Race communication

The Race Engineer is the figure that measures the performance of the car and is in charge of the communication with the pilot. To obtain data, it is vital that the feedback obtained during tests and trials is as objective as possible. For this reason we encourage our drivers to acquire effective communication skills in technical factors such as the dynamic behavior of the car. To measure this ability we decided to do a test in the simulator where the pilots had to go through different circuits with different set-ups and give feedback at the end.

FINAL SELECTION

1st driver
Lluís Marqués

2nd driver
Marc Morillo

3rd driver
Rubén Gris

4th driver
Martí Xuclà

Reserve
Sabrina Barrios

A LOOK INTO
ELECTRICAL SYSTEM

WHAT IS IT?

Electrical System is responsible for the design, manufacture, and/or assembly of electrical and electronic components, both high and low voltage, that allow the car to move safely.

WIRING

Standardize the car's wiring to facilitate understanding and streamline the assembly process.

ELECTRICAL SAFETY

Train all team members in high-voltage electrical safety.

IMPROVE PCB DESIGNS

Improve all the vehicle's printed circuit board designs to make them more compact and reliable.

ACTUAL MEMBERS


MARTÍ XUCLÀ


ARNAU ARTIGAS


ANDREU BALAGUER


ADRIÀ BALAGUER

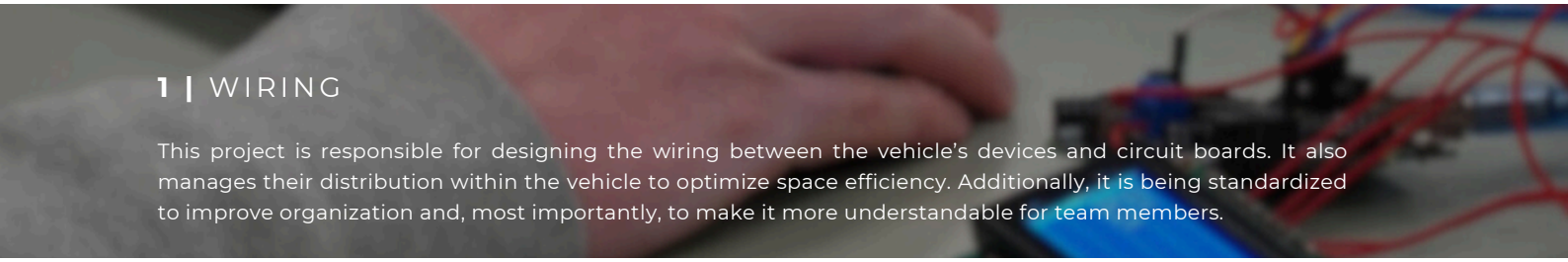

ORIOL CASANOVA


HECTOR JIMÉNEZ


JAN LEÓN

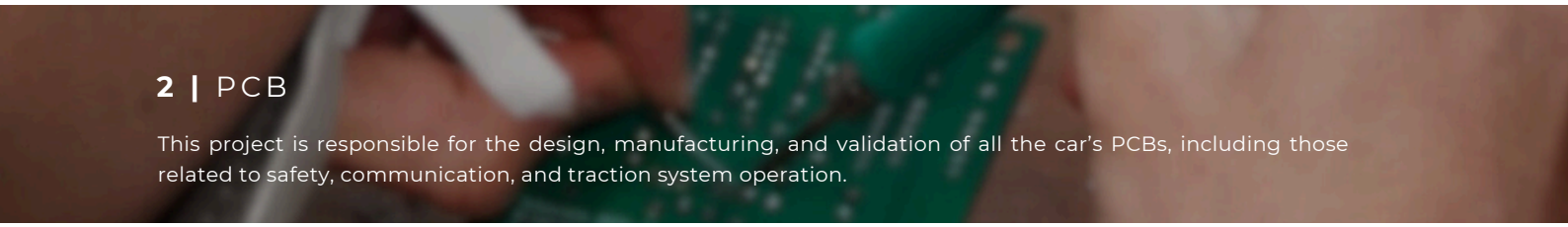

JORDI PIRLA


GUILLEM VÍLCHEZ



1 | WIRING

This project is responsible for designing the wiring between the vehicle's devices and circuit boards. It also manages their distribution within the vehicle to optimize space efficiency. Additionally, it is being standardized to improve organization and, most importantly, to make it more understandable for team members.

