

# Magna Tyres Digital solution



## TPMS

Digital Transformation: Embedding Artificial Intelligence, Automation and Smart Port Technologies in Creating Sustainable Port Operations

# AGENDA.

- Introduction to Magna Tyres.
- Pressure effect on tyres life.
- Magna Tyres digital Solution – Introduce Magna Tyres TPMS.
- Magna Tyres TPMS reports.
- It is more than TPMS.



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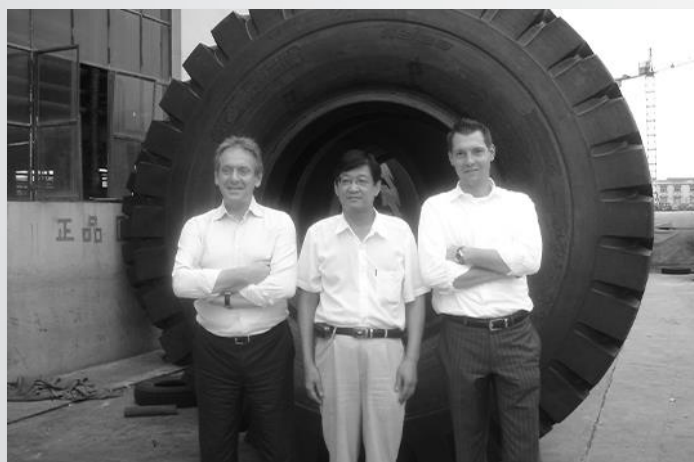




Magna Tyres founded in 2006 as vertical spin-off of a leading compound manufacturer.



Magna compounds produced in mixing facilities in the USA & The Netherlands.



It All Starts With The  
**Compound.**



Specialised in rubber compounds for OTR & Industrial tyres for 60 years.



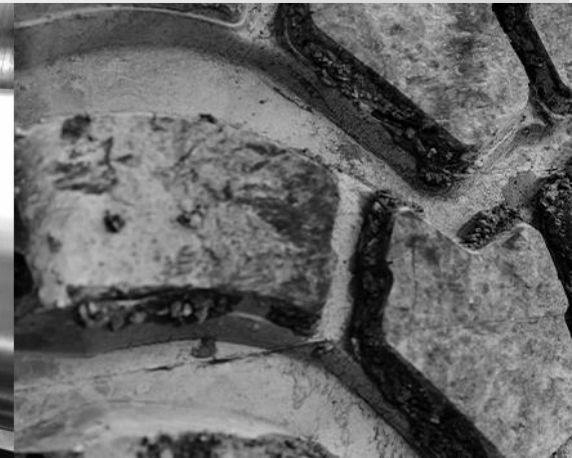




Use of own Magna rubber compounds, molds & building machinery.



Magna Tyres makes the difference with our rubber compound.



Joint venture production facilities in Asia.



Production Management & quality control by own Magna supervisors.



Trusted by OEM.

**VOLVO**   **LIEBHERR**   **ROKBAK**   **SEINEBOGEN**

**KONECRANES®**    **KALMAR**    **TEREX®**    **TERBERG**

 **FUCHS®**  
A TEREX BRAND

**Goldhofer**

**HOUCON** 

**DUTCH LANKA TRAILERS®**

***buisca***  
CARGO SOLUTIONS

***KAMAG***

 ***VERIERI*** BPA

  
**GAUSSIN**  
MANUBISTIQUE®

***BELL***

**TLD**  
LOCAL SUPPORT, TOTAL COMMITMENT

***COLMAR***

  
**MANTSINEN**

**BOAT LIFT**  **MAGNAS**  
TYRES Always.

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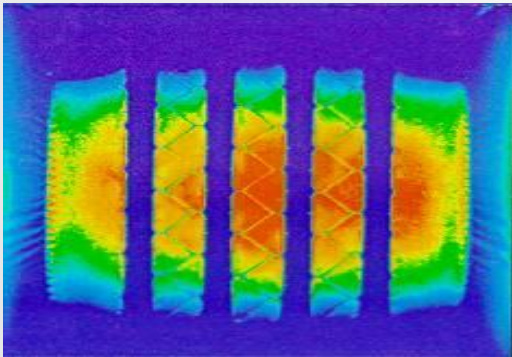


