



# GAMBUS

## Power Business Proposal

Intelligent Power & Engine  
Monitoring Solution

# Introduction

## Gambus Energy Limited

Gambus Energy specializes in providing a **comprehensive** range of services in the areas of Fleet Management, Asset Security, and Remote Site Monitoring. These services are designed to help businesses efficiently manage their operations, enhance security measures, and monitor remote sites effectively.



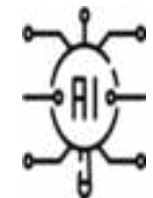
### Remote Analytics

Digitize your energy producing assets to **detect** anomalies



### Life Extension

Make assets **last longer** by changing customers and systems **behavior**.



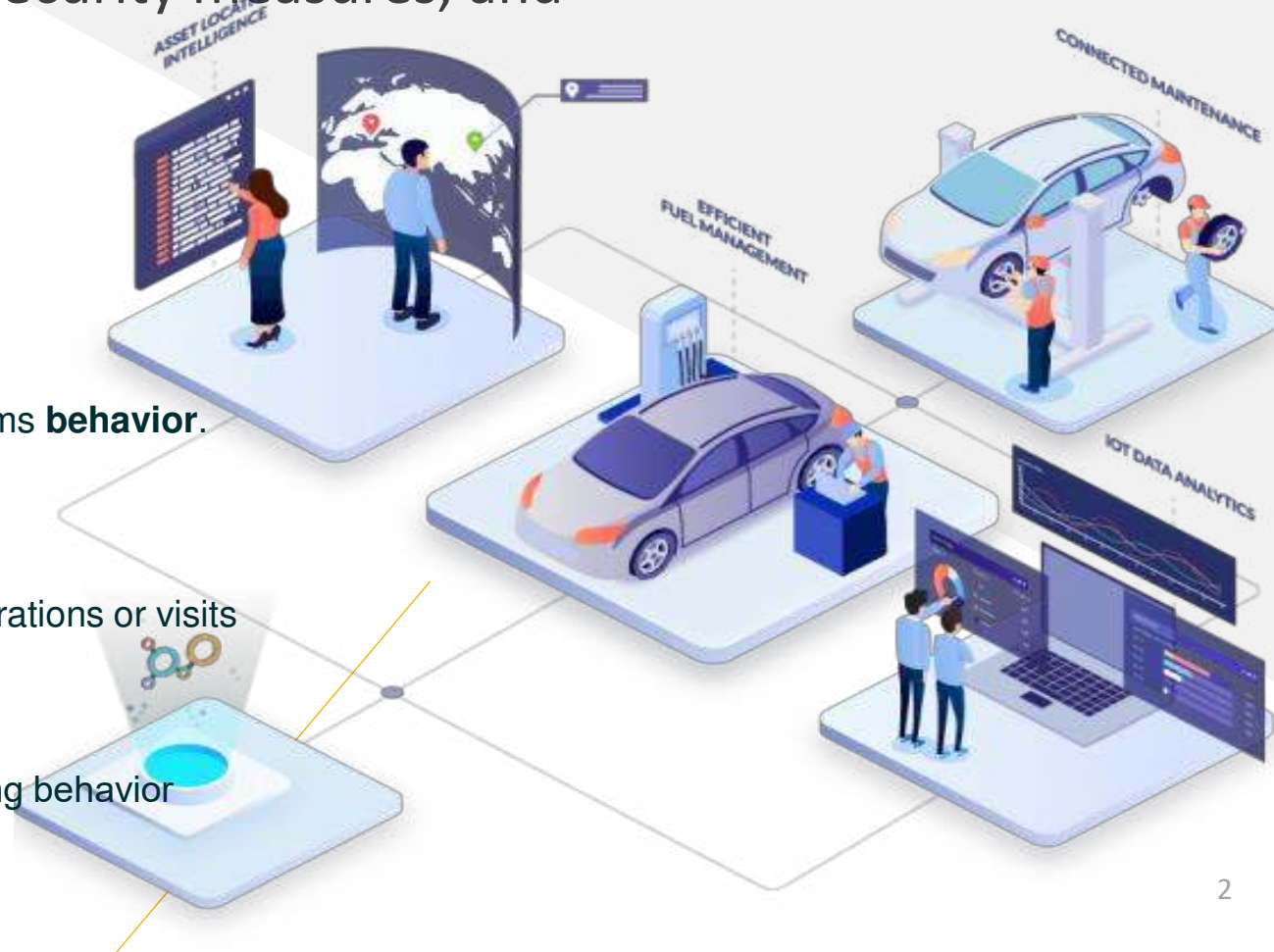
### Taking Control

**Artificial intelligence** models that eliminate manual configurations or visits



### Smart Management

Remotely **check pulse** of all assets' parameters and ongoing behavior



# Executive Summary

Gambus Energy (simply known as Gambus) is a leading provider of remote performance monitoring solutions for stationary and mobile assets, energy, and power sources. Founded in 2017 by Mr. Ayoola Olaitan, the company offers services in various sectors like construction, manufacturing, automotive, power and oil and gas.

- Nigeria is like most other African Countries where public utility is highly unstable and cost of providing standby alternative Power source is putting big overhead on both Private organizations and Public Agencies.
- **Gambus** help businesses cut their cost of alternative power solution through effective monitoring of both the power generation set and diesel tanks by providing real-time alert of happenings, abnormalities or any target events across all branches from the comfort of your office, home or on the go



# Welcome to Gambus IPMS

- Gambus Intelligent Power Monitoring Solution (IPMS) is a cutting-edge system designed to provide comprehensive monitoring and analysis of power consumption in various environments.
- With its advanced capabilities, IPMS enables users to gain valuable insights into their energy usage patterns, identify inefficiencies, and make informed decisions to optimize power consumption.

**Significant operational expenses will be saved by eliminating losses in the following areas**

- Receive real-time smart notification of event of interest.
- Remotely Control your generator sets.
- Enabled analytical Reporting that aid fast decision making .



