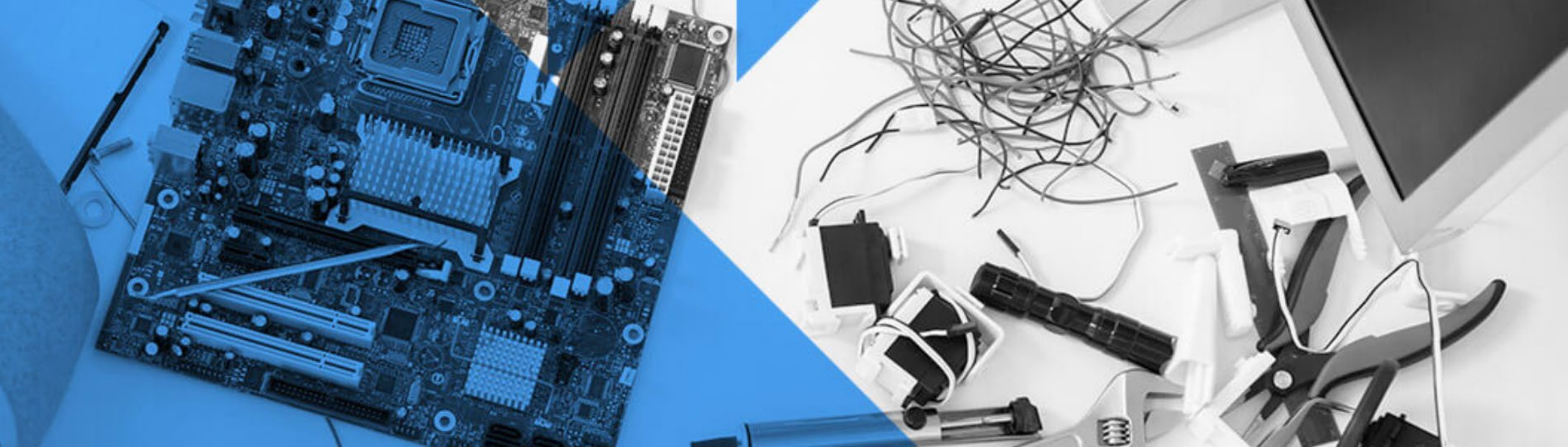


# ASSET TRACKING WITH BLUETOOTH LOW<sup>®</sup> ENERGY

APPLICATIONS & DEVICE GUIDE





# Bluetooth® Low Energy Technology

**Affordable and  
Efficient**

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**Bluetooth Low Energy (BLE)** is a variant of the Bluetooth technology used in many wireless consumer electronics. BLE is designed for short-range communication and offers many affordable and efficient asset tracking solutions.



Asset tracking with Bluetooth Low Energy involves a Bluetooth Gateway device and Bluetooth Tag.

# How does BLE work?

## Bluetooth Tags

- Bluetooth tags are placed on small or lower-value assets.
- The tag sends beacon signals every few seconds (frequency is configurable).
- Signals are detected by Bluetooth Gateway Devices.
- BLE Tags are compact and affordable, and do not require a SIM card or data plan.

## Gateways

- Digital Matter Gateway Devices house both Bluetooth 5.0 and GPS/GLONASS Modules.
- These devices provide GPS location and can also detect nearby Bluetooth signals.
- When a signal is detected, the gateway devices send a list of nearby tags to Telematics Guru, which places their approximate location on the map.
- Bluetooth gateways require cellular connectivity to transmit data.