# Tire Pressure – Influence on Tire Deformation

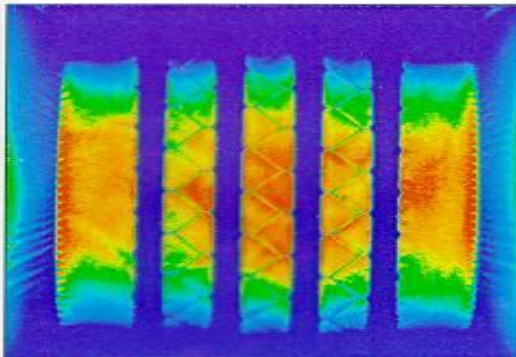
- TRACTION
- + DAMAGES
- + HARSH AND NOISY



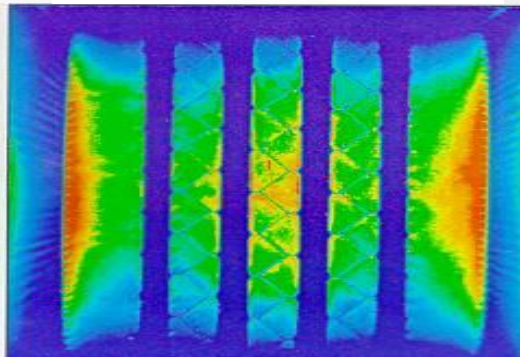
- RESPONSE
- PERFORMANCE
