prototyping the prototype

Building a racing car, a childhood dream of many.

Thanks to Vault Engineering's expertise and network, this dream is within reach.

“Imagine yourself driving a 60’s racecar built with today’s technology.”

Join us and be a part of this journey.

Laurent Bohez

Creating a new generation of classic motorsport,

by

Building high performance racing cars with an iconic shape.

Vault Engineering

Where your project is safe

Your partner for mechanical engineering

We take care of projects that require technical support. This both for prototypes and the production of the product. Mainly focused on mechanical and electromechanical aspects.

Our mission:

"The flawless translation of a concept into a finished design."

This is reflected in engineering projects and projects in the racing world.

www.vault.engineering

VAULT
ENGINEERING
Where your project is safe

“The dream became bigger, much bigger,
to build a car, that doesn’t slow in the curves, that
flies without leaving the ground.”

Enzo Ferrari

Prototyping the prototype

Cars designed in the 1960s are missing a lot of factors that influence driving performance. The geometry of the original chassis is pushed aside and replaced by a 'from the ground up' re-engineered chassis.

“Racing is the constant search for the weakest link”

The Marshal racing models are absolutely built to race! Not a replica to cruise to the sea on a Sunday, but made to defy the tarmac of Le Mans, Spa Francorchamps and Monza as it should be.

The goal has been set to provide people with a big heart for motorsport an opportunity to get behind the wheel of a new high performance racing car, which has the looks of an iconic model that competed in the 60's and 70's in the 24H of Le Mans.

The new generation of classic motorsport is nearby...

“Auto racing began 5 minutes after
the second car was build”

Henry Ford

Why 24H of Lemans?

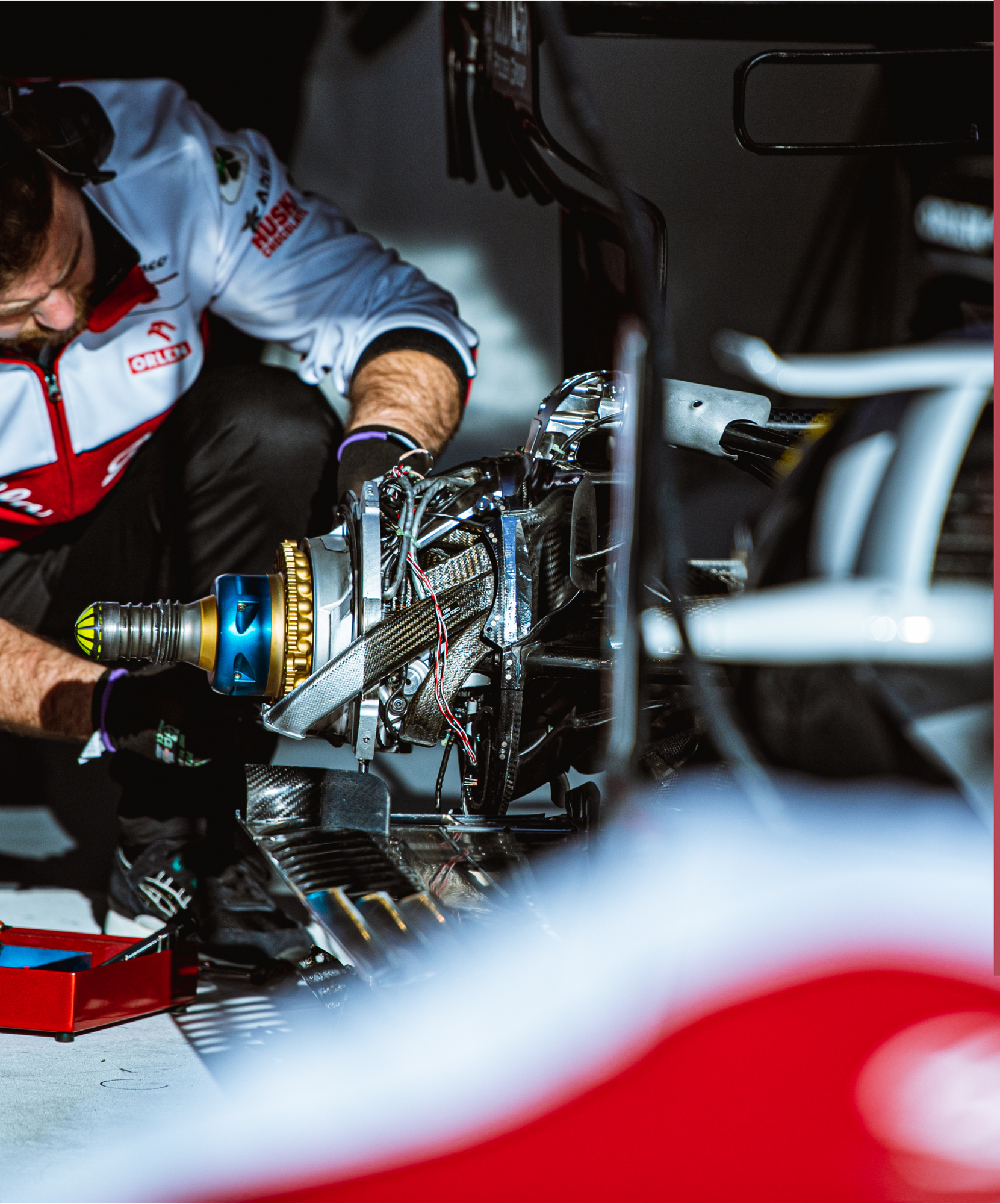
Big brands competed for the title of "winner of the 24H of Lemans". As a car manufacturer, this was the way to prove your technical ability by taking everything out of the closet.