## Problem Overview

- Businesses especially those with multiple office locations face major challenges in generating their standby power to compliment the erratic public supply. **Significant operational expenses will be saved by eliminating losses in the following areas;**
  - Block leakages like diesel theft and shortages in supply.
  - Eliminate falsified data like false fuel level, false Generator working Hour usage, False Grid Usage Hours.
  - Extend the lifespan of your generator through scheduled maintenance.

# Our Recommended Services

## Diesel Generator Monitoring

Diesel generator monitoring is a hardware and software solution for fuel monitoring, monitoring of diesel generator operation parameters and engine diagnostics, receiving electrical data from alternator and remote gen set control.

## Agricultural machinery Telematics

Agricultural machinery telematics by [Gambus IPS](#) is an integral telematics solution for fuel monitoring, monitoring of operating parameters, GPS tracking and running time tracking of tractors, harvesters and other agricultural vehicles, that are widely used in agro industrial complex and agricultural enterprises.

## Fleet and equipment tracking for the Energy industry(Energy)

Determine the safety of high-value resources like coal, crude petroleum, oil, minerals, and natural gas during their transfer. Keep track of fleet or equipment even when they are beyond coverage areas! Streamline operations for better ROIs. Stay on extraction schedules and eliminate unnecessary equipment or fleet rental charges.

## Mining Equipment Monitoring

Monitoring of fuel consumption and operation modes of mining and quarrying equipment (rock trucks, bulldozers, crawler tractors, loaders, power units) allows to reduce operation costs, prevent fuel theft and equipment breakdown.

# Our Recommended Services

## LNG & CNG Monitoring

Gambus IPMS provides an intelligent telemetry solution used by many LNG and CNG solution providers to monitor and control their compressors and storage tanks.

## Field Sales and Services

Employee Management solutions for Field Sales and Services

Are you unsure of your sales representatives' whereabouts? Do you have difficulty managing time? Losing track of bills and expenses?

Gambus IPMS's dynamic and flexible employee management system can help with all the above. slightly believable. If you are going to use a passage of Lorem Ipsum, you need to be sure there isn't anything embarrassing hidden.

