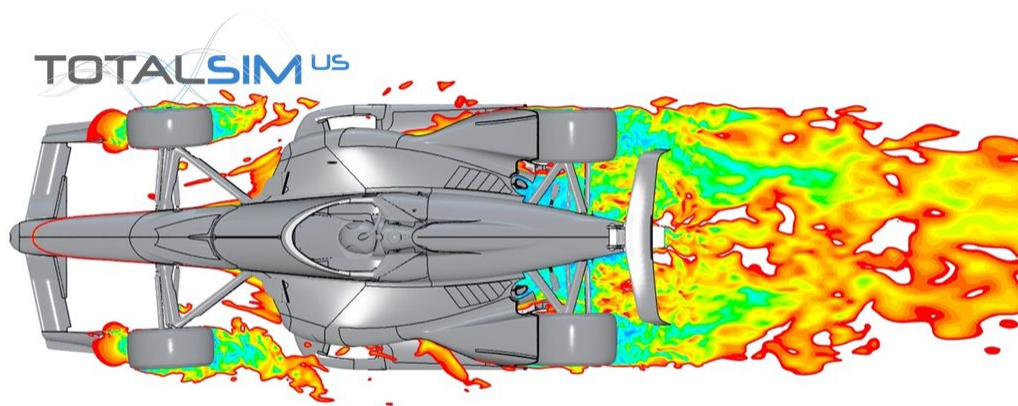


### CFD Simulation Continues to Make Advances in the World of IndyCar

Recently, Ray was interviewed by Racecar Engineering Magazine on the ways [CFD](#) has assisted IndyCar in improving the engineering process from a cost, timing and quality standpoint.



By embracing simulation, engineers can understand the performance sensitivities of the car on any particular track, and direct engineering efforts accordingly.

Ray was able to give insight on how TotalSim assisted IndyCar in the past by using CFD, and physical testing, to better understand car development.

You can click [here](#) to access the full article.

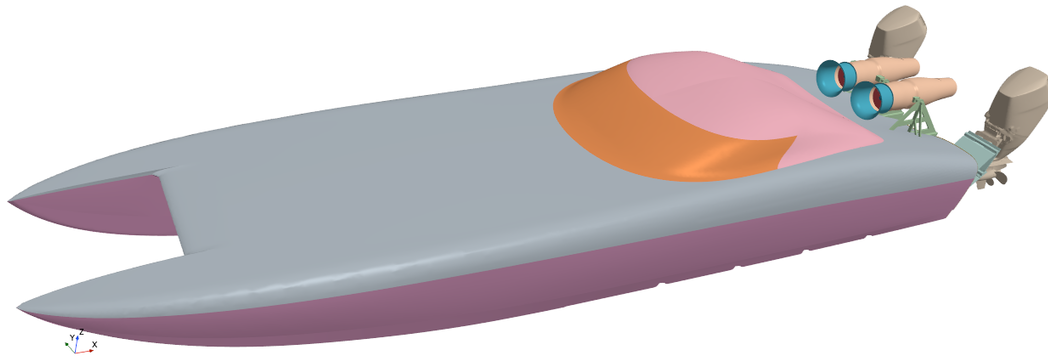
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# TotalSim and Gulf Coast Marine Service Collaborate on High Speed Catamaran Performance Boat

In the last few months, TotalSim has been working with Gulf Coast Marine Service on the development of a high-speed catamaran performance boat. The project goal is to successfully compete in long distance endurance races, world record point A to point B speed runs and hard acceleration shootout competitions.

