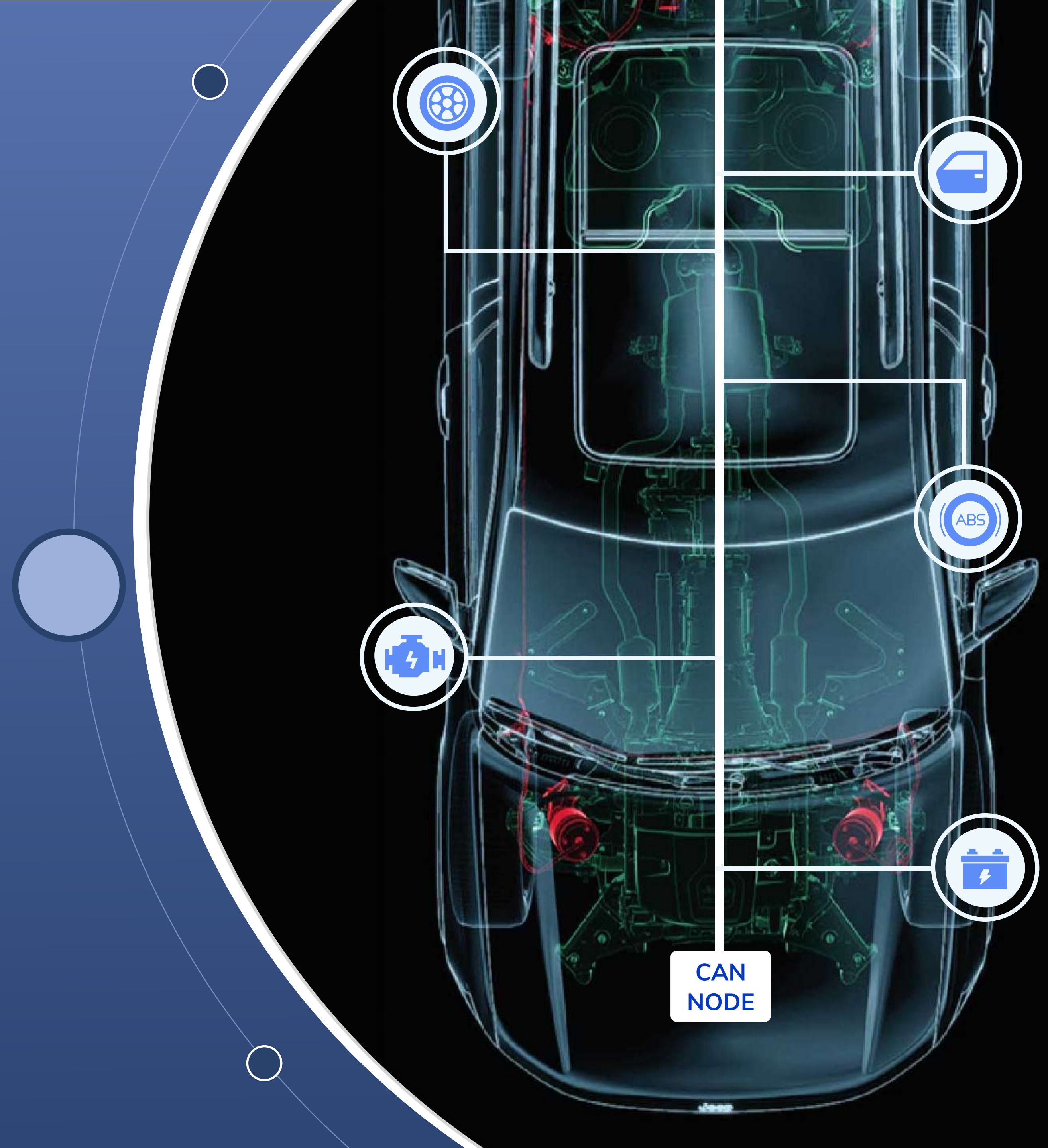# trakzee

VEHICLE HEALTH MONITORING

CAN NODE

ABS

Introduction

Vehicle health monitoring is a crucial activity that provides real-time insights into the condition and performance of vehicles. This solution is designed to meet the needs of vehicle health across various industries.