For the car manufacturer this title was an important boost for the sales of their new cars in the showroom. The racing cars (mostly prototypes as well) were considered to be the ultimate version of the latest models.

For some people, the outcome of the race was a basis for deciding which car and certainly of which make they were going to buy. It was literally a market battle on the track.

That is why this race has become so legendary.

"Experience the 24H of Lemans in a way that allows you to see through the eyes of a pilot who competed in one of the most challenging and popular motorsports of the time."



Under our own brand "Marshal", high end racing cars are developed in Belgium into 3 variants:

A high end model:
with the focus on ultimate performance (In a limited edition of 24 pieces).

An entry level model
with similar characteristics as the high end model but with compromises between performance, cost price and maintenance friendliness.

A street legal model
depending on the country of origin.

The view from both inside and outside is replicated as precisely as possible to its original model. By using modern techniques and applying the know-how we have at our disposal today,

It will be very discreet and the details will show that the technological innovations (as well as FIA guidelines, LMP1, LMP2,... directives) are integrated.

The intention is to bring several models on the market. All with the same philosophy. "Older icons equipped with modern techniques."

In order to incorporate contemporary technology even further into the design, as many recyclable materials as possible will be used. The range of power sources is extensive and includes both internal combustion engines and electric motors. A hybrid version glues both technologies together.

The intention is to find a solution to make these cars run on alternative fuels as well. This keeps motorsport loved by enthusiasts who also care about the environment.

LMP4

Italian beauty combined with an tremendous passion for racing results in a ruling hand dominating the racing world.

330 P4 History

The P3 won the 1000 km Monza in 1966, and the P4 won the same race in 1967. Two P4s, and one 412 P (customer version) crossed the finish line together in the 1967 24 Hours of Daytona, for a photo finish to counter the competition's photo of the GT40 Mk.II crossing the finish line together First, Second, and Third at the 1966 24 Hours of Le Mans.

Versions

- Entry level model
- High end model
- Street legal model

LMP40

Despite the fact that America is mainly famous for NASCAR, the real American muscles also come into their rightful place in the world of endurance racing.

GT40 MKIV History

The GT40 is a sports car that won the Le Mans 24 Hours four times in a row, from 1966 to 1969. The car was built to win long-distance races

The GT40 was named after the Gran Turismo category for which the car was intended. The requirement in this category was a maximum height of 40 inches.

