Smarter tires for smarter driving

“The IoT fleet solution developed in collaboration with Deloitte allows our customers to monitor many parameters in real time, to understand how tires interact with the road. That is a real revolution in our world—bringing benefits such as increased tire life and decreased environmental impact, thanks to reduced CO2 emissions”

— Fabrizio Orioli, Head of Architecture & Innovation, Pirelli

THE ISSUE
Tire pressure sensing has long been built into trucks and autos. But when a sensor is built into a cloud-connected tire, it can unlock IoT capabilities to drive parts ordering, performance adjustments, and more.

THE SOLUTION
Pirelli, a leading tire producer has developed a sensor that is embedded inside the sidewall of each tire to transmit pressure and temperature data to the cloud through a control unit on the vehicle. ABO Data, now part of Deloitte, helped engineer the cloud architecture that puts this sensor data to use so drivers, fleet managers, and retailers can enhance safety, operating efficiency, and supply chain management.

THE IMPACT
The sensor delivers not only air pressure but also temperature, wear level, static vertical load, mileage, and GPS location.

Using this data, drivers or fleet managers can extend tire lifecycles, reduce fuel consumption, and streamline routine maintenance.

The data interface works with onboard computers, a driver’s smartphone app, or remote systems such as those designed for dealers and fleets.

Under-inflation alarms enhance safety, fuel efficiency, and tire lifespan.

The same sensor that measures tire parameters can also help track and trace fleet vehicles.

This data can even drive real-time suspension adjustments based on working conditions, generate replacement orders, or trigger service appointments.

Unlike older tire pressure monitoring systems, the connected tire delivers useful data when the vehicles are moving and when they are parked.

QUICK STATS

• Manufacturing sites: 18 in 12 countries
• Employees: 30,000

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