

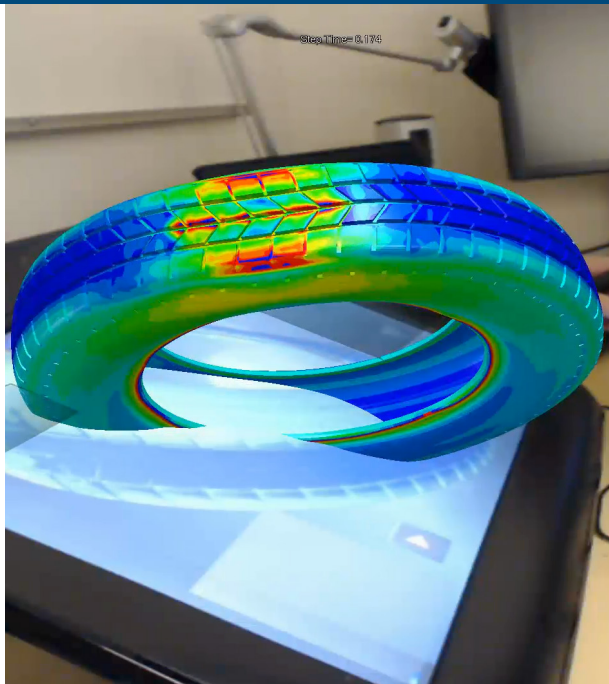
## THE NEED FOR SPEED: ACCELERATING INNOVATION AND OPTIMIZING THE DRIVING EXPERIENCE WITH TIRE PERFORMANCE

### CHALLENGES

Globally, vehicle miles are expected to double to 20 trillion by 2030, and with changes in the automotive industry including the move towards electric and autonomous vehicles, tire demand is likely to increase as well.

Help tire manufacturers to push their “Magic Triangle” (wet grip – safety, wear resistance – lifetime, and rolling resistance – fuel efficiency) beyond the current boundaries.

How do tire manufacturers satisfy customer demands, optimize their supply chain, and better manage raw materials, all while accelerating innovation to remain competitive?



### BENEFITS OF SIMULATION

- Fully automated process for easy design space exploration with design of experiments (DOE)
- Integrated design and simulation process in a single environment
- Full digital continuity and traceability across disciplines (requirements, design, simulation, project, etc.)
- Advanced simulation solutions:
  - Fluid-Structure Interaction (Abaqus-XFlow co-simulation) for evaluating tire performance in hydroplaning
  - Aerodynamic simulation using PowerFLOW for calculating aerodynamic drag
  - Vehicle Systems Dynamics using Simpack and Dymola