# Applications

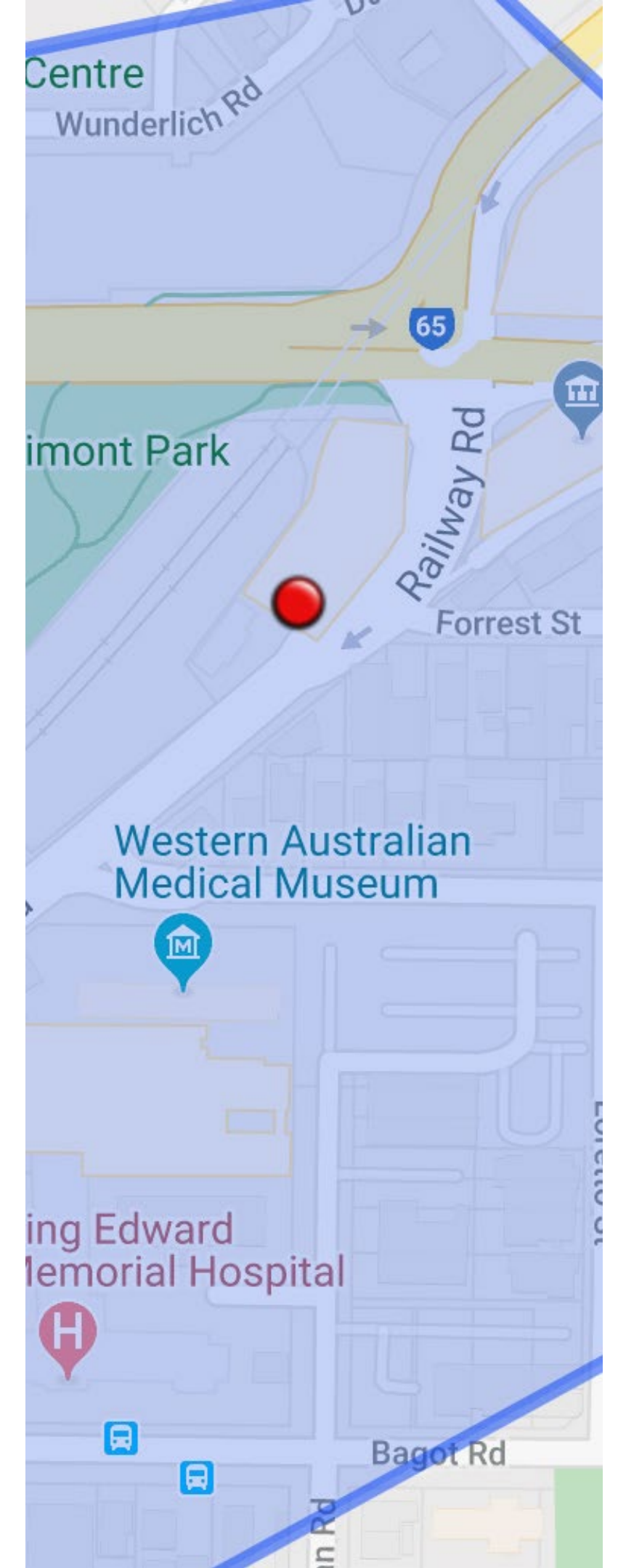
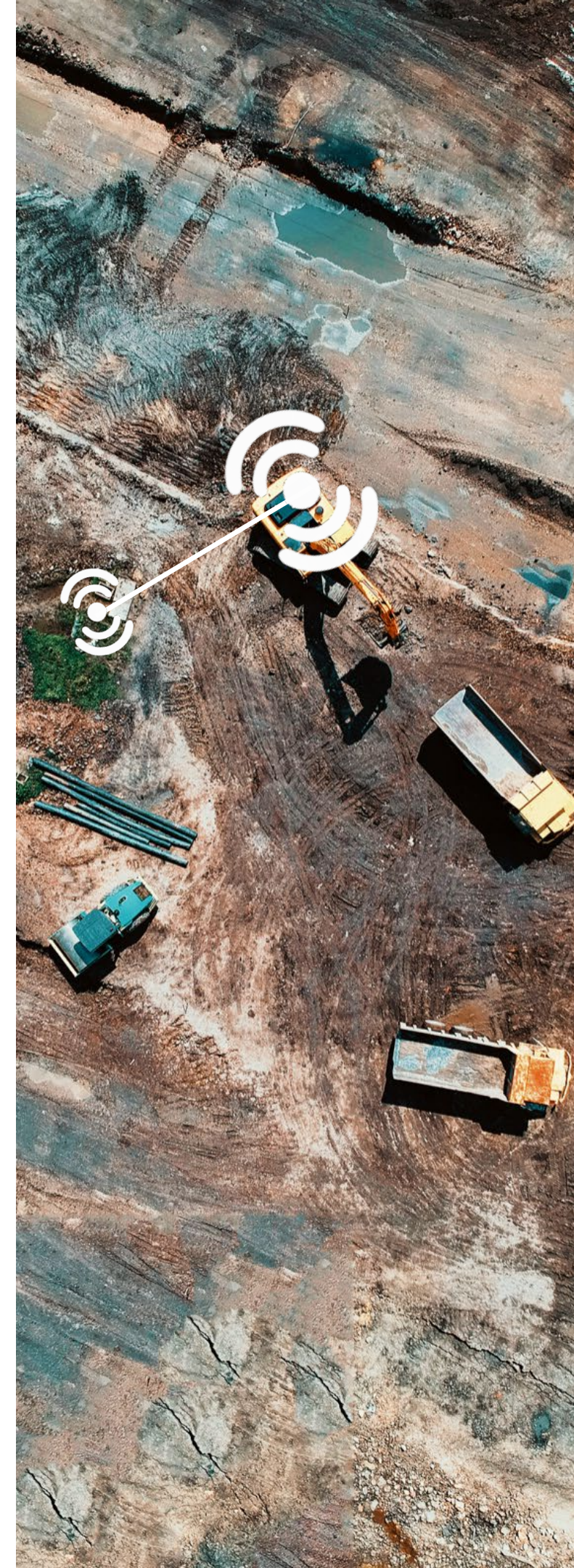
## Track Assets of all Sizes & Values

Bluetooth Tags are perfect for tracking tools, smaller equipment, or any mid-sized non-powered asset where a larger (and expensive) device does not make commercial sense.