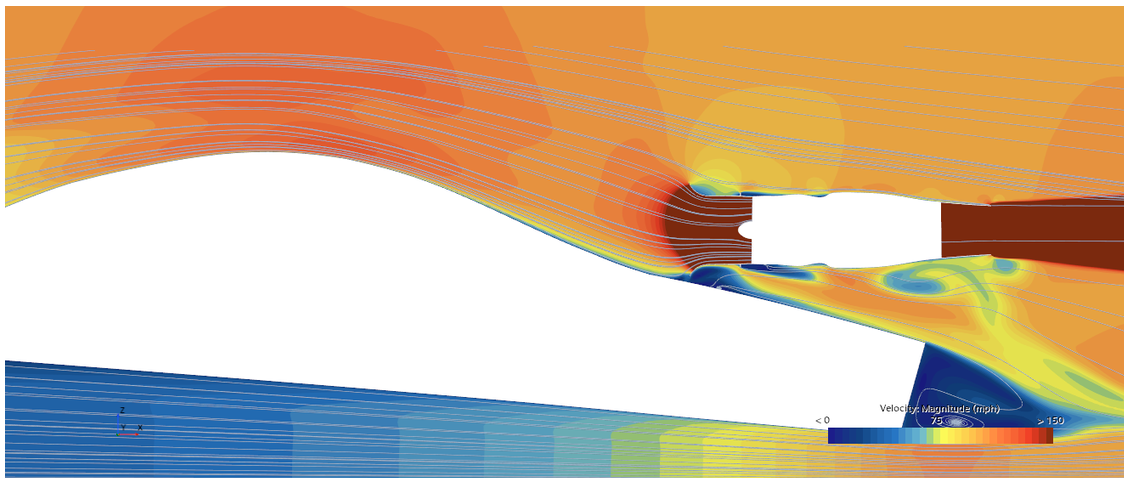
TotalSim collaborated with GCMS to use CFD for running resistance performance calculations as well as to design unique safety features on the upper deck of the boat before it is built.

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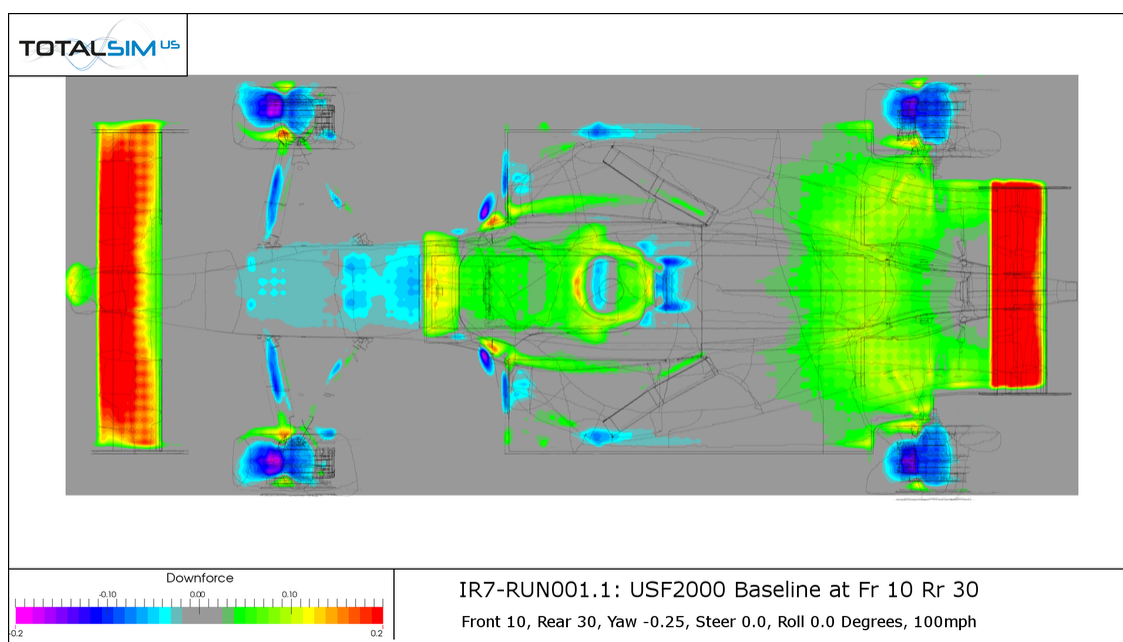


As the project continued, TotalSim also worked on airflow over and around the top of the boat for stability and making sure there is clean airflow feeding the jet engines. Our work also included developing safety concepts using aerodynamic spoilers and flaps to keep the boat as stable as possible at high speeds as well as slowing it down controllably as quickly as possible.