System tracks key health parameters such as **engine coolant level, battery level, engine oil temperature**, etc. By monitoring these parameters, the system can detect and alert fleet managers to potential issues, enabling them to take corrective action before it's too late.

With **real-time monitoring and early issue detection**, our solution empowers fleet managers to proactively maintain their fleet, minimize downtime, cut maintenance costs, and enhance safety and reliability.
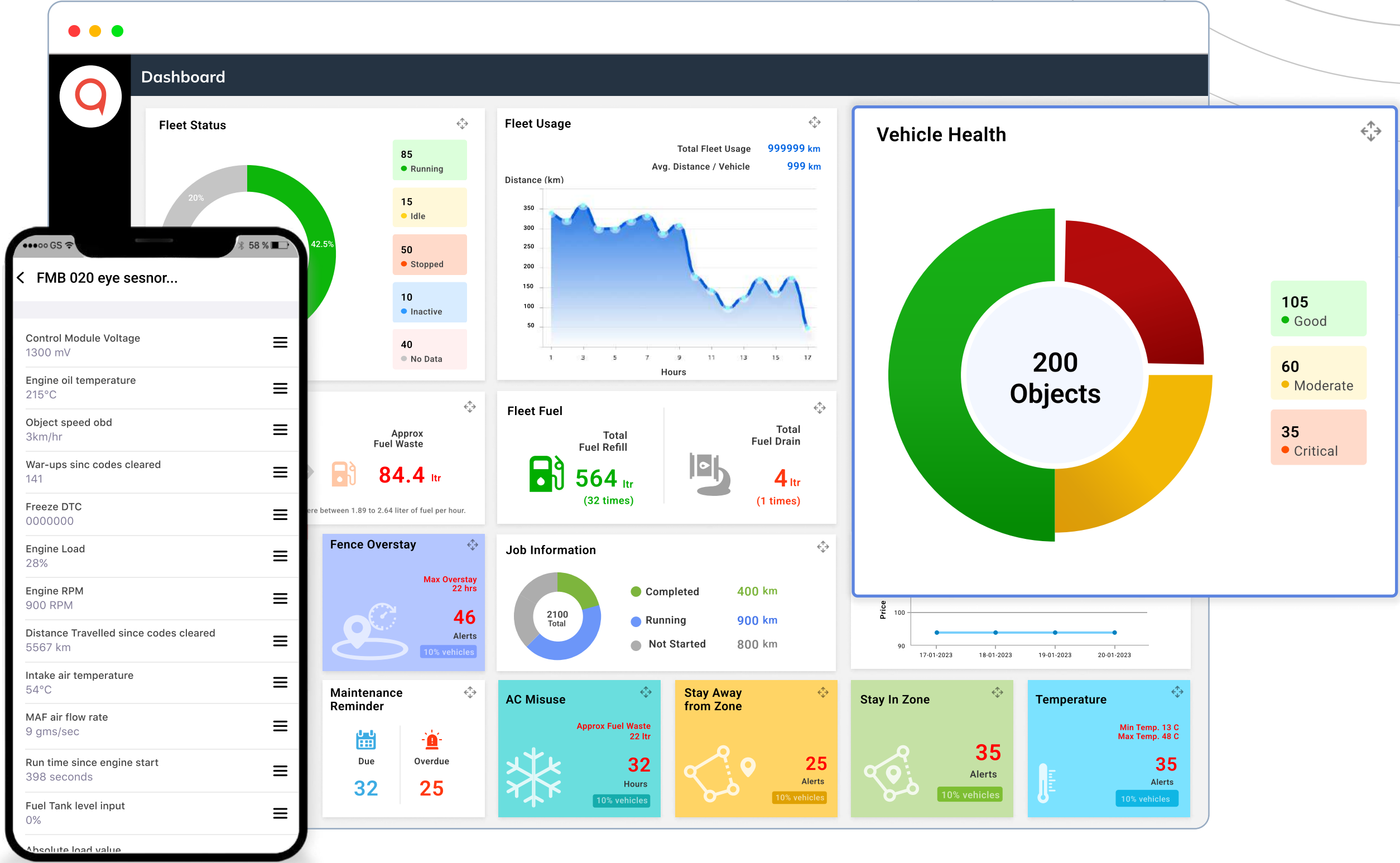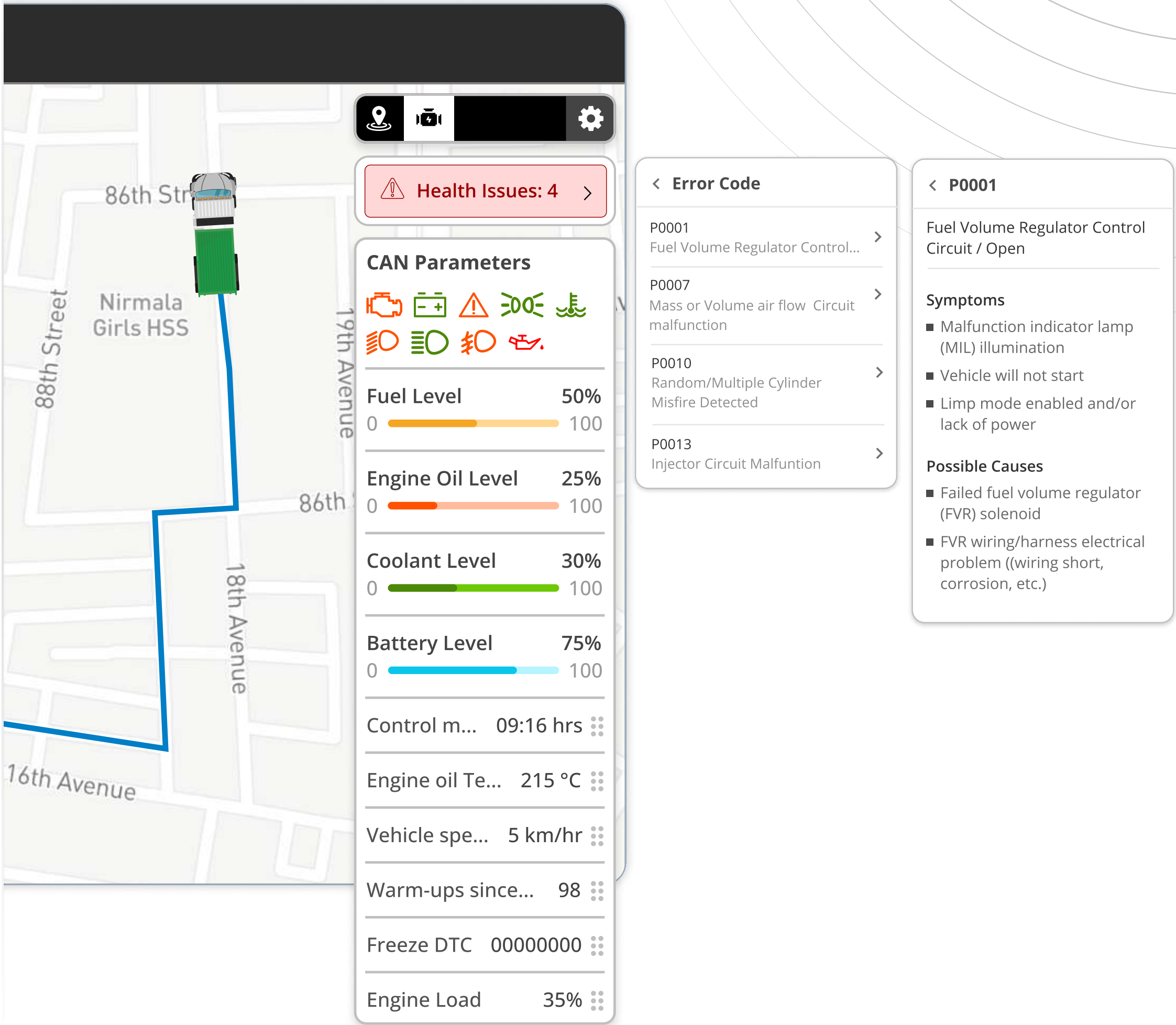
Vehicle Health Parameters