Gateway devices provide real-time GPS location and can be:

- Hard-wired into a high-value vehicle.
- Concealed on a worksite.
- Installed on a non-powered high-value asset.

Bluetooth tags are then placed on lower-value assets. When a gateway device is nearby, it detects the tag's signal and the asset's approximate location is shown in our tracking platform.

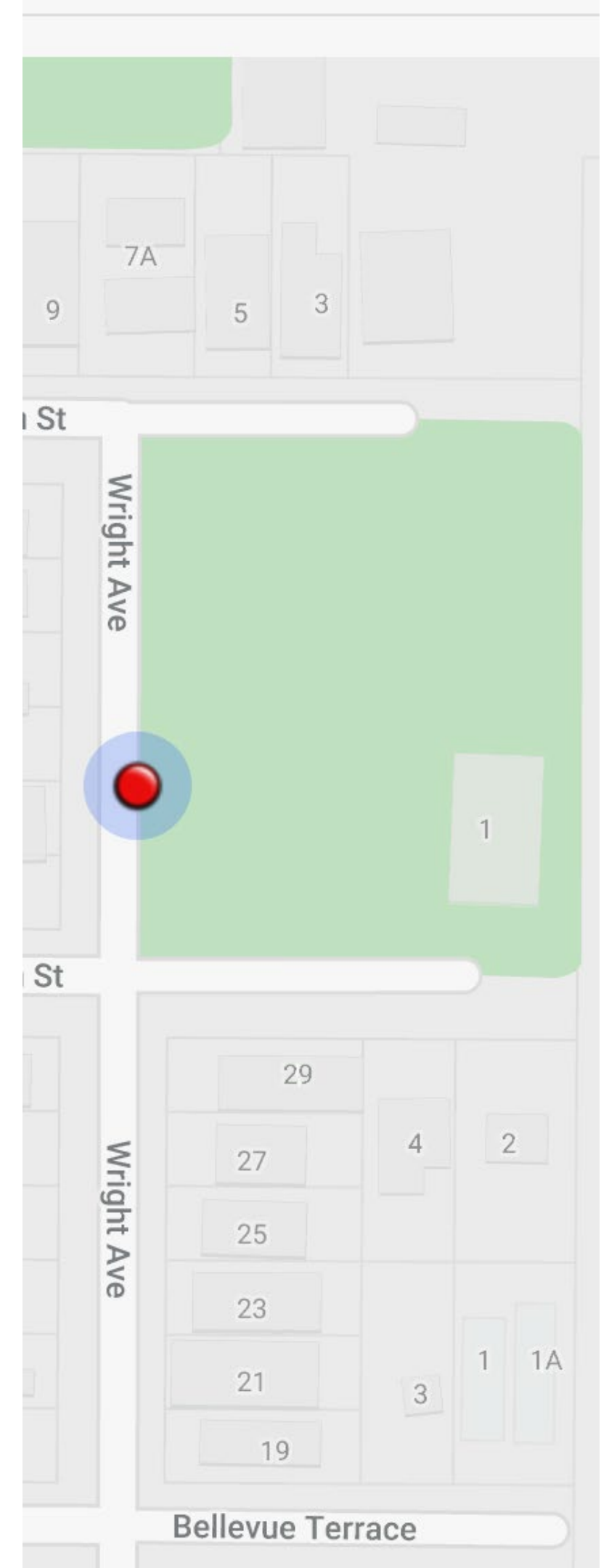
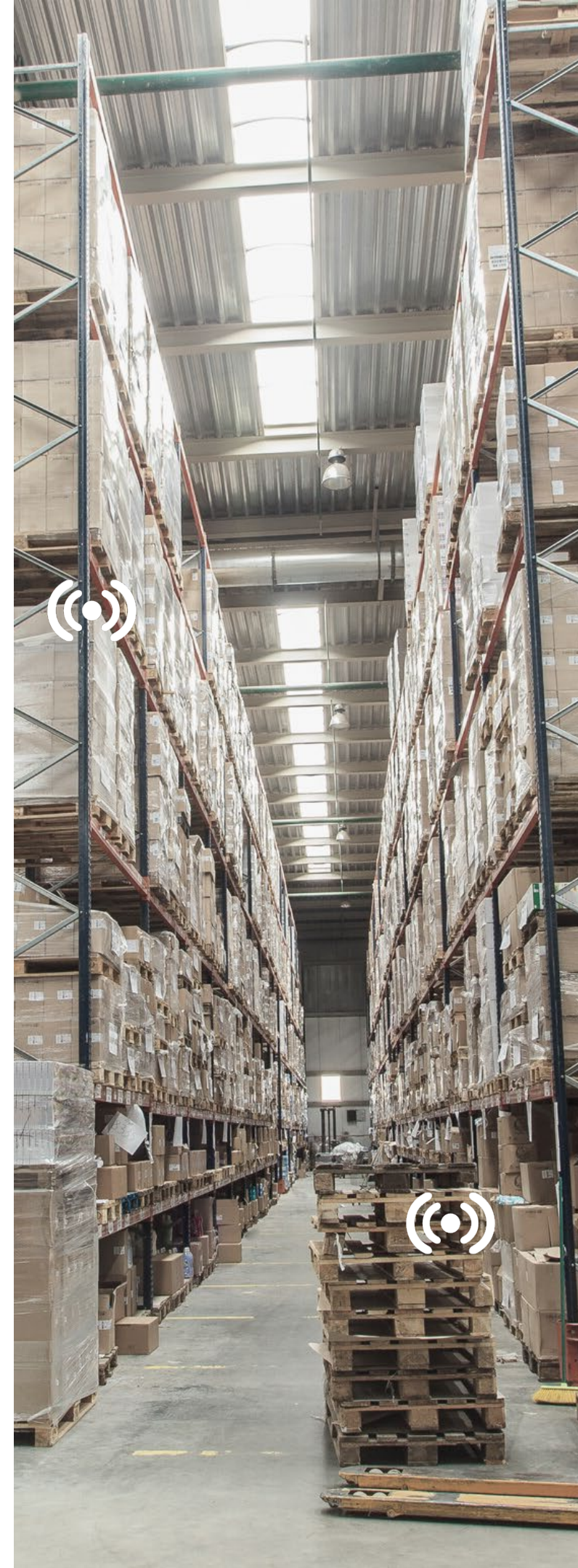


