TyreWatch.com Platform Introduction

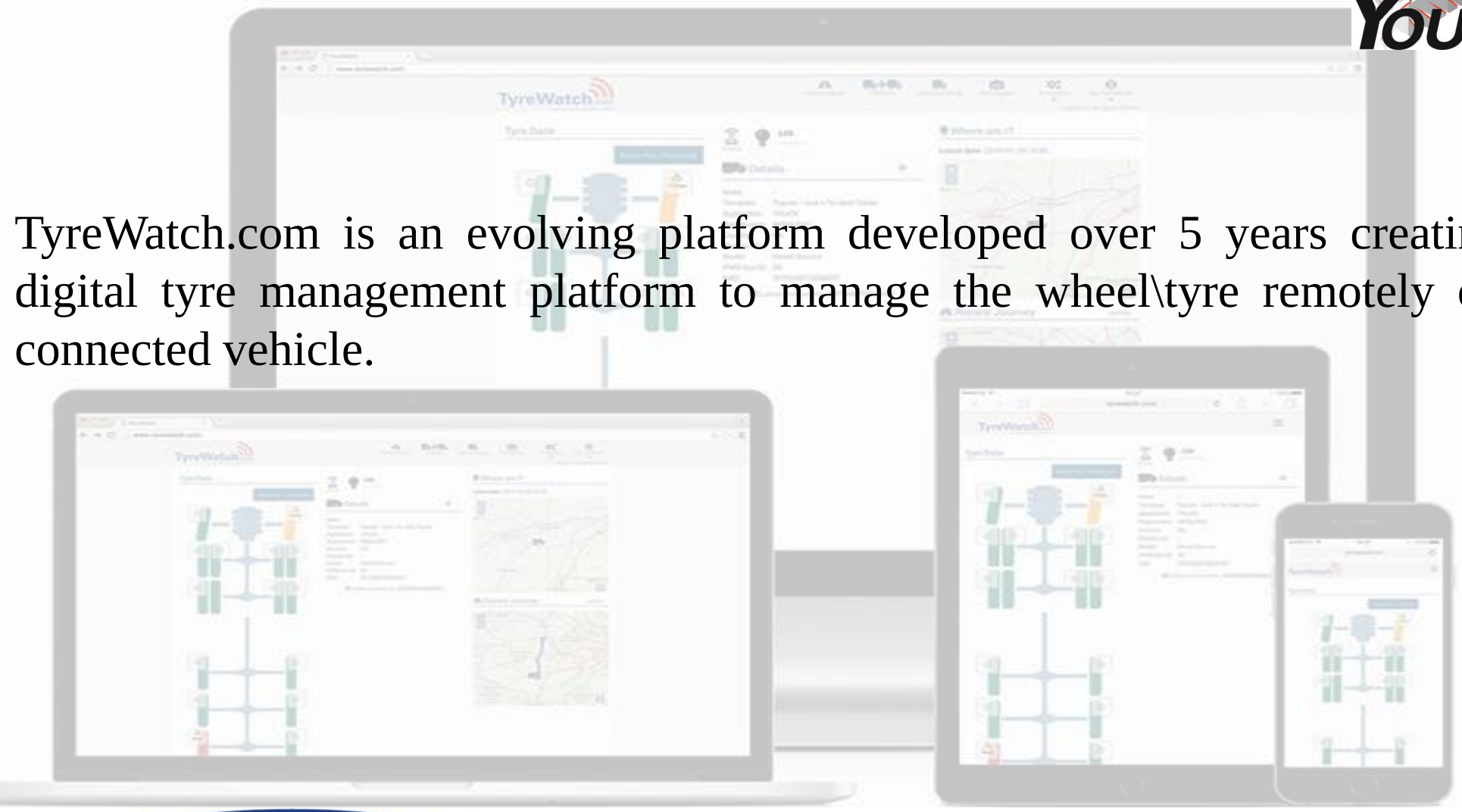
29th April 2021

TyreWatch™.com
saving time, assets, fuel

Connecting tyres and wheels for smarter working

Introduction

TyreWatch.com is an evolving platform developed over 5 years creating a digital tyre management platform to manage the wheel\tyre remotely on a connected vehicle.



The TyreWatch Team

Privately Owned

Introductions – The Team

- Glenn Sherwood, 46 years in the tyre industry
- Mark Longden, 22 years in the automotive industry
- Peter Roffey, 32 years in the tyre industry
- Anne Parker, 25 years in the tyre industry

+ customer & technical support, field service support and data scientists

System Guide

Tyre Sensors – internally fitted to the wheel, and wheel loss sensors and brackets to the wheels