- SAFETY



Inflation pressure 130%



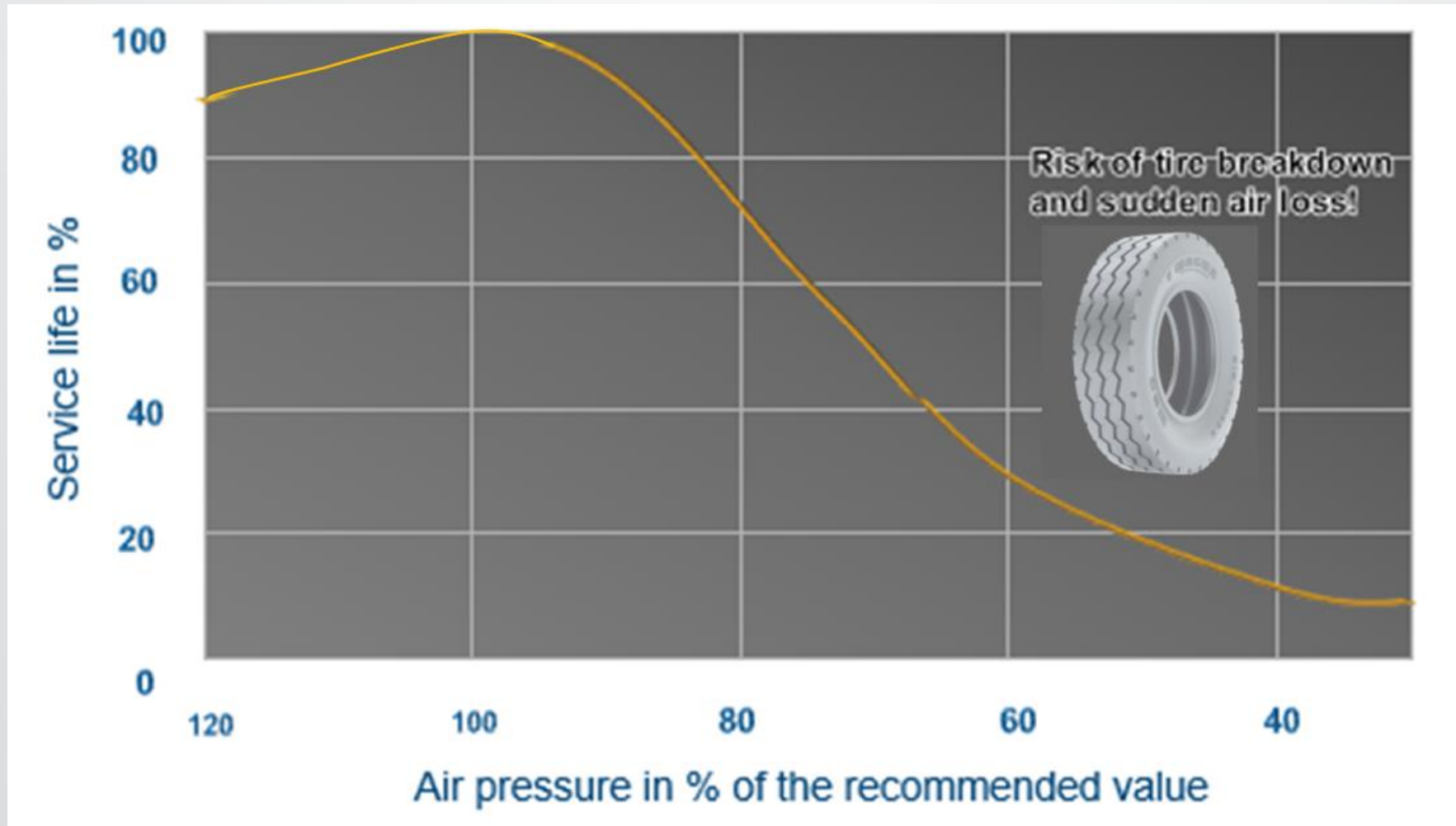
Inflation pressure 100%



Inflation pressure 70%

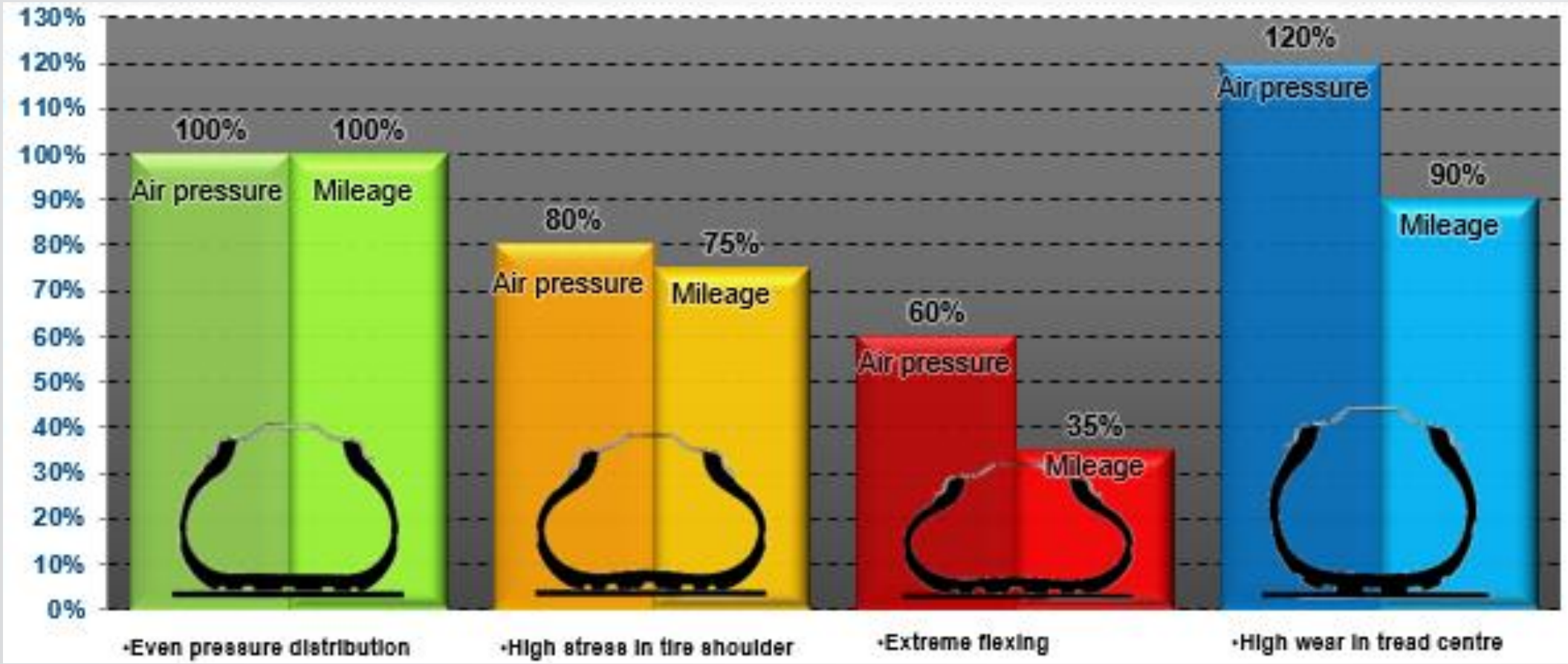
# Air pressure effect on tyre life.