# Applications

## Inventory & Asset Management Across Sites

Keep track of your inventory as you sell, manufacture and restock across multiple warehouse locations.

- Gateway devices are placed in warehouses (Remora2) or installed in delivery vehicles (G120). The G120 also enables Driver Behaviour Monitoring, Driver ID, Door Open Close and more.
- Bluetooth tags are placed on palettes or boxes of stock.
- As the palette or stock moves around warehouses and in and out of vehicles, the nearest Bluetooth Gateway automatically reports on its location.
- Quickly and easy locate the last known location of your stock in our tracking platform.

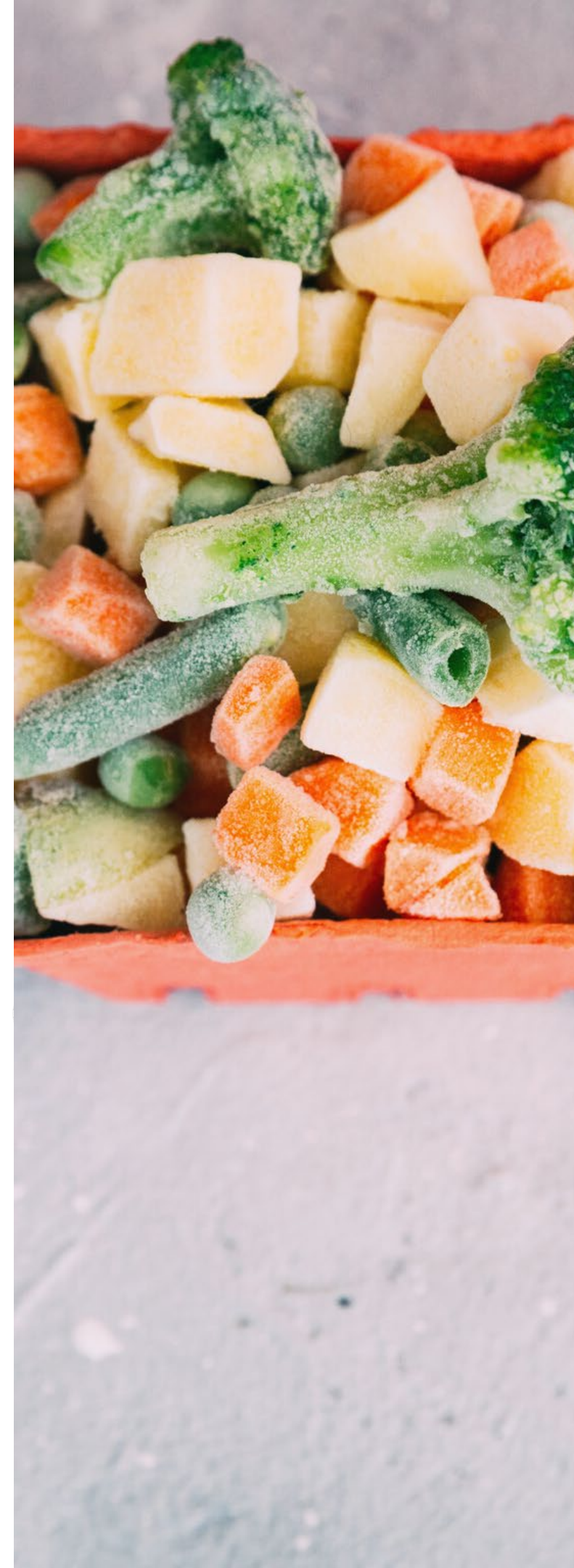


# Applications

## Cold Chain Management / Other Sensor Monitoring

There are several Bluetooth Tag Sensors, including our SensorNode Bluetooth, that collect data such as temperature, moisture, humidity, CO2 and more.