Versions

- Entry level model
- High end model
- Street legal model

Models in the pipeline

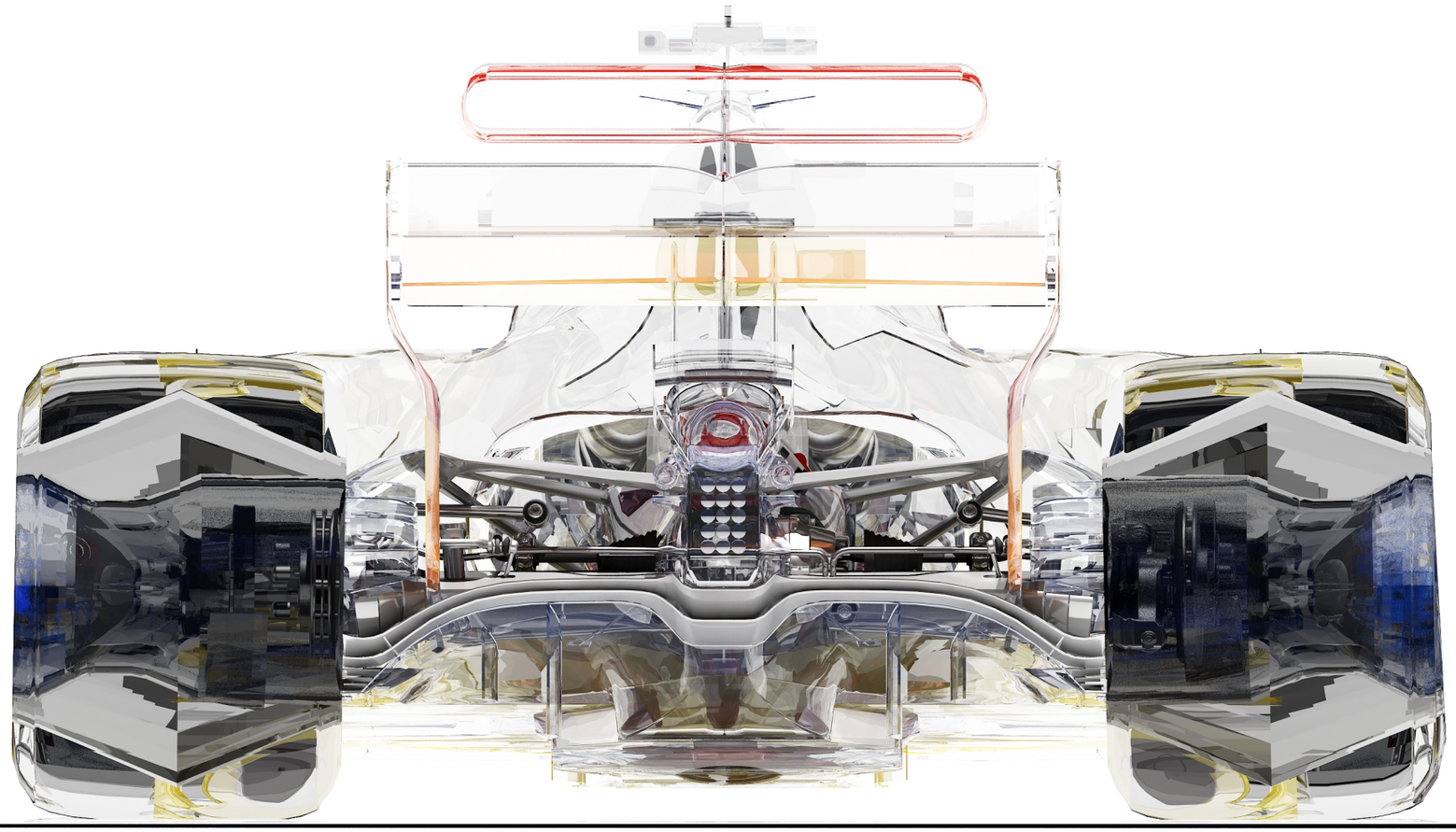
907 LH

The 907 was introduced at the 1967 24 Hours of Le Mans. The position of the driver was moved from the traditional left (as in German road cars) to the right as this gives advantages on the predominant clockwise race tracks.