Service Life vs. Air Pressure.

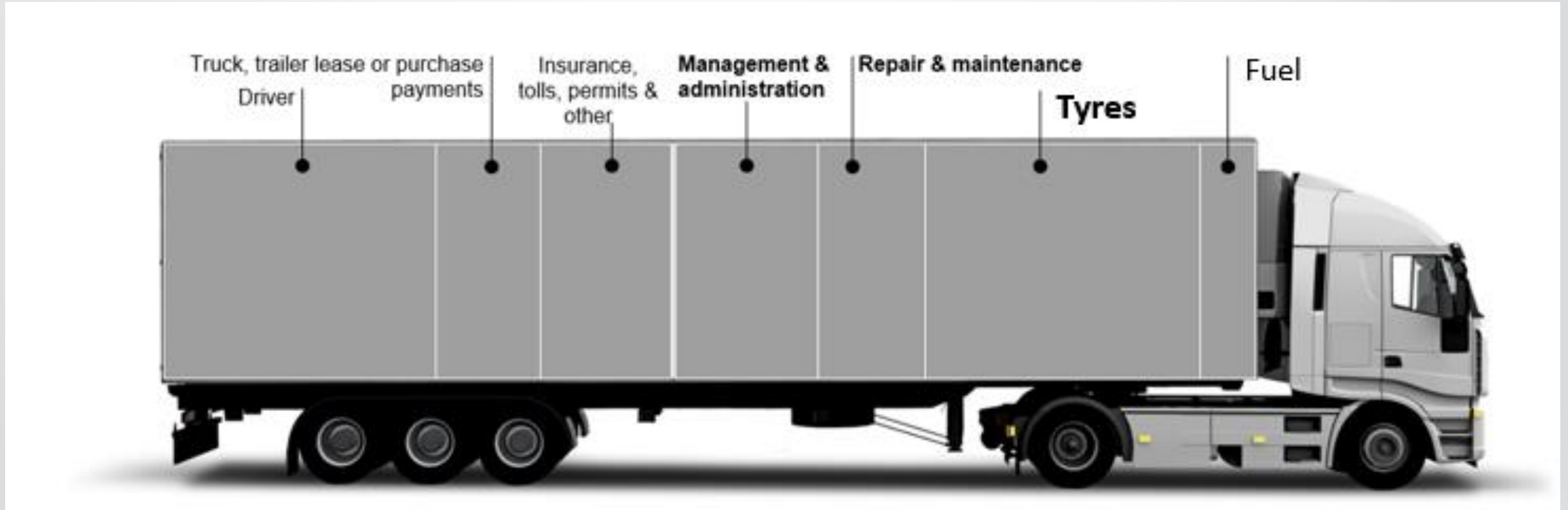


# Air pressure effect on tyre life.

Service Life vs. Air Pressure.



# Fleet operating costs



Tyre cost represent around 20% of total fleet maintenance cost, What is the optimum solution to control this?





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# Always Connected.