- Sensors are placed in locations or on assets which require regular sensor readings, such as in freezers, refrigerated trucks, in store rooms, etc.
- Gateway devices are installed in trailers, vehicles, or concealed on-site.
- The Sensor sends data to the gateway device, which then reports the data to our tracking platform.



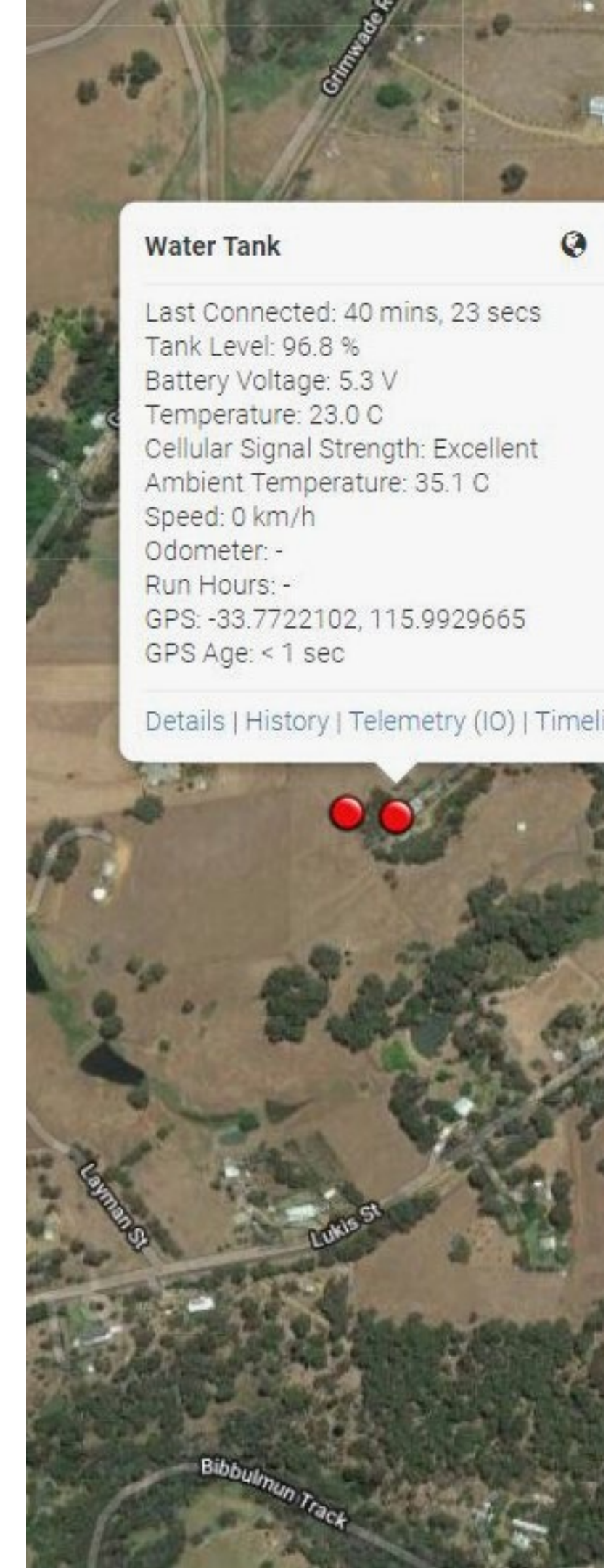
# Applications

## Smart Farming / AgTech

Smart farming uses agriculture technology (agtech) to improve and optimise agricultural operations, increasing the overall quality and quantity of agricultural products.

- Sensors are installed to measure rainfall, soil moisture, humidity, temperature, water and fuel tank levels, etc.
- Industrial Bluetooth tags can also be attached to farming tools and small equipment.
- Gateway devices are installed in tractors, vehicles, heavy farm equipment or concealed on-site.
- Sensors and tags send data to the gateway device, which then reports the data to our tracking platform.