## Digital Drilling

Gambus IPMS's solution "Digital drilling" is designed for performance evaluation and optimization of drilling rig's power units (diesel generator sets) and remote monitoring of drilling rig's engines. Drilling rig monitoring system allows to increase operational efficiency of drilling rig, reduce maintenance costs and prevent failures of power units.

## Smart Agriculture: Granary Solution

Smart solution for remote granary solution / monitoring

### Tasks

Online fuel consumption monitoring

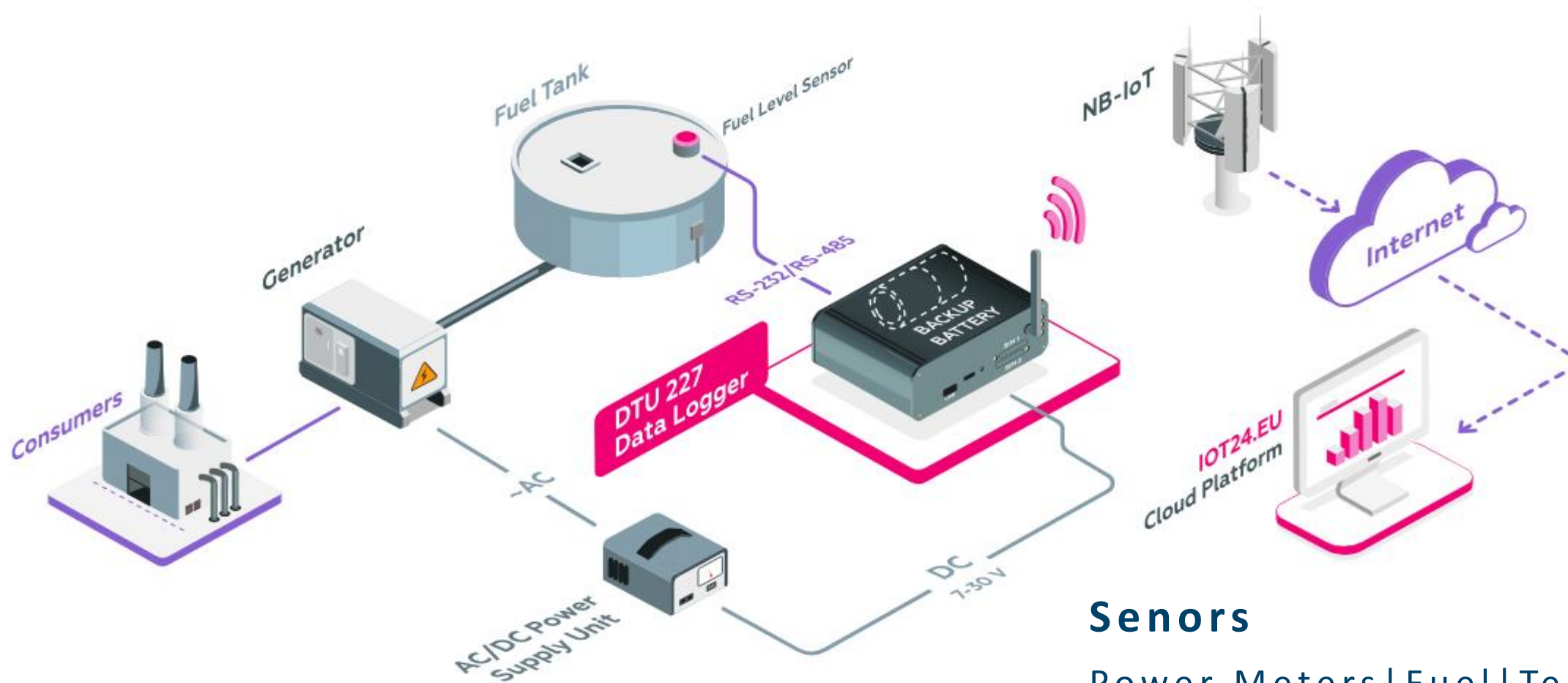
Online monitoring of fuel fill-ups and draining

