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Quest for Gold: How Aerodynamics Plays a Large Role in Olympic Cycling

In professional and Olympic cycling, fractions of a second can be the difference between gold, silver, bronze or not placing at all. The quest for speed has driven a focus on technology and engineering to reduce aerodynamic drag and rolling resistance, allowing athletes to achieve greater speeds with less energy. From optimized riding positions, to cutting-edge equipment like bike frames and wheels, all the way down to the athlete's suit, helmet, socks and shoes, the sport showcases the blend of engineering and athleticism. Explore the innovations transforming cycling, where wind tunnel testing, Computational Fluid Dynamics (CFD), and precision engineering push the boundaries of human performance. Discover how companies like TotalSim lead the charge by creating solutions for cycling teams, and see how these advancements are reshaping the sport as cyclists compete for gold at the Paris Olympic Games.



TotalSim created a simulation of cyclists drafting off of one another within a peloton several years ago as part of the AweSIM program with Ohio Supercomputer Center. By sitting behind another rider, the following rider is shielded from the air and riding in the wake of the leader. This seemingly small reduction in effort is hugely significant over the course of a day or weeks in a race like the Tour de France.

Jump into the full blog: [How Aerodynamics Plays a Large Role in Olympic Cycling](#)

Welcome Longshot Space Technology Corporation!

[Longshot Space Technology Corporation](#), a hypersonic launch startup located in Oakland, California, has selected TotalSim and Siemens for their internal Simulation and Analysis. At the forefront of innovation, Longshot is completely reshaping the space industry by reducing the complexity and cost of launch. Understanding the power of Digital Twin, Longshot is leveraging Siemens software solutions, including Simcenter [STAR-CCM+](#), for advanced computational fluid dynamics, systems engineering and design exploration and optimization. We look forward to working more closely with Longshot as they optimize their prototypes and upend the space industry.



Our Time at EAA AirVenture 2024

Ray again had the opportunity to fly his own plane to Oshkosh, Wisconsin to attend [AirVenture](#): The World's Greatest Aviation Celebration. Held at the Wittman Regional Airport, Ray and thousands of other air enthusiasts around the world came together to celebrate the beauty of aviation. Ray was able to spend a couple of days exploring everything AirVenture had to offer, whether it be air shows or other unique aircraft, while getting to interact with many of our current and past customers and others who share his same passion for aviation.



Upcoming Events

National Advanced Air Mobility Industry Forum // August 20 - 21 // Springfield, OH

Americas Partner Conference // October 21 - 25 // Anaheim, CA

PRI // December 12 - 14 // Indianapolis, IN

Industries Where We Excel





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