Left Image: Courtesy of GoAnna Ag

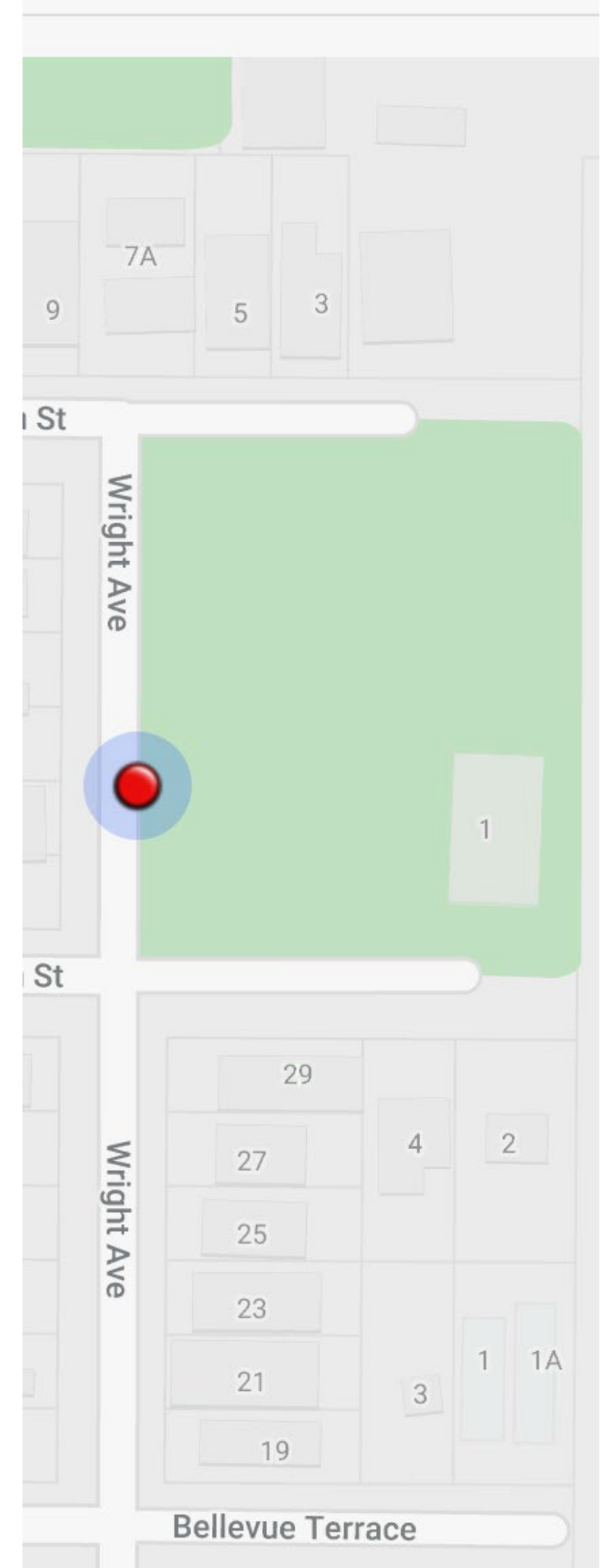


# Applications

## Bin Location Tracking

Bluetooth Tags and Gateways can be used in Waste Management for managing bins and waste trucks.

- The truck contains a gateway device.
- Tags are placed on waste bins.
- When the tag attached to the bin is 'lost' (out of range of the gateway) the bin has been dropped off at this location.
- View the last known location of the bin on our tracking platform.





# Digital Matter Device Features

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## **Versatile Device Range**

We offer an award-winning range of tracking devices, sensors, and IoT devices to meet any tracking application.

## **Rugged and Waterproof**

Waterproof and dust resistant IP67 rated housing ensures device can withstand fine dust, high pressure spray, submersion for 30 mins in 1 metre of water, and extreme temperatures.

## **White Label Ready**

Our devices and tracking platform can be used out-of-the-box or can be white-labelled to match existing branding.

## **Engineered to Outperform**

Uncompromising quality of design, components, engineering, materials and workmanship separates us from other device manufacturers.

# Gateway Option for Vehicles

## G120

### 2G/4G Cat-M1/Nb-IoT GPS

The G120 is an advanced GPS tracking device with a variety of inputs and outputs, designed for vehicle tracking, Driver ID and Driver Behaviour Monitoring.

- Bluetooth 5.0 Module for continuous scanning of tags
- 24/7 Vehicle Monitoring with Ignition Detection
- Multiple inputs and outputs for measuring triggers (Driver ID, SOS Duress Buttons/Pendants, Seatbelt and 4WD Status, Emergency Lights Usage, Door Open / Closed)
- Plug and Play RS232 can be used to connect an Iridium Module for tracking in remote (out-of-cellular coverage) locations



[> View Device Specs](#)