Grain moisture control

Tracking operation time of equipment

Fuel theft prevention

# Gambus Solution Architecture



## 3<sup>rd</sup> Party Solutions

Batteries | Solar | Wind | Generator | Rectifiers | Access Control

## Sensors

Power Meters | Fuel | Temperature | Smoke | CCTV

# Remote Site Management

Control Tower  
Capabilities

Highly Configurable  
Interface

Deep Drill-Down and  
Filtration

Interactive Visual  
Analytics



## Accessories

- Elara – Din Rail
- EX20 – Din Rail Extension
- EX-ETH –Din Rail Ethernet input
- DC-DC converter
- Metal Distribution Box
- Fuel Sensor
- DC Meter
- AC current detector
- 12V Relay
- 48V Relay
- 220V Relay
- Door Sensor
- Temperature sensor
- Smoke detector
- Air-condition current detector
- 3 Phase Energy Meter

# Diesel Generator Monitoring

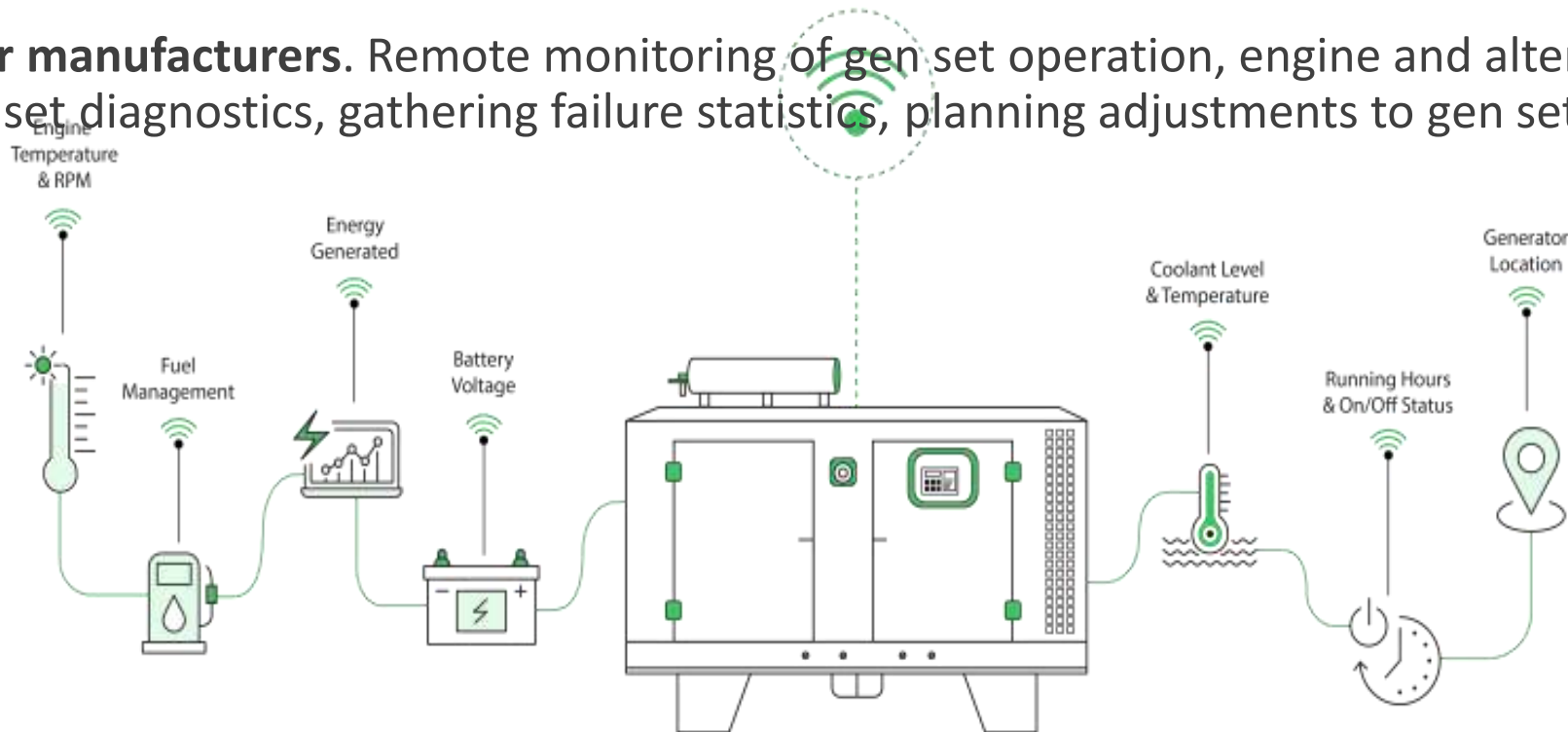
## Diesel generator monitoring field of application