Fleet managers can easily define thresholds for different parameters according to the model of the vehicle, ensuring that they stay on top of any potential issues before they turn into major problems.

Fleet managers will also get detailed fault code identification and descriptions. When a fault code is generated, the software provides a clear and concise symptoms and cause of the issue, including the affected system or component and the severity of the issue.

This helps to identify the root cause of the problem and prioritize repairs based on urgency. With the fault code analysis, fleet managers can ensure that the fleet is always running at peak performance and minimize any downtime or maintenance costs.

⚠ Health Issues: 4 >

CAN Parameters

Fuel Level 50%
0 — 100

Engine Oil Level 25%
0 — 100

Coolant Level 30%
0 — 100

Battery Level 75%
0 — 100

Control m... 09:16 hrs

Engine oil Te... 215 °C

Vehicle spe... 5 km/hr

Warm-ups since... 98

Freeze DTC 00000000

Engine Load 35%

< Error Code

P0001
Fuel Volume Regulator Control... >

P0007
Mass or Volume air flow Circuit malfunction >

P0010
Random/Multiple Cylinder Misfire Detected >

P0013
Injector Circuit Malfuntion >

< P0001

Fuel Volume Regulator Control Circuit / Open

Symptoms
- Malfunction indicator lamp (MIL) illumination
- Vehicle will not start
- Limp mode enabled and/or lack of power

Possible Causes
- Failed fuel volume regulator (FVR) solenoid
- FVR wiring/harness electrical problem ((wiring short, corrosion, etc.)

Insightful Reports

By analyzing data on vehicle health parameters fleet managers can identify trends and patterns that may indicate potential issues. This allows them to take proactive measures to address issues before they become major problems.

Health Status

Get the total number of faults detected for each parameter, along with a health score indicating the overall health of the vehicle or equipment.

Engine Temperature

Get valuable information such as distance traveled, engine running and idle times, maximum and minimum temperatures etc. It also shows the number of times the engine temperature went above or below ideal levels.

Battery Voltage

This report includes maximum and minimum voltages, and the number of times the battery voltage went above or below ideal levels. This information can be used to track usage patterns, identify abnormal driving behavior, and monitor battery health.

OBD Parameters

By tracking parameters such as ignition, power, speed, and battery percentage, fleet managers can gain insights into how their vehicles are being used and how efficiently they are operating.

And Many More...

Health Status Summary

Object	Total Fault	Health
GJ 15 AA 9022	0	Good
MH 02 RR 5689	1	Major
KA 10 PO 3482	0	Good
GJ 28 HH 1122	0	Critical
DL 12 D		
GA 01		
KL 01		
DL 06 M		
GJ 15 A		
GJ 15 C		

Engine Temperature

Object	Distance	Running	Idle	Max Temp.	Min Temp.	No Of Times Above Ideal	No Of Times Below Ideal
GJ 15 AA 9022	1902.49	26:58	08:35	90	84	0	1
MH 02 RR 5689	865.86	25:00	50:06	104	86	0	0
KA 10 PO 348							
GJ 28 HH 112							
DL 12 DD 555							
GA 01 LL 2020							
KL 15 CN 2002							
DL 06 MN 802							
GJ 15 AB 1234							
GJ 15 CN 6800							

Battery Voltage

Object	Distance	Running	Idle	Max Voltage	Min Voltage	No Of Times Above Ideal	No Of Times Below Ideal
GJ 15 AA 9022	1902.49	26:58	08:35	13.5	10.5	0	1
MH 02 RR 5689	865.86	25:00	50:06	14	10.2	0	0
KA 10 PO 3482							
GJ 28 HH 1122							
DL 12 DD 5553							
GA 01 LL 2020							
KL 15 CN 2002							
DL 06 MN 802							
GJ 15 AB 1234							
GJ 15 CN 6800							

OBD Parameters

Time	Location	IGN	Power	GPS	Device Battery%	Engine fuel Rate	Fuel Used	Engine Load	Engine Coolant Temp
01-04-2023 01:59 PM	Tersali Chokdi, Adarsh Nagar, Tarsali, Vadodara	🔑	⏻	📶	83.5	0	21	29	11
01-04-2023 02:04 PM	Near HDFC Bank, Shanker Talav, Gujarat	🔑	⏻	📶	83	0	24	18	12
02-04-2023 11:30 AM	Primary Health Centre, Abrama, SH6:704, Navsari	🔑	⏻	📶	82	0	14	20	13
					82.5	0	34	22	16
02-04-2023 02:19 PM	R507,South Hall,The Municipal District, Navsari	🔑	⏻	📶	86.9	0	15	-	14
02-04-2023 05:55 PM	SUNNI KASHBA MASJID, Vadodara	🔑	⏻	📶	83	2	25	17	14
02-04-2023 10:45 PM	Shivam Infinity, Ranchhodji Nagar, Vadodara	🔑	⏻	📶	84	0	29	-	12
					82.1	0	12	18	11
03-04-2023 05:14 AM	Mogale City Ward 14,Mogale City Local, Valsad	🔑	⏻	📶	82	1	33	26	12
03-04-2023 04:18 PM	Ganesh Temple, Nagari mandal, Valsad	🔑	⏻	📶	85	0	29	-	13