# Gateway Option for Non-Powered Assets

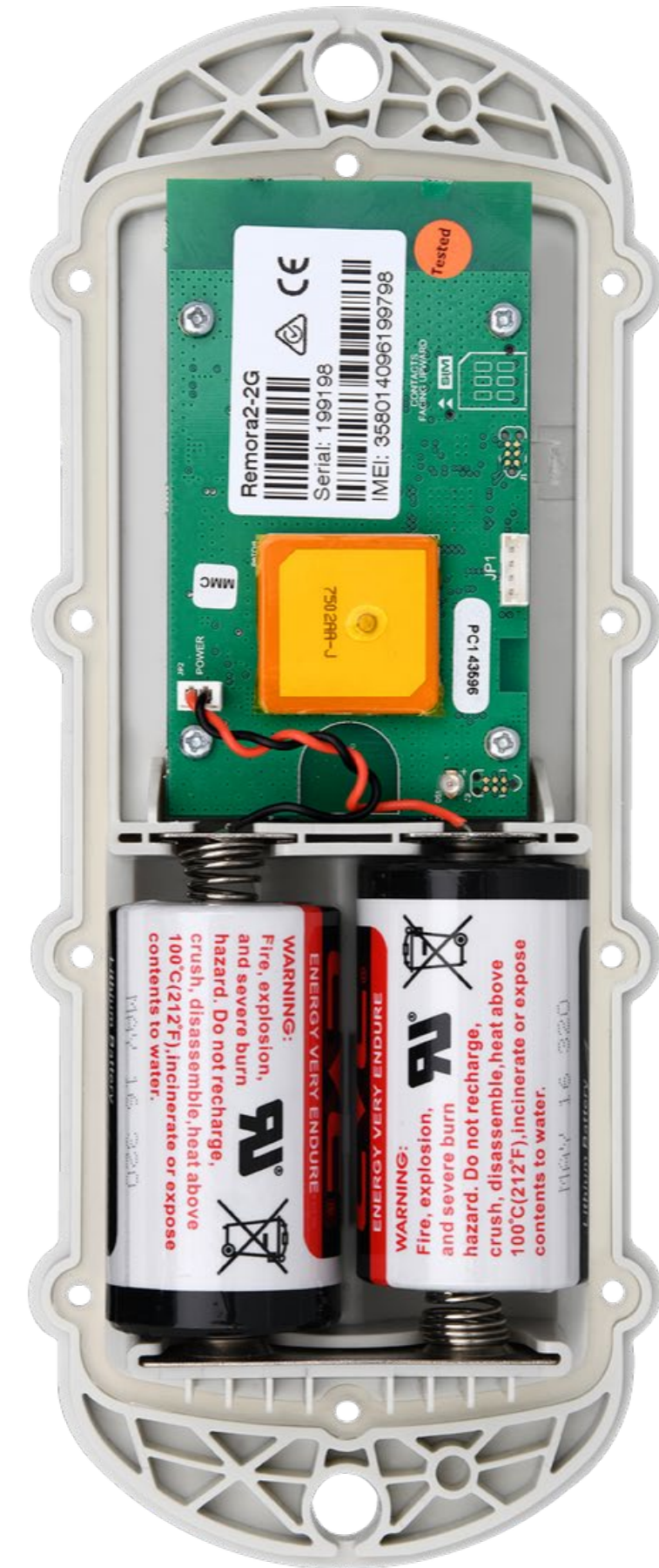
## REMORA2

### 2G/4G Cat-M1/Nb-IoT GPS

The Remora2 is a battery powered tracking device designed for tracking non-powered assets, like containers, bins, trailers, and more, where extremely long battery life is required.

- Bluetooth 5.0 Module for continuous scanning of tags
- 5 Years Battery Life at once hourly updates / 10 years at once daily
- Rugged and waterproof IP67 Rated Housing
- LTC Batteries for tracking in extreme temperatures
- Built-in Battery Meter for accurate battery life predictions
- Magnetic Tamper Detect

[> View Device Specs](#)



# Stationary Gateway Option

## EAGLE

### 2G/4G Cat-M1/Nb-IoT GPS & DATA-LOGGER

The Eagle is a flexible battery-powered or powered data logger that provides GPS asset tracking while catering for an impressive array of inputs and outputs and different sensor interfaces.

- Bluetooth 5.0 Module for continuous scanning of tags
- Flexible Power Options: 4 x C Cell Battery holder fitted and screw terminals for line power
- Inputs: 3 x Digital, 2 x Analog, 2 x 4-20mA, 1-wire (i-Button)
- Outputs: 2 x switched GND, Vout, 3.3V
- SDI-12, I<sup>2</sup>C sensor interface
- Rugged and waterproof IP67 Rated Housing
- LTC Batteries for tracking in extreme temperatures
- Ideal for smart farming / AgTech applications

[> View Device Specs](#)



# Compact and Rugged Industrial Bluetooth Tag

## GUPPY

The Guppy is a compact and rugged Bluetooth Tag readily attached to almost anything to provide low cost asset location.

- Bluetooth 5.0 for sending asset data to gateway
- Does not require a SIM or data plan
- Rugged and waterproof IP67 Rated Housing
- Powered by 2 x AAA batteries for up to 5 years

### Line of Sight

+8dBm “standard” Bluetooth – 195m

+8dBm “long range” Bluetooth – 330m

\*Transmit Mode is configurable

[> View Device Specs](#)



# Rugged Bluetooth Sensor

## SENSORNODE BLUETOOTH

The SensorNode Bluetooth is a Bluetooth enabled sensor with a configurable I2C interface, perfect for Cold Chain Management.