Data sent to a control box 

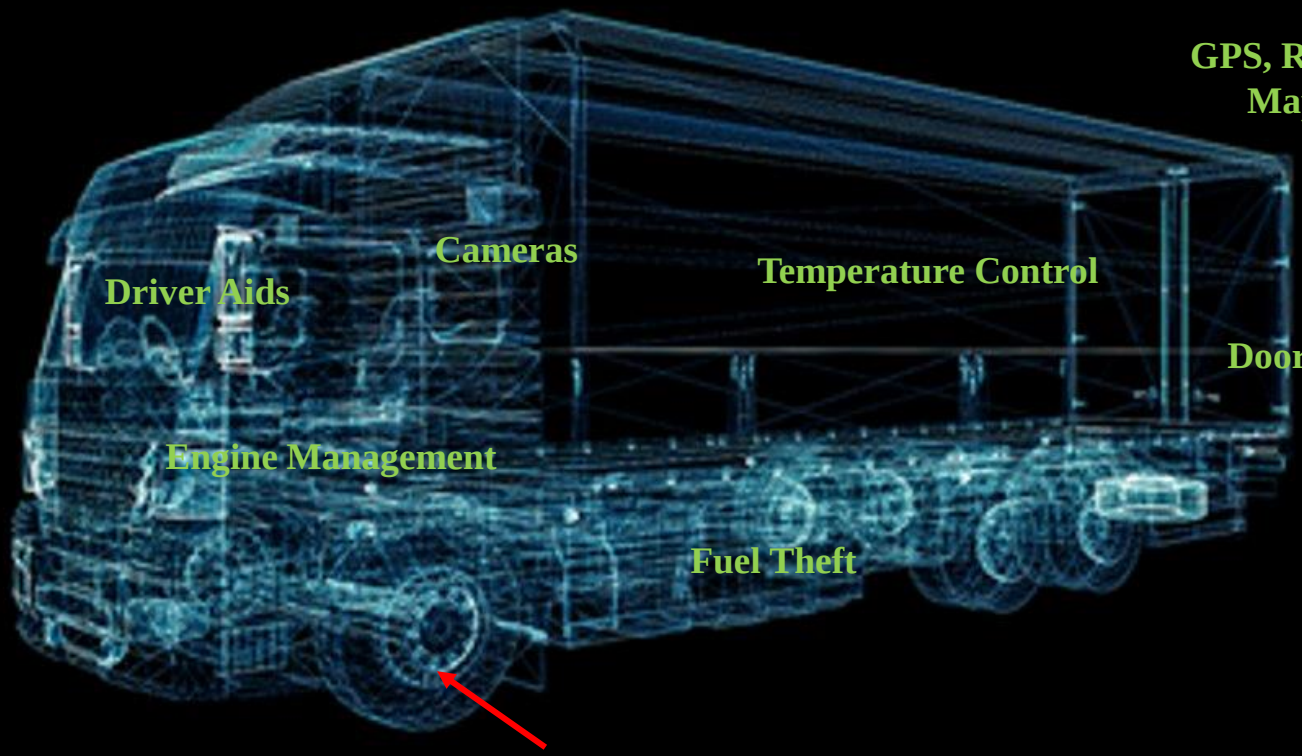
Data sent to a Telematics box* 

Data to Tyrewatch cloud 

Data and control made visible in user friendly application to Qube and its key service agents

Auto alerts for maintenance and actions to key nominated personnel –
All RED alerts are warned to the driver in cab by red LED
Automatic data feed to workshops based upon service dates Y/N

The Connected Vehicle



Digital Overview

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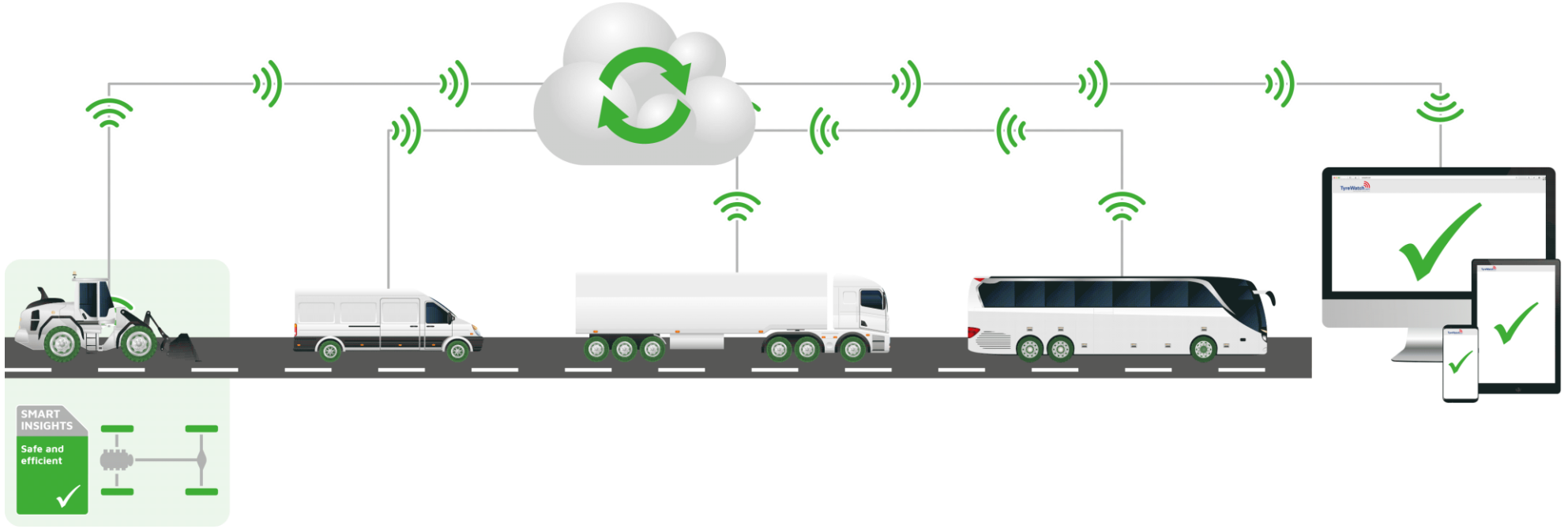
Remote Monitoring



