



## Emirates Team New Zealand Flies to the Finish Line of America's Cup Using ANSYS Solutions

June 27, 2017

PITTSBURGH, June 27, 2017/PRNewswire/ -- Using [ANSYS](#) (NASDAQ: ANSS) engineering simulation technology to design and optimize its high-performance yacht, Emirates Team New Zealand defeated Oracle Team USA to win the 35th America's Cup, 7-1.

image

The need for speed is critical on the water and small changes can make the difference between first and last place.

Emirates Team New Zealand used ANSYS fluid and structural simulation technology to develop and test virtual prototypes of its yacht — minimizing the need for costly and time-intensive physical prototypes. The team evaluated thousands of operating conditions per design to analyze the vessel's performance and make engineering and design improvements before ever entering the water.

Rather than traditional sails, today's cup-class yachts are built with wings that transfer wind into forward momentum. Emirates Team New Zealand used an exclusively simulation-driven development process to optimize the wing's geometry and structure, ensuring ultimate performance and speed while using as little energy as possible.

"ANSYS provided an edge over our competitors by helping us change the game of traditional sailing," said Nick Hutchins, CFD engineer, Emirates Team New Zealand. "We replaced sails with wings and implemented a revolutionary cycling system to harness maximum hydrodynamic and aerodynamic momentum. Every aspect of the boat was tested through simulation. A cornerstone of our design process, ANSYS' simulation tools delivered valuable productivity gains that ultimately led to a faster, more competitive craft."

Using the integrated suite of ANSYS multiphysics tools, including fluids, structural and composites simulation, Emirates Team New Zealand designed a craft that provided accurate and fast control while remaining within weight targets. The simulation and subsequent optimization proved successful as the team repeatedly achieved flawless, 100 percent fly times during races.

"Emirates Team New Zealand is the epitome of world-class innovation," said Richard Mitchell, lead product manager, ANSYS. "The team designed a best-in-class vessel using the smartest tools available. We at ANSYS are inspired by the team's forward thinking and couldn't be prouder to play a role in this well-deserved victory."

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