4

Warning Alerts

Fleet managers can easily define thresholds for different parameters, allowing them to customize alerts and set triggers. With real-time notifications of any potential issues or faults in the vehicle, fleet managers can quickly address problems before they become major issues.

Engine Fault Alerts
These alerts notify the fleet manager when the software detects any fault codes related to the engine system.

Battery Alerts
These alerts inform the fleet manager about low battery levels or issues with the battery charging system.

Tire Pressure Alerts
These alerts notify the fleet manager when the tire pressure of a vehicle goes below the recommended level.

Fuel Alerts
These alerts inform the fleet manager when a vehicle's fuel level is low or when there is any issue with the fuel system.

And Many More...

Vehicle Health Parameters

Engine Coolant Temperature **85%**
0% 100%

Fuel level **55%**
0% 100%

Good   **Moderate**   **Critical**

Save   Cancel

Vehicle Health Issue 2

P0115 - Engine Coolant Temperature **Critically High**

Overcoming Inefficiencies in Fleet Maintenance in **Tourism Industry**
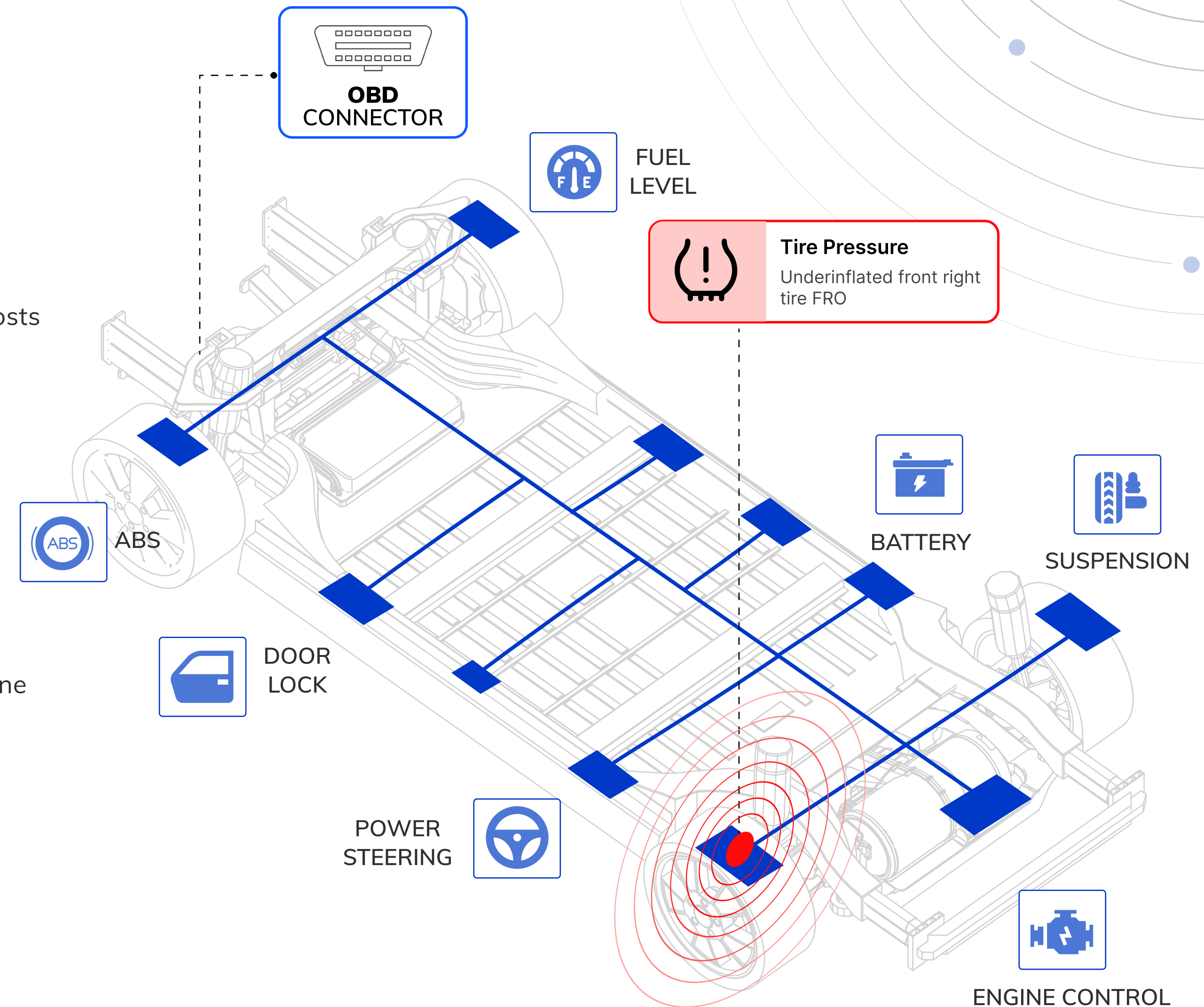
Challenges