Remote diesel generator monitoring (also called generator telematics) is used for industrial and residential power generators, which are used as main, reserve or auxiliary energy source.

**Owners and operators of generators.** Remote supervision of operation and diesel generator management, gen set fuel monitoring, getting data for accounting and predictive maintenance.

**Servicing companies,** engaged in DG maintenance and repairs. Diagnostics of engine and alternator, operating time monitoring, maintenance scheduling, just-in-time servicing and replacement of consumables.

**Diesel generator manufacturers.** Remote monitoring of gen set operation, engine and alternator health monitoring and overall Gen set diagnostics, gathering failure statistics, planning adjustments to gen set design.

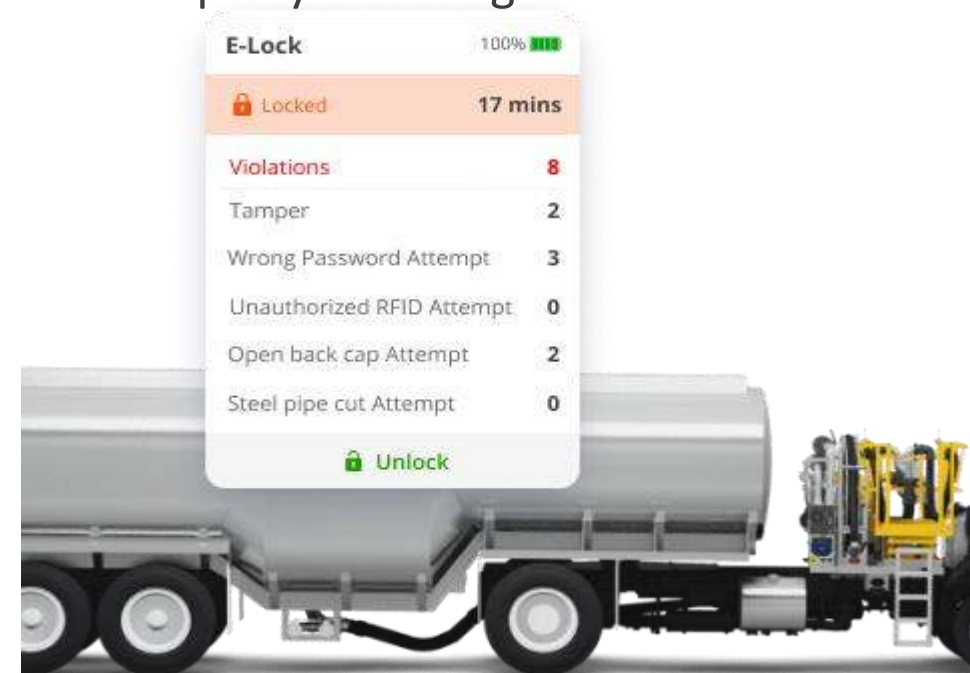


# Fleet and equipment tracking for the Energy industry(Energy)

## Benefits

- Manage equipment and construction fleets over multiple job sites. Boost productivity by streamlining operations.
- Reduced Thefts: Alerts for route deviation, unauthorized stops, and consignment tampering, and more.
- Fewer Repairs: Access actionable maintenance data and save a fortune on equipment repairs.
- Enhanced Safety: Get live alerts for site accidents and protect your on-site workers and drivers.
- Customizable Features: Our platform is configurable and allows 3rd party API integration.