- ✓ Uninterrupted Connectivity, Anytime, Anywhere 24/7
- ✓ Beyond Monitoring: A Comprehensive Fleet Management Tool
- ✓ Global Accessibility with User-Friendly Interfaces
- ✓ Effortless Installation, Universal Compatibility
- ✓ Cost-Effective Fleet Management
- ✓ Precision, Confidence, and Cost Reduction





# Markets.

- Any market
- Any machine or vehicle
- Any tyre
- Any manufacturer



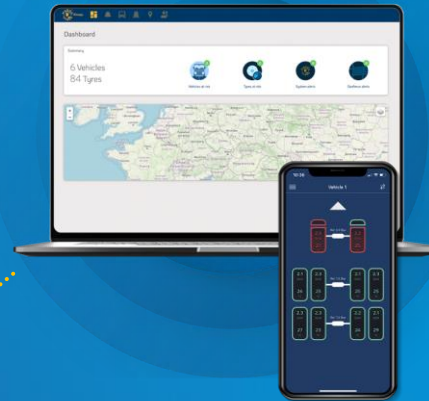
No limitations on number of tyres.

# Key Components.



## TPMS Sensor

- On-Valve Sensor
- Standard & Large Bore
- No need to remove tyre



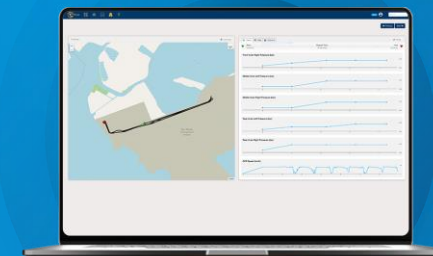
## Insights

- Helps diagnose any problems
- Easy to configure parameters
- Easy to set up
- Alerts 'on-the-go'



## Magna Gateway

- Flexible Hardware with multiple I/O capability
- Cellular/GPS/Bluetooth
- Battery Backed



## Reports

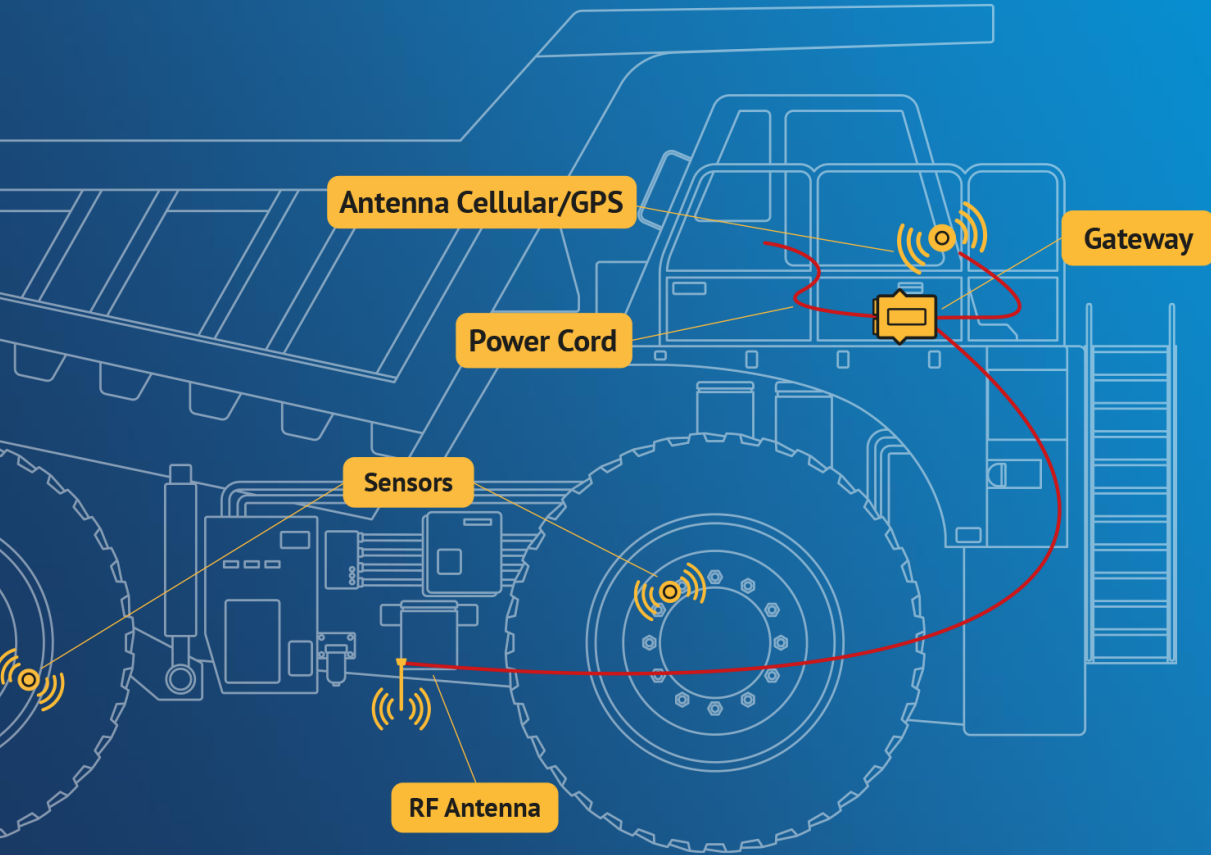
- Tyre reports
- Mileage
- Hours
- Journeys
- Problems