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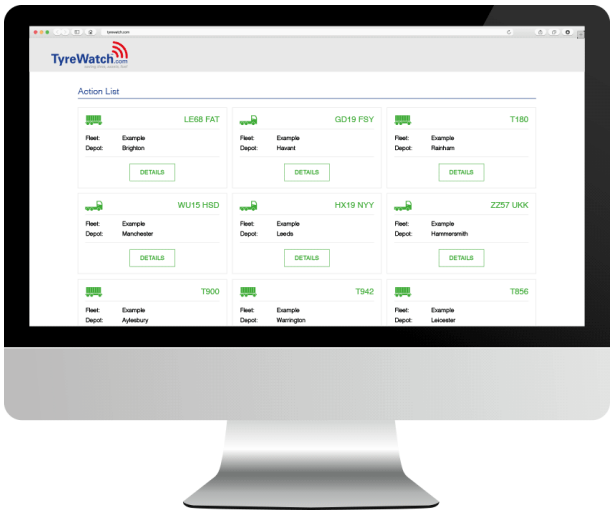
The Reasons

- 87% of HGV roadside breakdowns are caused by tyre failure
- 40% of HGV road traffic accidents are caused by tyre failure
- 90% of tyre-related breakdowns are caused by under-inflation
- The average cost of a tyre-related roadside breakdown is £500 + intangibles
- 20% of fleet truck tyres run at least 10% below optimum pressure
- 1 in 20 (5%) fleet truck tyres run at least 20% below optimum pressure
- 50% of fleet truck tyres run between 5% and 10% under-inflated

The 4th highest cost is tyres, and it affects the highest cost, which is fuel and has the biggest environmental impact.

The Benefits



Tyres naturally deflate by 2-3% every month without an effective tyre monitoring system. Fully connected autonomous systems,

- Saves fuel between 1-2%,
- Reduces CO_2 emissions (2.68kg of CO_2 per 1 litre of diesel),
- Improving tyre life anywhere between 10-30%,
- Reduction in vehicle particulate emissions PM2.5 and PM10 from premature tyre wear.
- Saving 95% of tyre related breakdowns,
- Improving overall safety & compliance in the fleet,
- Improved vehicle uptime and utilization,
- Improved service and workshop savings in time and costs,
- Giving back control of the fleet.

Pro's & Con's of a TyreWatch Connected System

	Standard Non-Connected System	TyreWatch Connected System
Agnostic to tyre brand	✓	✓
Agnostic to vehicle type	✓	✓
Connected to telematics + integration	x	✓
In-cab alert	✓	✓
Driver dependent	✓	x
24\7-365 automated alerts (email & SMS)	x	✓
Time saving on safety inspections	x	✓
Fuel saving	?	✓
KPI reporting	x	✓
Reduction in roadside recovery	✓	✓
Reduction in tyre damage	?	✓
Dynamic wheel security	✓	✓
Continuous remote monitoring	x	✓
Remote brake\hub temperature monitoring	x	✓
Brake\hub temperature critical alert	✓	✓
Predictive time to critical	x	✓
Driver anti-tamper monitoring	x	✓
False positive alerts	✓	x

Note: Non-connected TPMS systems will alert when tyre becomes critical @ 20%.

Ongoing Development of the Platform

Current Features

- ✓ Pressure
- ✓ Temperature
- ✓ Predictive Time to Critical
- ✓ Remote Automated Monitoring
- ✓ Automated Alerts & Reports
- ✓ Environmental Impact Measuring CO_2

In Development in 2021

- ➢ Dynamic Vehicle Alignment – (first trials April 2021)
- ➢ Wheel Security – (first trials late 2021)
- ➢ Dynamic Environmental Impact in Measurement Tool PM2.10 – (late 2021)
- ➢ Predictive Tread Wear – (first quarter 2022)

Technology & Industry Partners

TyreWatch & AlignWatch Technology Partners

SOLUTION DESIGN, CONNECTIVITY
MATHEMATICAL MODELLING

WHEEL SENSOR DESIGN
AND SIGNAL PROCESSING

COMPUTATIONAL AND
FE MODELLING

ARTIFICAL INTELLIGENCE

BIG DATA ANALYTICS
STANDARDISED TEST PROTOCOL

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Live Demo

https://tyrewatch.ifmscloud.com/#/fleet/overview

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