- Lack of visibility into vehicle health parameters, leading to breakdowns and unscheduled maintenance during tours
- Inaccurate tracking of fuel consumption and mileage, resulting in higher operating costs
- Difficulty in identifying vehicle issues before they escalate, leading to longer downtimes and reduced customer satisfaction
- Time-consuming manual monitoring and data analysis, diverting resources away from core business operations

Solution

- Implemented vehicle health monitoring to monitor and collect data on engine parameters in real-time.
- Setting up automatic alerts for out-of-parameter readings to prompt maintenance
- The system provided access to vital engine data such as fuel consumption, and engine temperature etc. enabling fleet managers to identify and address issues before they impact tours.

Results

- Improved visibility and control over engine health, leading to fewer breakdowns and unscheduled maintenance
- Early detection of engine problems, leading to timely repairs and preventing costly breakdowns

OBD CONNECTOR

FUEL LEVEL

Tire Pressure
Underinflated front right tire FRO

BATTERY

SUSPENSION

ABS

DOOR LOCK

POWER STEERING

ENGINE CONTROL

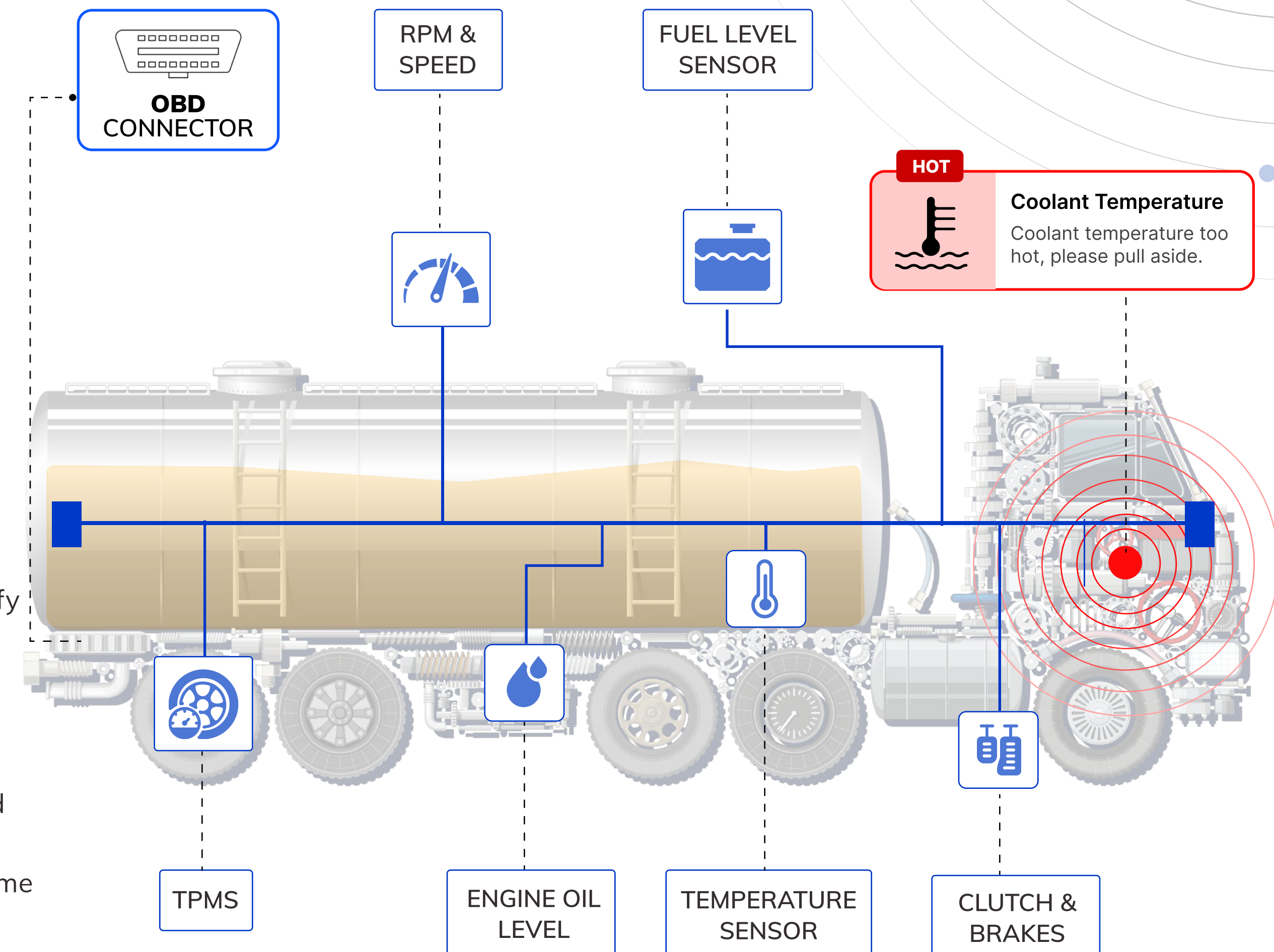# Enhancing Equipment Health and Uptime in Oil and Gas Industry

Challenges

- Difficulty in monitoring equipment health and identifying potential issues early on
- Limited visibility into engine and equipment performance
- Manual tracking of equipment maintenance schedules and repairs
- Coolant temperature issues due to the high operating temperatures in oil and gas exploration sites

Solution

- Implemented vehicle health monitoring system that collects data on critical engine and equipment parameters
- Utilized analytics to identify potential issues before they occur and schedule maintenance based on the collected data
- Implemented alerts based on certain threshold for various engine parameters to notify of any abnormal readings or potential issues.

Results

- Improved visibility into equipment performance and health
- Reduced fuel consumption and emissions through real-time monitoring of engine and equipment parameters
- Reduced risk of coolant temperature-related issues, leading to increased vehicle uptime and reduced repair costs.

OBD CONNECTOR

RPM & SPEED

FUEL LEVEL SENSOR

HOT
Coolant Temperature
Coolant temperature too hot, please pull aside.