# Easy to Install.

30 – 60 minutes depending on the complexity of the vehicle or machine

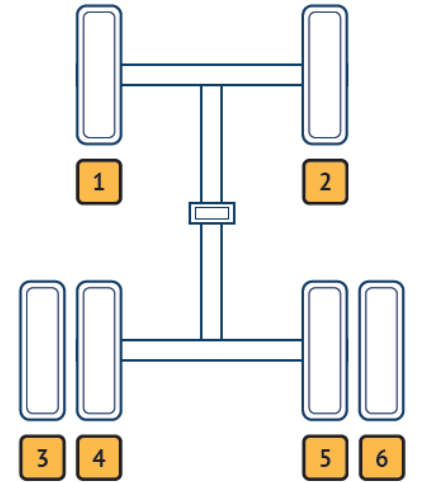


- Easy Install – No need to remove tyres
- Pre-programed for your vehicle(s)
- Simple Set-up

## Rigid Dump Truck

MAG – TPMS-RDT

1x	MAG-Gateway	Magna Gateway
1x	MAG-200PD	Power Cable
1x	MAG-333AN	GPS/Cellular Antenna
1x	MAG-850K	RF cable 35" plus Whip Antenna
6x	MAG-920	T-Valve large
6x	MAG-TEHL-2	Large Bore Sensor





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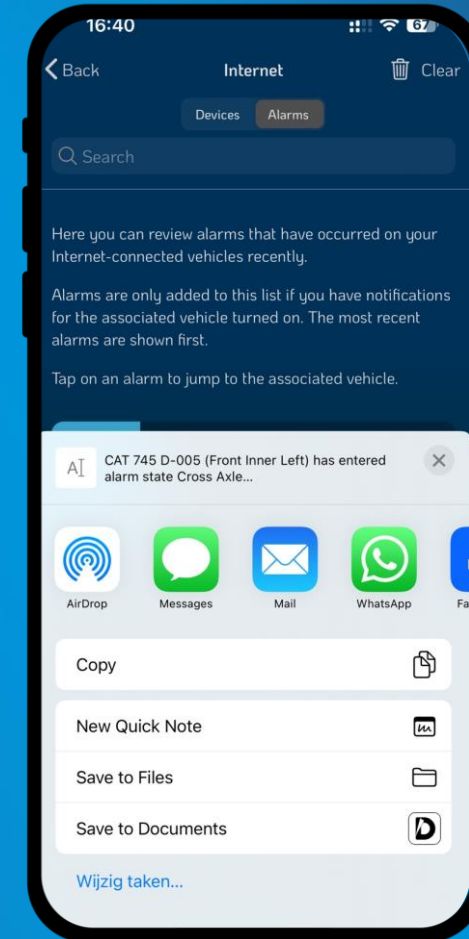


