



THE CHALLENGE



PERRINN wanted to improve the aerodynamics and check the safety of their racing car.

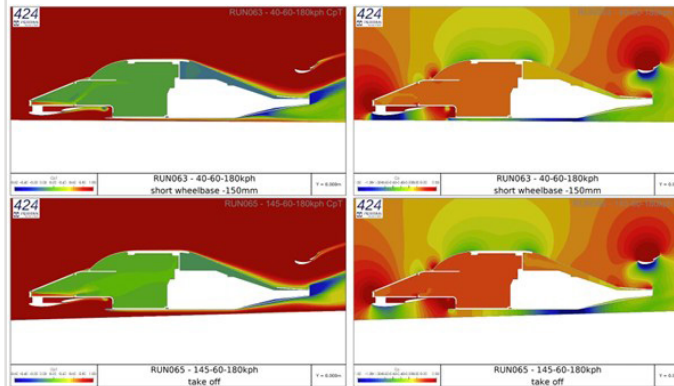
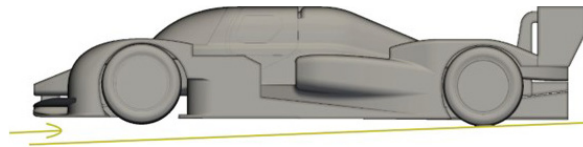
“ Using CFD simulations rather than real-world testing allowed PERRINN to **analyse many more designs**. As well as being able to run simulations, make alterations to the design, then run further tests, without making any prototypes. **Saving huge amounts of time and money.** ”

Nico Perrin
PERRINN 424 Founder

PERRINN are a team of engineers, software developers and investors from around the world, with the goal of creating the fastest electric car in the world using only open source designs.

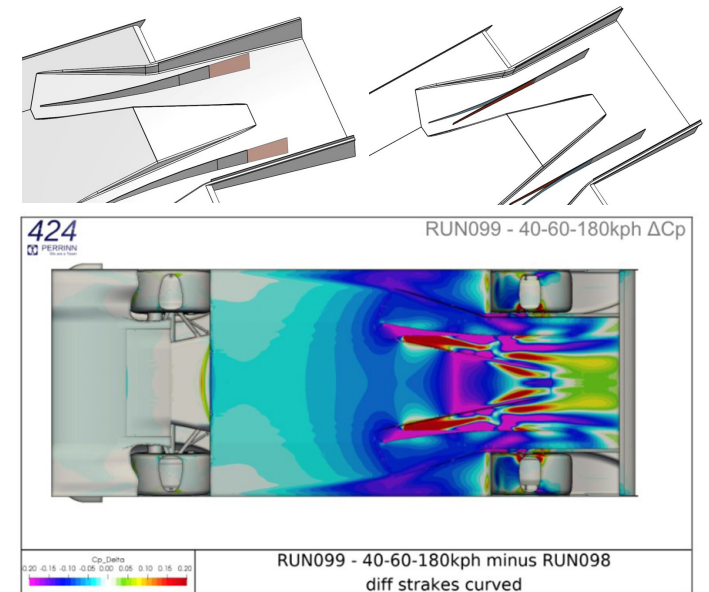
Without access to a wind tunnel to test their racing car PERRINN decided to use CFD simulation, choosing bramble CFD due to its Open Source code.

BRAMBLE SOLUTION



First off, bramble ran a special CFD analysis to assess the take-off attitude of the car, (with front wheels off the ground scenario). After that PERRINN focussed on improving the aerodynamics, completing numerous runs that resulted in the design and launch of a new diffuser strake geometries that were curved.

VALUE REALISED



The results from the first CFD tests showed that the car wouldn't flip as aggressively in reality and following on from the design changes the second run of results showed a 5% gain in aerodynamic efficiency. This does mean other sections may need to be changed or altered but it's all about compromise.