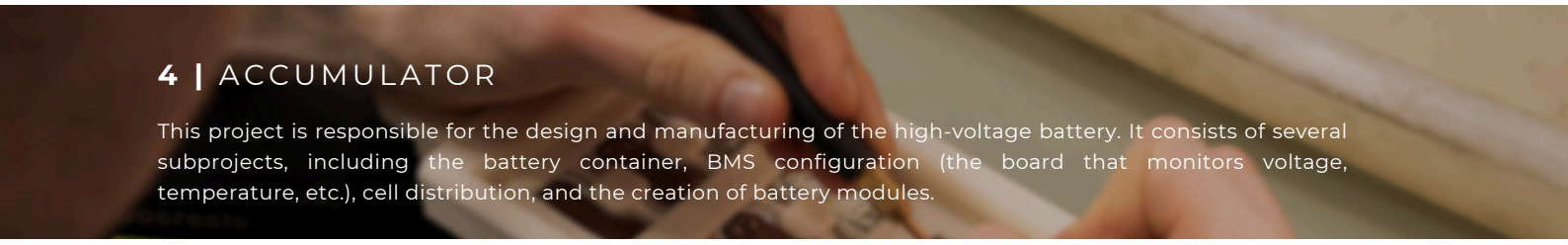


2 | PCB

This project is responsible for the design, manufacturing, and validation of all the car's PCBs, including those related to safety, communication, and traction system operation.

3 | POWER TRAIN

This project focuses on configuring the inverter to ensure that the motor operates as efficiently as possible based on the battery we use. Additionally, it explores ways to improve driving efficiency.



4 | ACCUMULATOR

This project is responsible for the design and manufacturing of the high-voltage battery. It consists of several subprojects, including the battery container, BMS configuration (the board that monitors voltage, temperature, etc.), cell distribution, and the creation of battery modules.

A LOOK INTO
OPERACIONES

WHAT IS IT?

Operations is a department whose mission is to analyze, measure and optimize the production and general processes of the team with the main objective of improving performance through management.

KEY PERFORMANCE INDICATORS

Parametrize the team's progress to be able to take measures before they happen, as well as see patterns.

TRANSFER OF KNOWLEDGE

Preparation of material and training, avoiding the loss of knowledge with generational changes.

STANDARDIZATION OF PROCESSES

Unification of procedures and operations to create a work model and have quality and efficiency.

ACTUAL MEMBERS

SABRINA BARRIOS

GUILLEM CASTELLNOU

ORIOL CHICHARRO

ARNAU VIÑAS

1 | COST AND MANUFACTURING

It consists of evaluating the economic viability of the project and the team's ability to develop an efficient and profitable vehicle. A detailed analysis of the costs involved in the manufacture of the single-seater must be carried out, including materials, labor, components and production processes, in addition to presenting an efficient and effective manufacturing approach.

2 | RACE ENGINEERING

It is responsible for optimizing the track performance of the pilot-single-seater combination, ensuring greater efficiency in every aspect of performance. This involves the analysis and adjustment of components, the communication between pilot and engineer and the implementation of technologies.

3 | TEST LOGISTICS AND COMPETITIONS

It consists in the planning and organization of all the material, personnel and processes necessary to guarantee the correct development of test events and competitions. This includes the logistics, maintenance and tuning of the equipment ensuring that each element is ready and working optimally at all times.