Summary				
Vehicle	Work Duration	Running	Stop	Dist
15 AA 9022	02:30	01:00	00:04	33
404 CD 3222	05:45	00:30	01:04	20
402 DD 6565	01:02	00:15	00:34	18
10 AB 2123	00:30	00:30	01:10	11
12 CC 3214	06:30	02:30	01:00	46
12 CC 3214	04:32	00:12	01:20	0.
06 JJ 2654	02:38	03:03	00:20	200
03 LL 1122	01:56	01:03	01:00	89
05 RR 7587	04:50	02:03	01:00	99



# Agricultural machinery Telematics

**Fuel monitoring of agricultural machinery** provides opportunities of detecting fuel over consumption, normalizing fuel consumption quotas for each operation, monitoring fuel tank fill-up and draining volumes and preventing fuel theft, which happens due to adopted excessive fuel consumption quotas or violations of operating procedures.

**Operation parameters monitoring of tractors and harvesters** allows fleet manager to monitor compliance of operating procedures, check operation of auxiliary and attached equipment, keep an eye on operation modes of machinery (engine RPM, instant fuel consumption, temperature of cooling fluid, oil pressure).

**Machine running time tracking** helps to adjust time quotas for certain works, precisely record real engine operation hours, also allows introducing employee compensation system based on actual working hours.

**GPS tracking of tractors and harvesters** provides information on location and route of vehicles, movement direction and route and enables detection of machinery misuse and inappropriate usage for private purposes.

## Effects of implementing agricultural machinery monitoring system

**Lowering fuel and lubricants costs:** fuel consumption optimization (detection of excessive consumption), diesel fuel theft prevention (fuel tank siphoning and theft from engine return line, underfilling fuel in a tank)

**Reduction of maintenance costs:** remote malfunction diagnostics, breakdown prevention, prediction of maintenance date taking into account real operating conditions of the equipment

**Increase fleet performance:** reduction of excessive downtime, prevention of inappropriate usage, strengthening labor discipline.



# Mining Equipment Monitoring

## Tracking Mining Workers and Machinery

Personnel safety on mining sites, both above and underground, has long been a concern. Exercising safe mining practices means doing more than avoiding operational errors. Mining businesses need proactive strategies to confront possible on-site accidents while safeguarding assets.

### Benefits:

**Increased Visibility:** Check on workforce idling even when they are underground and out-of-sight! See your business

**Lone Worker Safety:** Deploy SOS module during emergencies. Dispatch first responders within seconds of a mishap.

**Geofencing:** Geofence sites that are prone to cave-ins and rock-falls. Receive notifications when someone wanders over the geo-fenced areas.

**Secure your investment:** Mining implements can cost a fortune! Safeguard them with our equipment tracking and maintenance tools.



# LNG & CNG Monitoring

Our Midi Remote terminal Units (RTUs) can monitor any size of Compressor, new or existing. They can provide PLC style Ladder logic to automatically control your system. All data is reported regularly to our cloud servers using broadband or wireless communications.

- Live monitoring and controlling from any device with internet access.
- Monitor Pressures, Temperatures, Levels, Hours Run, Compressor Status and Electrical Parameters.
- View live compressor status and operate remote controls including Start, Stop and Reset.



# Digital Drilling

## Tasks

- Fuel theft prevention
- Engine operation time tracking
- Online fuel consumption monitoring
- Prevention of equipment downtime
- Remote monitoring of equipment health