TPMS

ENGINE OIL LEVEL

TEMPERATURE SENSOR

CLUTCH & BRAKES

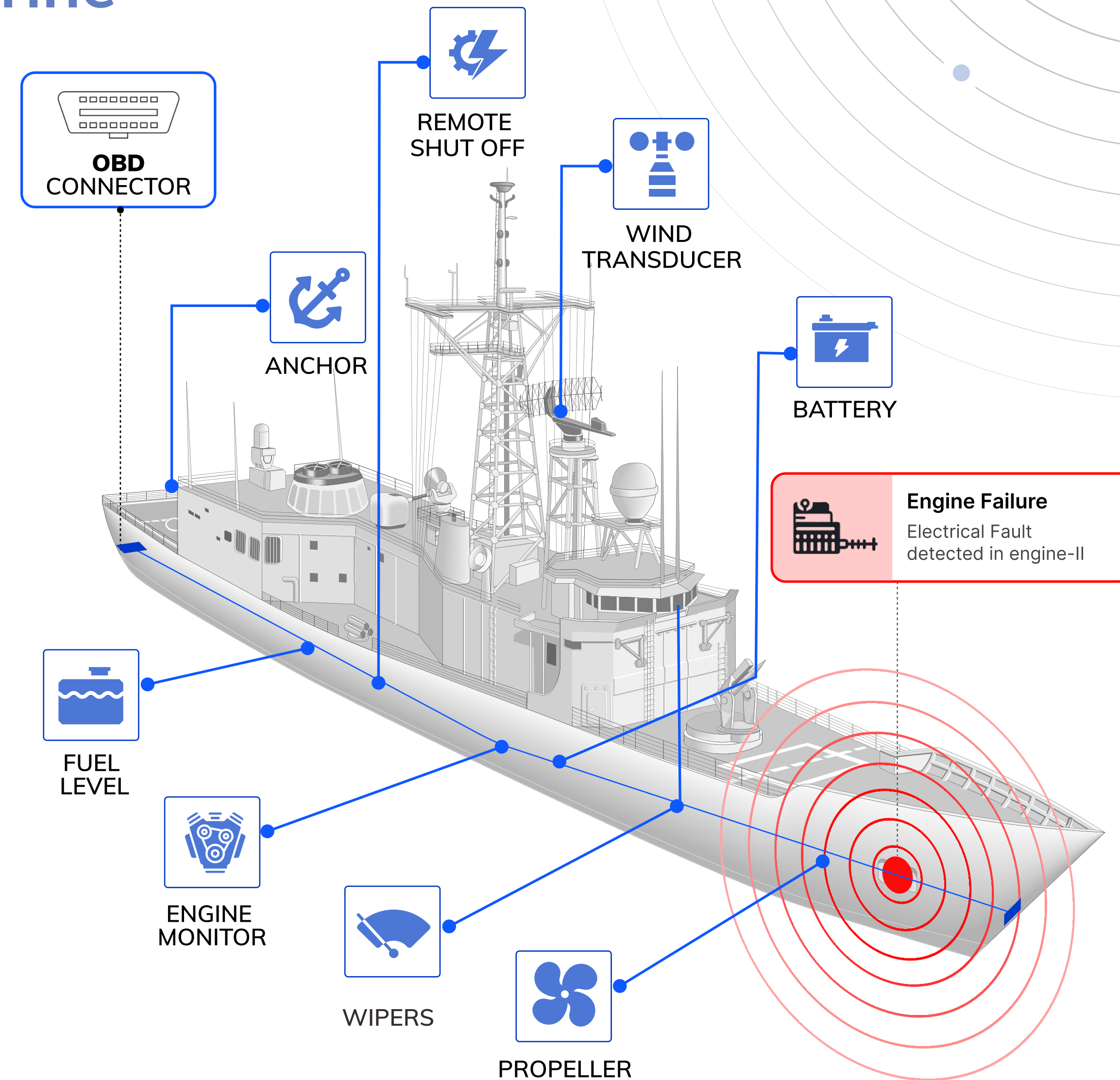# Ensuring Optimal Engine Health in Marine Industry

Challenges

- Lack of real-time monitoring and insights into the health and performance of marine engines and equipment.
- Difficulty in identifying engine problems early on leading to engine failure issues.
- Manual tracking of maintenance schedules and inspections, leading to potential oversights and increased downtime.

Solution

- Implemented a system that collects real-time data on key engine parameters, such as oil pressure, engine temperature, and fuel consumption.
- Utilize analytics to identify potential issues before they escalate and schedule maintenance and repairs based on the collected data.
- Implemented automatic alerts for out-of-parameter readings or potential issues to prompt maintenance actions and prevent engine failures at sea.

Results

- Improved engine reliability and uptime, leading to increased vessel productivity and profitability.
- Enhanced safety for crew and passengers by minimizing the risk of engine failures and accidents at sea.
- Reduced maintenance costs and downtime through proactive maintenance scheduling and early detection of potential issues.

OBD CONNECTOR

REMOTE SHUT OFF

WIND TRANSDUCER

ANCHOR

BATTERY

Engine Failure
Electrical Fault detected in engine-II

FUEL LEVEL

ENGINE MONITOR

WIPERS

PROPELLER

Our software is designed to be **flexible, scalable, and customizable**. We understand that every business is unique, and we work closely with our customers to ensure that our solutions are tailored to meet their specific needs.

Contact us today to learn more about how our software can benefit your business.
info@uffizio.com

Thank you!