910

The Porsche 910, also known as Carrera 10, was a racing car based on the 906. There are 15 made in 1966 and 1967. It was only raced by the factory for a year but in that year the 910 was very successful, especially on the curved circuits. At the 1000 KM Nürburgring race the 910's were also very successful, another 1-2-3 victory.

"The greatest satisfaction is developing racing cars that have all been iconic on the Lemans 24H circuit with contemporary technology," says Laurent Bohez, inspirer of Marshal.



Technology

The technology behind these cars is derived from nowadays endurance racing, better known as LMP (Le Mans Prototype class).

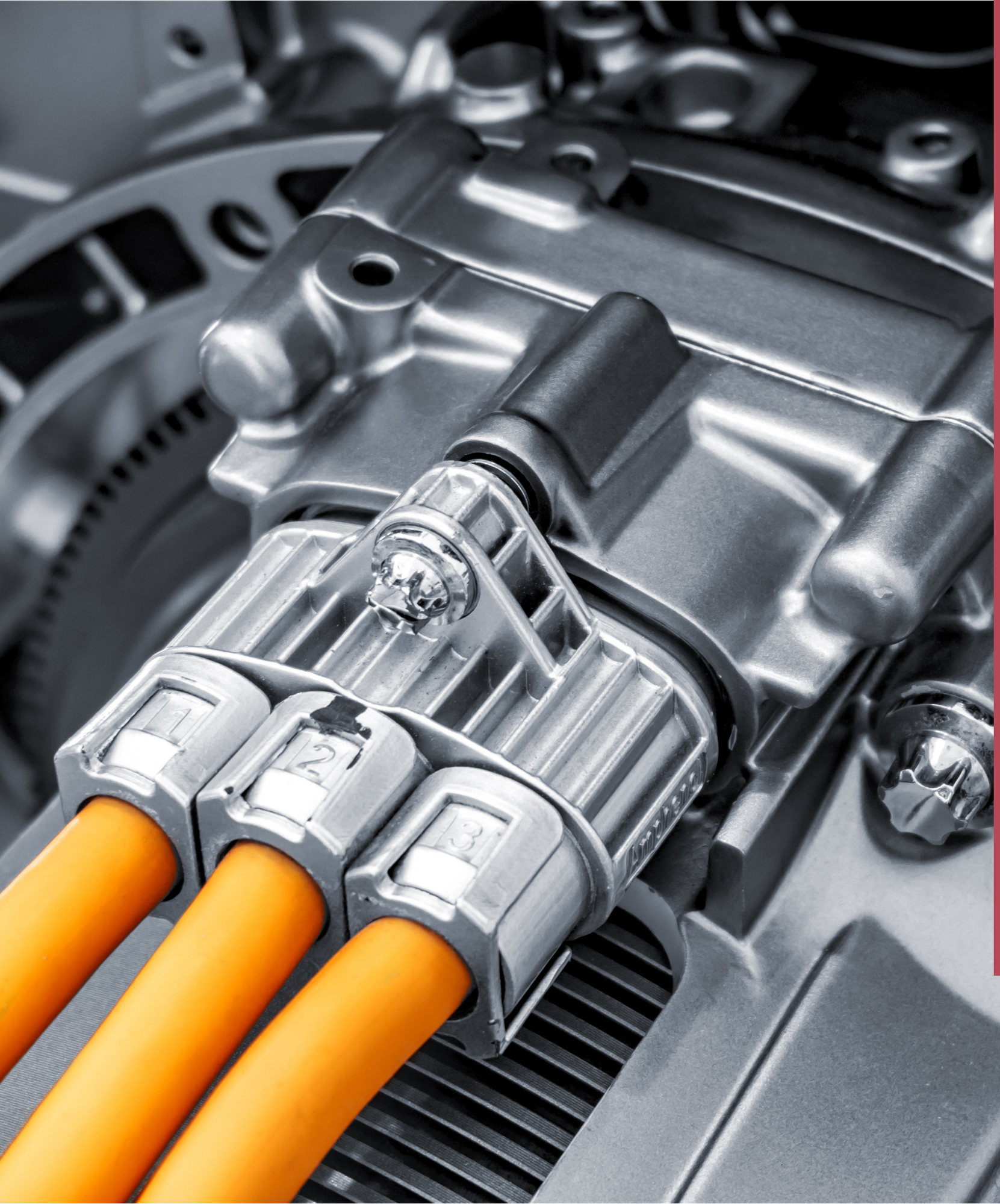
In this way, each aspect is approached separately with the support of different specialists who are master of their field.