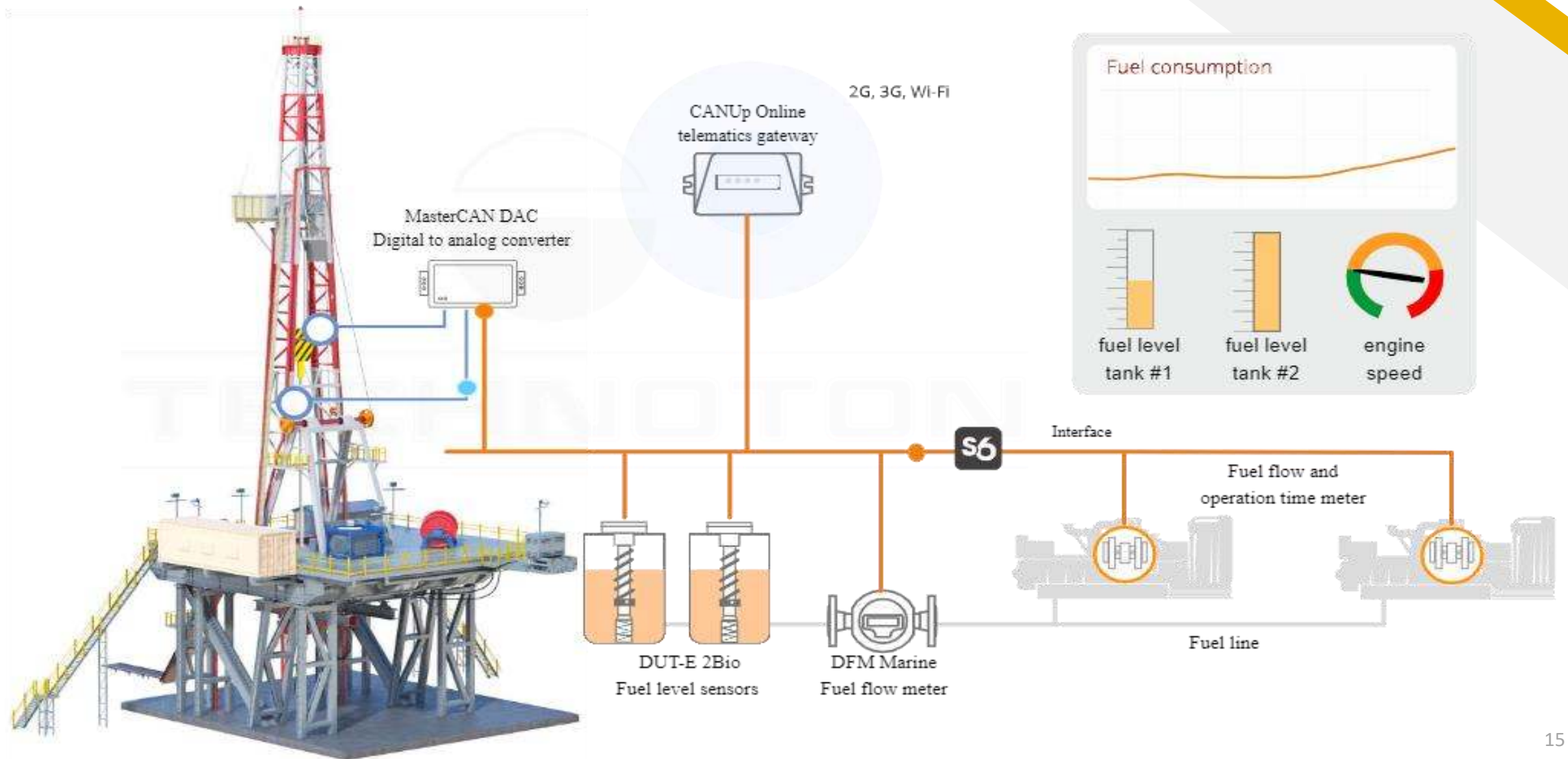


Gambus IPMS's solution "Digital drilling" is designed for performance evaluation and optimization of drilling rig's power units (diesel generator sets) and remote monitoring of drilling rig's engines. Drilling rig monitoring system allows to increase operational efficiency of drilling rig, reduce maintenance costs and prevent failures of power units.

Extended information on fuel volume in tanks, fuel consumption and engines' operation time in various work modes is gathered using smart-sensors such as DUT-E fuel level sensor and DFM fuel flow meter. Basic data from standard rig sensors (temperature, rotation, pressure) is collected using MasterCAN DAC configurable i/o module. All data is sent over CAN j1939/S6 interface to CANUp online gateway and later transferred to web-based monitoring platform.