# Data Insight – Web and mobile Application.



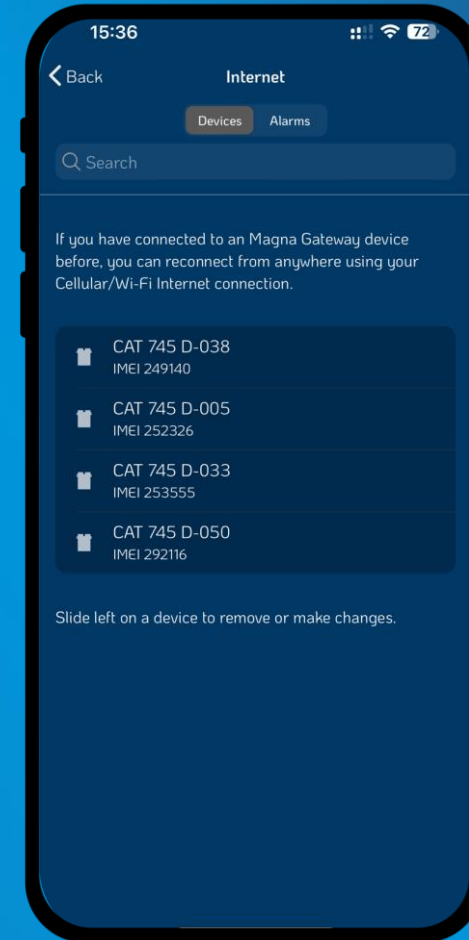
# Data Insight – Alerts/Actions.

- Mobile detailed alerts via notification Centre on smart phone
- Email with full interactive links to web application
- Easy to create a follow-on action
- Monitoring and sharing alerts ‘on-the-go’



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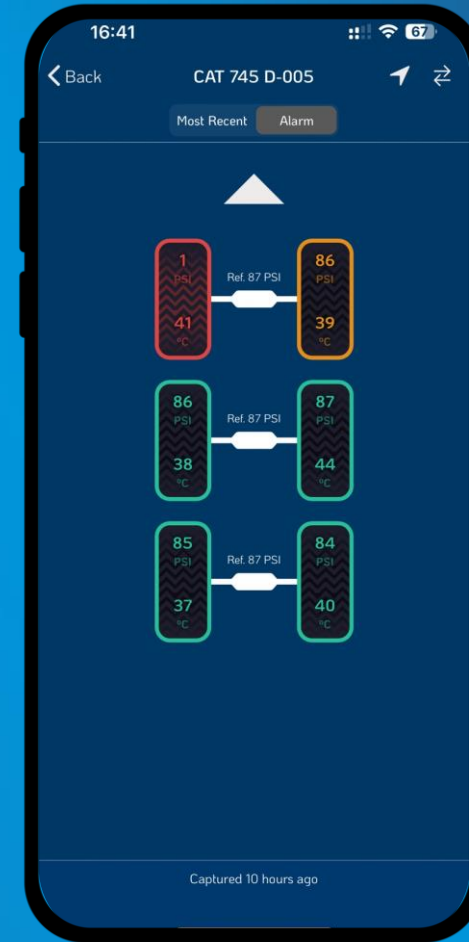
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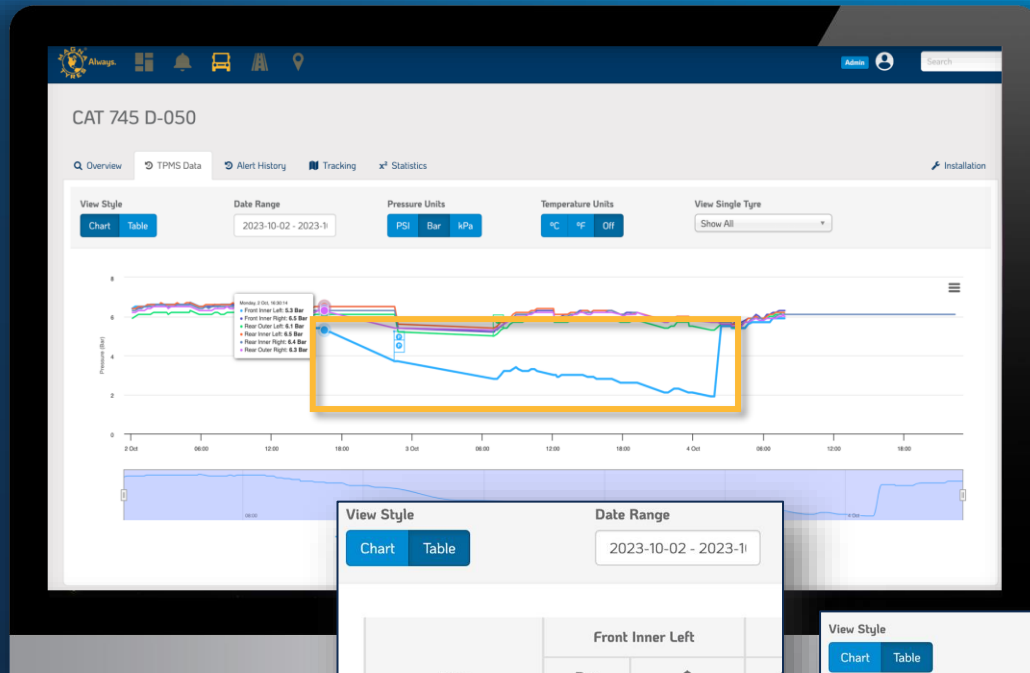


