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1.) What’s the biggest challenge your customers are asking you to tackle today?
The major challenge from our customers is to accurately predict lifetime and failure mode for tires and other rubber applications. They use our integrated durability solutions to predict when and where cracks will show up in their products. Loading schedules and component geometries are becoming increasingly complex, so we are continually advancing our software and testing capabilities to meet the demanding requirements of our customers.

2.) What trends are pushing your company to innovate?
The growing importance of the Internet of Things and digital twin technology resulted in our recent software innovation which is Endurica DT™. Another trend is lightweighting to save energy and cost of materials, which is pushing us to demonstrate how our Endurica CL™ durability solver can work in combination with optimization tools in finite element simulations to guide the removal of material while maintaining durability.

3.) How will the supply chain for tire manufacturing differ in five years from what it is today?
I read many press releases by major tire companies and raw materials suppliers during the past year that clearly indicate that recycled materials are a rapidly growing part of the supply chain in the tire industry. This will have tire durability implications, because incorporation of ground rubber, for example, can introduce sizeable crack precursors into rubber compounds if the particle sizes are large. Our testing services and instruments will be called upon to quantify those precursors, with the implication on product lifetime determined with our software.

4.) When it comes to the future of the tire industry, what opportunities are you most excited to embrace?
Endurica is excited about the future use of sensors for monitoring temperatures and strains in tires during operation. These advancements are needed in order to fully implement digital twin approaches to health monitoring of tires.