# Digital Drilling

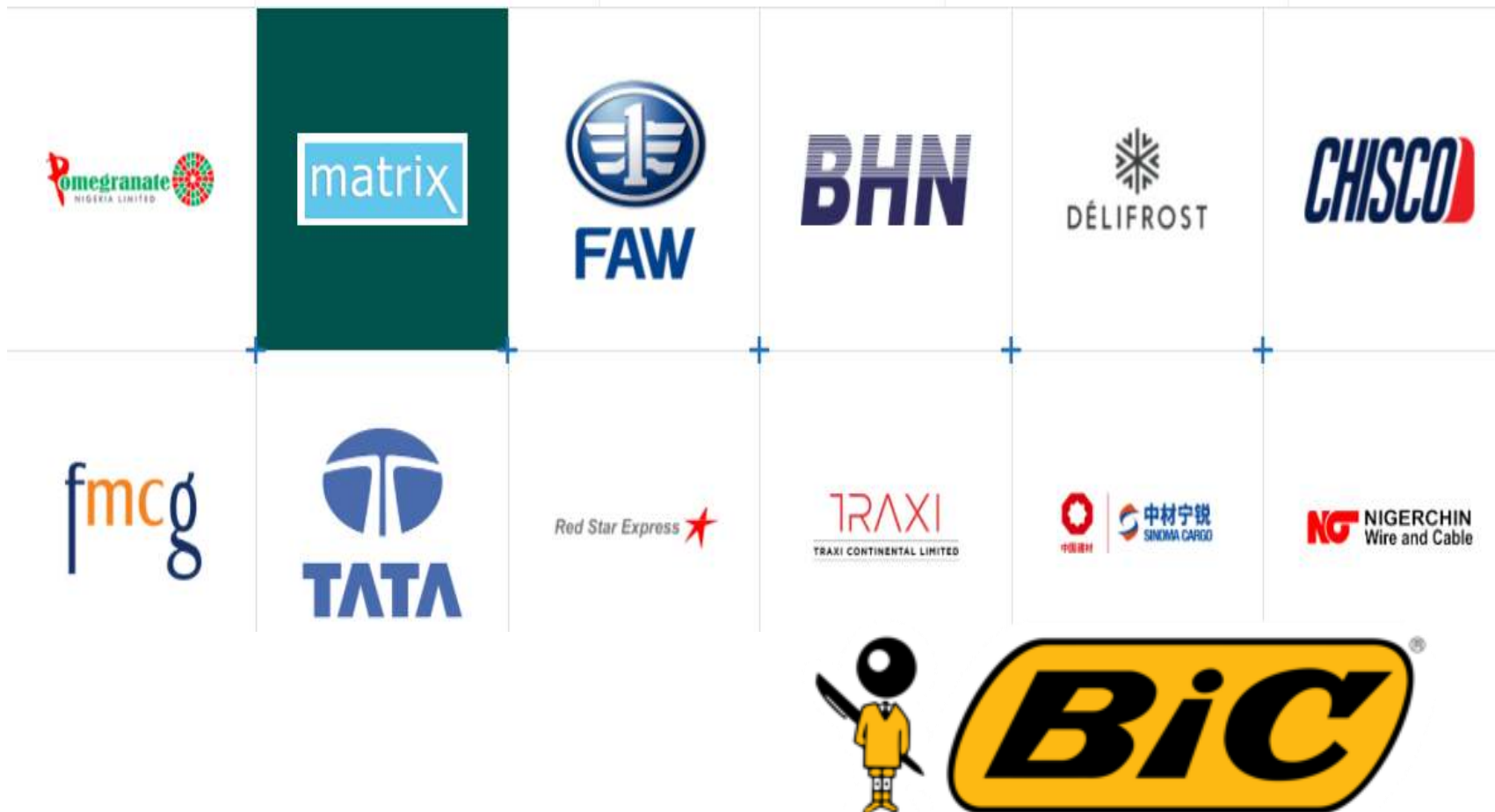
## TELEMATIC SYSTEM SETUP



# Empowering the world's largest companies

## More than 5,000 businesses using our solutions, some among Fortune 500

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ap ardova plc

ENYO  
Retail and Supply Limited

BUILDWELL  
PLANTS & EQUIPMENT  
INDUSTRIES LTD.



# Thank You.



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