

AERO-MAPPING: UNDERSTANDING YOUR RACE CAR TO CUT LAP TIMES

Tuning the setup of the car to the circuit layout & driver style is crucial to winning races. With little time to test before the race and time pressure to change set up during the race, it's essential to have a good understanding of how the car works. An aero map will provide you with the aerodynamic performance parameters (like lift, drag and aero balance) for different setups of the car (like ride height, wing angle, ...). If the required CAD model is not available, a 3D scan of the physical product will do the trick: this method can provide a result accuracy below 0.5 mm.

Mapeex and AirShaper formed a strategic partnership to bring a one-stop **aero analysis package** for racing teams: **High-quality 3D scan, complete 3D model & tailored aerodynamic analysis** – all this at an attractive price: Thanks to Mapeex' profound experience in Motorsports, which allows highly efficient scanning and post-treatment services, and AirShaper's unique ability to work with open-surface 3D models and automated simulation platform & pricing per simulation.

STEP 1 – SCAN & 3D MODEL:



The physical car: Mapeex' Queron

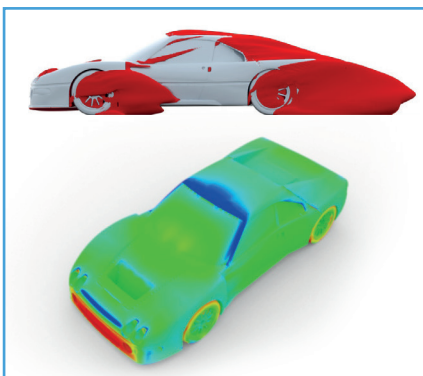
In the post treatment process, engineers specialised in this task finish the CAD construction of the 3D model

The scanning leads to a mesh (stl file)

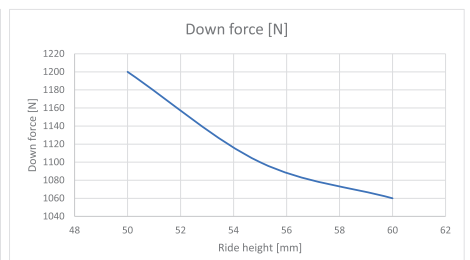
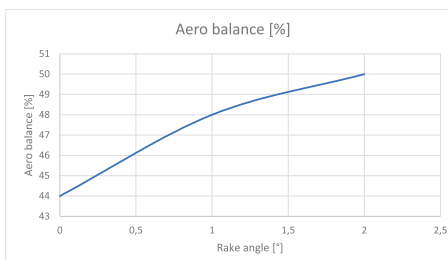


The result: Virtual 3D Model to use with AirShapers online Aerodynamic Analysis

STEP 2 – AERODYNAMIC ANALYSIS



Get aerodynamic insights of your car



Build aeromaps for fast set-up of the car prior to & during the race

3D SCANNING BY MAPEEX

At Mapeex, our qualified Motorsport engineers are specialised in solving challenged, complex tasks, wherever expert's knowledge is required. With expertise acquired working with both the best suppliers and Top-Teams, Mapeex has been for years the invaluable interface between automotive and racing organisations and specialist supplier networks. With 3D scanning, Mapeex will create a virtual 3D image of a physical model which can be used with [AirShapers online Aero analysis](#). The scanning and post-treatment process is performed by trained engineers and will take between two to three days for scanning and up to two weeks for the CAD model creation.

For more information on the scanning process, visit www.mapeex.com/portfolio/3d-scanningreverse-engineering/

WHAT IS AIRSHAPER?

AirShaper is an award-winning on-line cloud solution to analyse & optimise the aerodynamics of race cars. We are active in motorsport – running a simulation platform to improve downforce, aero stability, and so on. [See our race car page](#).

AIRSHAPER OFFERING:

Useful insights into the relative trends for the aero maps and accurate absolute values for use in lap time simulation tools.

ACTIVITY	DESCRIPTION
Aerodynamic Simulations	CFD (Computational Fluid Dynamics) to analyse the aerodynamics of the car for different set-up and scenarios (front & rear ride height, rear wing angle, roll angle...).
Aero-maps	Mapping the correlation between the aerodynamic results parameters (front & rear downforce, aero balance...) and the set-up of the car. The result is a set of graphs & data that can be used for fast set-up of the car prior to & during the race.

YOUR BENEFITS:



One-stop for all services:

3D scan, 3D modelling and full aerodynamics analysis with aeromap;



Cost Savings:

The seamless integration of complementary services guarantees quality at a low cost.



Flexibility:

Scanning facilities available in the UK & Germany. It's also possible to scan at the clients location*;

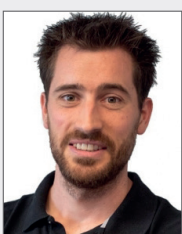


Tailored offering: the Pay-per-Use pricing of AirShaper allows you to define your approach for aerodynamic analysis or building aeromaps;

* travel and logistic cost will apply
© stockadobe.com/jivdesign/NicoElNino



CONTACT US



Wouter Remmerie

Founder, CEO

wouter@airshaper.com

+32 486 89 87 86



Bhushan Rajput

Bus. Dev. Manager

bhushan@airshaper.com

+32 490 65 83 29



Jocelyn Litra

Director

jlitra@mapeex.com

+44 7584 22 95 42