We are excited to see the final results and thoroughly enjoyed working closely with GCMS throughout the process! To read more about TotalSim's marine capabilities you can visit our [web page](#).



## TotalSim US and iRacing Work to Bring Realism to Virtual Racing



For nearly 10 years, TotalSim and iRacing have worked together utilizing our CFD consulting services to generate and fill the gaps in performance data for multiple iRacing vehicles.

Most recently, TotalSim worked with iRacing to develop an aerodynamic mapping plan for two new vehicles that covered all the different ride heights, yaw (wind) angles, pitch angles, roll angles, and front and rear wing angles.

TotalSim used the results from this mapping plan to create a virtual copy of the actual vehicle for use in the iRacing simulation.

Click [here](#) to learn more about the project and read the full case study.



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## Field Trip to TotalSim UK Leads to Exciting Possibilities for US Wind Tunnel Testing

In late April, Ray and Naethan went across the pond to visit our 'sister companies' in the UK: [TotalSim CFD](#), [Catesby Projects](#), [Vorteq Sports](#) and [Silverstone Sports Engineering Hub \(SSEH\)](#). Along with a broad based business catch-up, they were able to attend a cycling focused wind tunnel test at SSEH.

The wind tunnel is used by manufacturers, teams, trainers and athletes for aerodynamic testing along with research and development. Ray and Naethan attended a test for a US-based cycling team that had brought along two athletes and various components to test over the course of the three days.



This was the first time Ray and Naethan had actively worked a test at the facility, and this only furthered their interest in creating a replica of the wind tunnel stateside.

Ray said "It's incredible how far the SSEH facility has come in the last 4-5 years since its inception. It's a super efficient place to test aero for all kinds of sports and for cycling in particular. We are really excited to move forward on creating a copy of this concept here in the US."

To learn more about the wind tunnel and its benefits, you can visit the [SSEH web page](#).

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## Service Spotlight: Physical Testing

TotalSim has decades of experience in aerodynamic testing and performance mapping. We can plan and help execute your physical testing program while ensuring these tests and tools are closely tied to any simulation program thus helping move your development forward.

Our physical testing services include:

- Wind Tunnel Testing
- Track Testing
- Performance Mapping
- Aerodynamic Analysis



CFD and physical testing work hand in hand to help lower costs and make the early development phases of a project easier. To learn more about TotalSim's physical testing services visit [our page](#).

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## Ohio State FSAE Team Unveils 2023 Competition Car

Congratulations to the Ohio State Formula SAE team on the rollout of their 2023 competition car! TotalSim is proud to be a sponsor of this epic team and the work they've done using the [TS Auto App](#).

Each year, the team builds a Formula style race car from scratch to compete nationally and internationally against other student led teams.



Recently, the team showcased the car to sponsors, team alumni, friends and family. Awesome work Formula Buckeyes, we can't wait to see what's next!

To learn more about other ways TotalSim has been supporting this next generation of talented engineers check out this [case study](#).

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## Trade Shows and Conferences

The month of May was busy for TotalSim as we attended trade shows all across the United States.

Alberto attended the Offshore Technology Conference in Houston, TX where he got the chance to discuss, debate and continue to learn about pressing topics facing the offshore energy sector.

Perry represented TotalSim at the Advanced Clean Transportation Expo in Anaheim, CA.

“The electric vehicle industry is one we've been involved in for years and the ACT Expo put us in front of more of these manufacturers,” Perry explains. “I was able to speak with one of our current customers, Bollinger Motors, who had two vehicles on display. One was a former project of ours and one is a current project. It is always exciting to see something we've been working on come to life.”

Finally, Tom wrapped up the month at the AUVSI Exponential in Denver, CO. He can not wait to continue all of the conversations he started there!



**Upcoming Events**

[AIAA Aviation Forum](#), June 12 - 16, San Diego, CA

[VFS Electric Aircraft Symposium](#), July 22 - 23 , Oshkosh, WI

[EAA AirVenture](#), July 24-30, Oshkosh, WI

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**Industries Where We Excel**







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