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# Magna TPMS – CASE.



First cross-axle alert received at 16:30 October 2<sup>nd</sup>

Tyre reinflated/replaced? Around 10:00 on October 4<sup>th</sup>

- Lack of communication?
- Lack of action?
- Audit trail for warranty

Time	Front Inner Left		Bar
	Bar	🔔	
Oct-02 16:14:06 🟢	5.4		6.5
Oct-02 16:30:14 🟢	5.3	🔴	6.5
Oct-02 16:47:58 🟢	5.2	Cross Axle	6.5

Time	Front Inner Left		Bar
	Bar	🔔	
Oct-04 01:47:46 🟡	1.9	🔴	5.7
Oct-04 01:48:06 🟡	0.0	🔴	5.7
Oct-04 02:04:54 🟡	0.0	🔴 ⚠️	5.7
Oct-04 02:22:34 🟡	5.5		5.7



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# Much more than TPMS.

- Tyre Pressures even when vehicle unpowered
- Tracking even when vehicle unpowered
- Know if the vehicle has moved
- Security in accordance with Thatcham S5
- Engine characteristics and fault codes
- Usage statistics to support service contracts



Multiple Sensor Inputs  
OEM Customisation



• TPMS



• Battery Backed



• Tracking



• Security



• Axle Load



• Engine Monitoring



• Wheel loss



• Hub/Brake Temp



# Available TPMS kits.

## OTR Applications

Application	Valve Bore Sensor	Wheel Positions
Articulated Dump Truck	Large	6
Rigid Dump Truck	Large	6
Wheel Loader	Large	4

- All kits directly available from stock
- All other applications on request.

## Port/Material Handling

Application	Valve Bore Sensor	Wheel Positions
Reachstacker	Large	6
Forklift / ECH	Small	6
Straddle Carrier	Large	8
Terminal Trailer	Small	6
Terminal Trailer	Small	8
RTG	Large	8
Mobile Excavator	Small	8



# Summary.

- Any machine, any tyre, any manufacturer
- Easy to install, easy to use at an affordable price
- Competitive “cost of ownership” – hardware, subscription, install, maintenance

If you want to know more please contact me:

**Mohammed Sayed**

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**Mail: [mohammed.sayed@magnatyres.ae](mailto:mohammed.sayed@magnatyres.ae)**



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TPMS

Thank you