

PROJECT

OnTrack

Development of a commercial manufacturing process for embeddable RFID and NFC Tags for complete lifecycle tracking of tyres

Funding: European (Horizon 2020)

Duration: Oct 2017 - Oct 2019

Status: Complete

Total project cost: €2,200,708

EU contribution: €1,540,495



Call for proposal: H2020-SMEINST-2-2016-2017

[CORDIS RCN : 212507](#)

Objectives:

Europe's tyre manufacturing and re-treading industries are under increasing threat from imported tyres mainly from China. The EU re-treading industry is valued at €1.2bn (2015) but is declining due to the influx of Chinese tyres leading to the loss of highly-skilled jobs.

The low-cost imported tyres cost on average €80 per tyre compared to €300-500 from a premium manufacturer. The temptation to buy these low-cost tyres is clear, however they are manufactured from poor quality materials with tread patterns that underperform. The ethos of cheap tyres is 'use and replace', whereas premium tyres are built to be re-treaded to increase lifetime. As a result, imported tyres are not cost effective over the lifetime of the tyres due to poor fuel economy and performance. Use of premium tyres and re-treading over the use and replace model needs to be encouraged to increase safety and fuel efficiency.

Silent Sensors are an innovative IoT company that are working on a tyre traceability solution to remove the logistical burden of re-treading for FOs. We are manufacturing UHF/NFC RFID tags 'OnTrack' to embed directly into tyres which provides each tyre with a permanent, unique ID for life. Our tags can store data from the manufacturing process and key events during operational use such as repairs etc. This comprehensive history for each tyre makes it easier for FOs to plan their tyre re-treads. This data also makes the re-tread process simpler as the tyre history will speed-up integrity tests.

OnTrack is the only tyre traceability solution that offers NFC - empowering employees to interrogate tyres with just a smartphone. We have a clear market opportunity with OnTrack to supply up to 40m tags/annum to a single tyre manufacturer. Based on our 7-year cumulative total gross profits of €44.9m post-project, the 7-year ROI is 5.44:1 with a payback period of 40 months. The Internal Rate of Return is 45% and NPV of 7-year Operating Profits is €11.2m (assuming a 3% discount rate).

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Silent Sensors Limited

Address:

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LONDON
SW7 3SS

United Kingdom

EU Contribution: €1,540,495

Technologies:

Sensor technologies
NFC and RFID tags for complete lifecycle tracking of
tyres

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing, Smart mobility and services

Transport mode: Road transport

Transport sectors: Passenger transport, Freight transport

Geo-spatial type: Other