



The reCharge tyre | Photo source <https://news.goodyear.eu/the-goodyear-recharge-concept--making-tire-changing-easy-with-customized-capsules-that-renew-your-tires/>

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CONCEPT TYRE REPAIRS ITSELF ON-THE-GO

 MOBILITY & TRANSPORT

The reCharge tyre design would also aim to make driving safer and more attuned to changes in automobile technology

Spotted: Goodyear developed the first tubeless tyre around 65 years ago. Now, it is working to develop a tyre that replaces itself when it wears out. The tyre is designed for a future where driverless cars are the norm – a future that may be fast approaching.

For now, the reCharge tyre exists only as a concept. The core of the concept is a reloadable and biodegradable liquid tread, which would be contained in individual capsules in a central reservoir, ready to squirt out to replace or repair worn tyres. The tread could also be tailored to different road conditions — squirting out a snow tyre when extra grip is needed, for example. Artificial intelligence would be used to create a customised compound tailored to these different needs.

Goodyear also plans to make the compound from a biodegradable biological material reinforced with spider silk fibres for strength. According to Goodyear, the wheel architecture would also flex a little to replace the ride comfort of a pneumatic tire. This new tyre shape would be thin and robust enough to eliminate the need for pressure maintenance or for the car to stop for punctures.

Tyre manufacturers are constantly working to develop new tyre concepts to make driving safer and more attuned to changes in driving technology. Springwise has previously covered Goodyear's [spherical smart tyre](#) concept and an [airless tyre](#) developed by Michelin and GM.

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Takeaway:

This new concept tyre has a number of huge hurdles to overcome before it can move from concept to reality, not least of which is how the tyre compound will be applied in a way that prevents deformation of the wheel. There is also the question of whether this type of tyre will be needed in the age of self-driving cars. However, it is clear that Goodyear is already thinking ahead to a new era in the automobile industry.