4 | DOCUMENTATION STANDARDIZATION

Establish a clear set of rules and guidelines for document preparation and presentation, ensuring uniformity in their structure. Improving consistency and facilitating user understanding by ensuring that each document meets defined standards and is accessible to all stakeholders.

5 | INTERNAL MANAGEMENT

It is the internal management of an organization and encompasses processes such as strategic planning, human talent management, and financial control. Its objective is to achieve efficiency and meet established objectives. It involves the appropriate allocation of resources, establishing organizational structures, monitoring performance, and seeking continuous improvement.

6 | RIGHT HAND

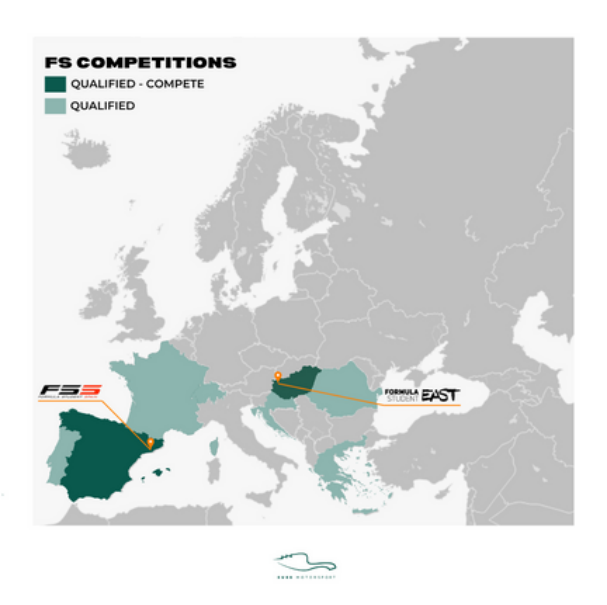
The *Right Hand* program consists of training and selecting future coordinators for each area. The project involves assigning tasks to each member to test their autonomy, proactivity, organization, and ability to work on a project led by them and meet established deadlines. The program also aims to raise awareness among members of each area about the importance of the lead.

THE CHALLENGES AND COMPETITIONS AHEAD OF US

This year, after months of work, we have managed to qualify for several Formula Student competitions across Europe!

Our team has passed the rigorous selection quizzes and secured spots in **Portugal, Spain, France, Switzerland, Croatia (Balkans), Romania, Greece, and Hungary**.

However, due to logistical and budgetary reasons, we will ultimately compete in Formula Student Spain (FSS) and Formula Student East (FSEast), two of the most demanding competitions on the calendar.



THE EFFORT BEHIND IT ALL

Entering a Formula Student competition is not just about having a good car; it's also about passing the qualifying quizzes. Our team takes this phase very seriously, which is why we prepare weeks in advance.

From the coordination team, members are asked to have forms, software, templates, and spreadsheets ready to solve the tests as efficiently as possible. But preparation doesn't stop there. In the days leading up to the event, we create a training schedule with quizzes from previous years, simulating real conditions to improve the speed and accuracy of our responses.

We also work on the resolution strategy, identifying who handles each type of question, optimizing logistics to avoid time loss, and establishing protocols to manage situations with differing opinions. All this effort has been key to securing a place in the competitions.

COMPETITIONS

FORMULA STUDENT EAST 2025

ZALAEGERSZEG HUNGARY

After days of debate to decide which competition to attend, we chose Hungary, as it is one of the most prestigious competitions in the Formula Student world.

For the first time in the team's history, we will compete at the Zalaegerszeg circuit. This year, it will take place from **July 28 to August 2.**

FORMULA STUDENT SPAIN 2025

BARCELONA CATALONIA

On the other hand, we have also chosen to participate in the competition held in our home country, FSS (Formula Student Spain), as it offers great opportunities to build strong connections with the teams closest to us and share ideas, solutions, and projects. We are proud to return this year.

This year, it will take place from **August 4 to August 10.**

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