Being:

- Aerodynamics
- Suspension geometry
- Chassis construction
- Power unit
- Power transmission
- Braking system

Additional revolutionary techniques:

- Generative design
- Carbon/Kevlar 3D printing
- Low emission fuel systems



Electric version

An electric version will be developed separately.

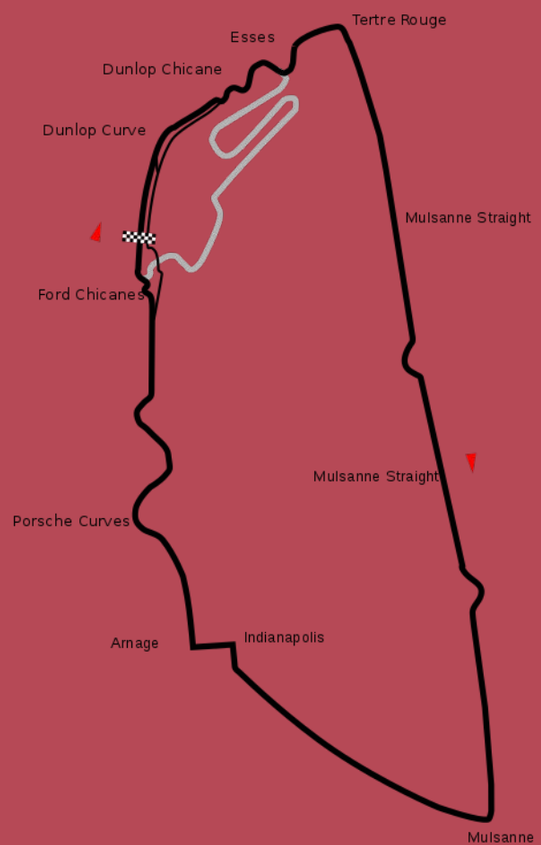
Complete the mechanical system is the equivalent to the combustion engine version.
This implies: the chassis, suspension and bodywork.

The aim is to match the weight of the internal combustion engine, transmission and auxiliary equipment with the electrical components.

As a result, performance could be further improved.

The real racing experience

As soon as the Marshall assortment is partly or completely finished, a series of trackdays will be organized with these different models under like-minded people on the real circuit of Lemans.



01

Fase 1

Development using simulation and FEA calculations

Integration of transmission and power unit with supplier consultation.

The creation of a digital twin model.

02

Fase 2

Building different prototypes.

Adjustment and intensive testing of prototype.

03

Fase 3

Market research together with participation in various events and fairs.

04

Fase 4

Preparing the "go to market".

Partners

- **Voxdale:**
  Expert in airflow, thermal conduction and aerodynamics

- **Frank Design:**
  The importance of design becomes clear in their work.

- **Berte engineering:**
  Because of the experience in space, extreme conditions and complex concept designs, we work together on a regular basis.

- **Cadac:**
  Our solid software supplier with people who have quite a lot of experience in developing racing cars.

- **Team members:**
  Including F1 suspension engineers who have earned their stripes at SAUBER. And experts in the field of simulation and FEA calculations with experience on chassis design.

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Laurent Bohez

Boekzitting 10 · 9600 Ronse · info@vault-engineering · 0475 77 41 11