- Bluetooth 4.2 for sending asset data to gateway
- I2C interface for a wide range of sensor integrations such as temperature, humidity, vibration, CO2 gas and more
- Rugged and waterproof IP67 Rated Housing
- Does not require a SIM or data plan
- Can be hardwired into a vehicle or battery powered with up to 4 years battery life using 3 x AA off the-shelf batteries



### Line of Sight

+8dBm “standard” Bluetooth – 195m

\*Transmit Mode is configurable

[> View Device Specs](#)

# Third Party Tag and Beacon Integrations

## CONNECT ANYTHING

Third-party Bluetooth Tags and beacons can also be integrated with our Gateways to suit a variety of applications.

Tags such as Tyre Pressure Sensors, Fuel Probes, Temperature Sensors and Door Open/Close sensors can all be connected wirelessly to a gateway device.

Eddystone and iBeacon tags supported as standard.

[> Learn More](#)





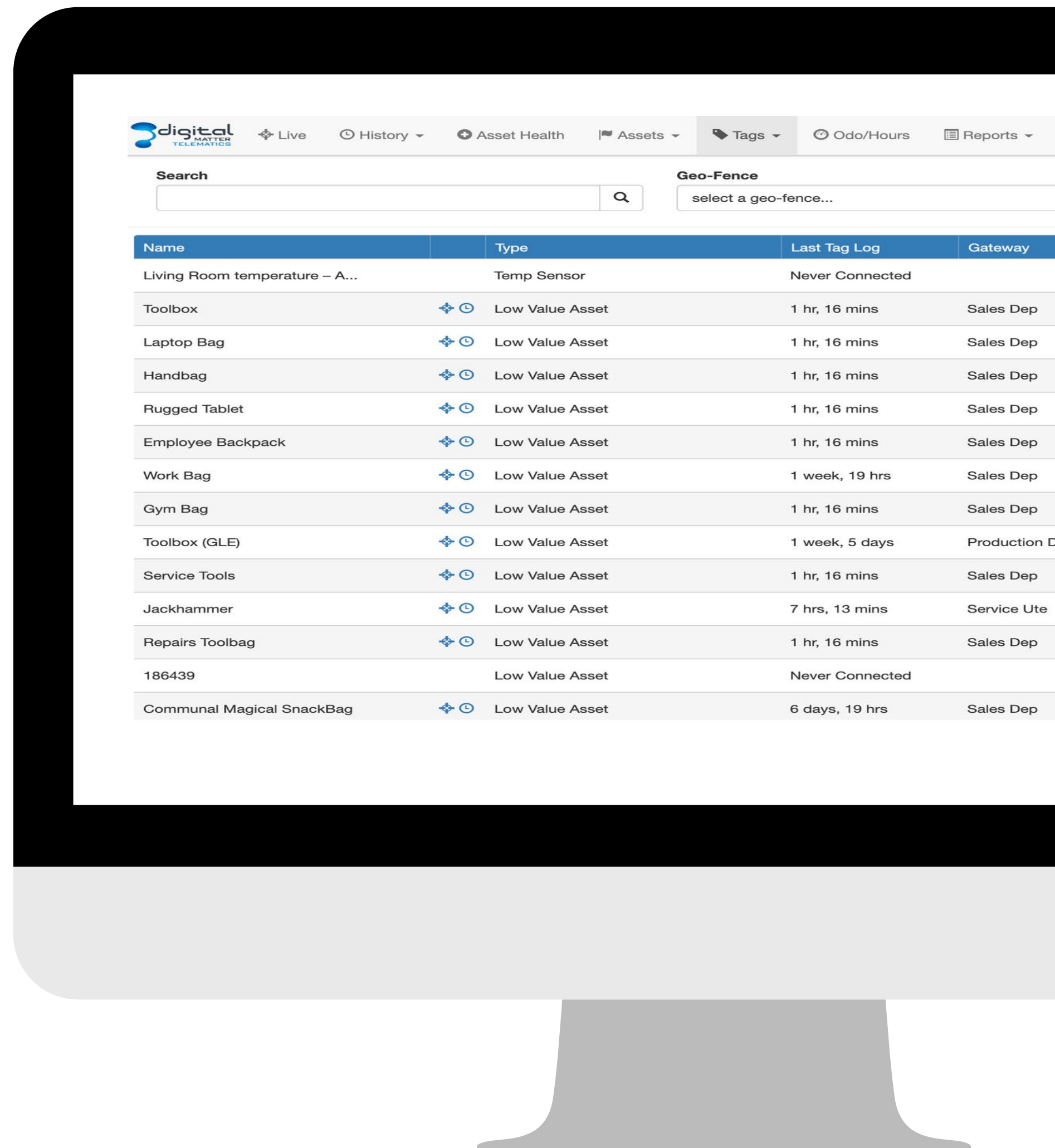
## ONE PLATFORM, ALL OF YOUR ASSETS

- Quickly find the last location of your tagged assets
- View movement history
- Configure Geofences and movement alerts
- Monitor device battery life and other diagnostic

indicators

[> Learn More about Telematics Guru](#)

[> Already have tracking software or an ERP? Learn More about third-party integration.](#)



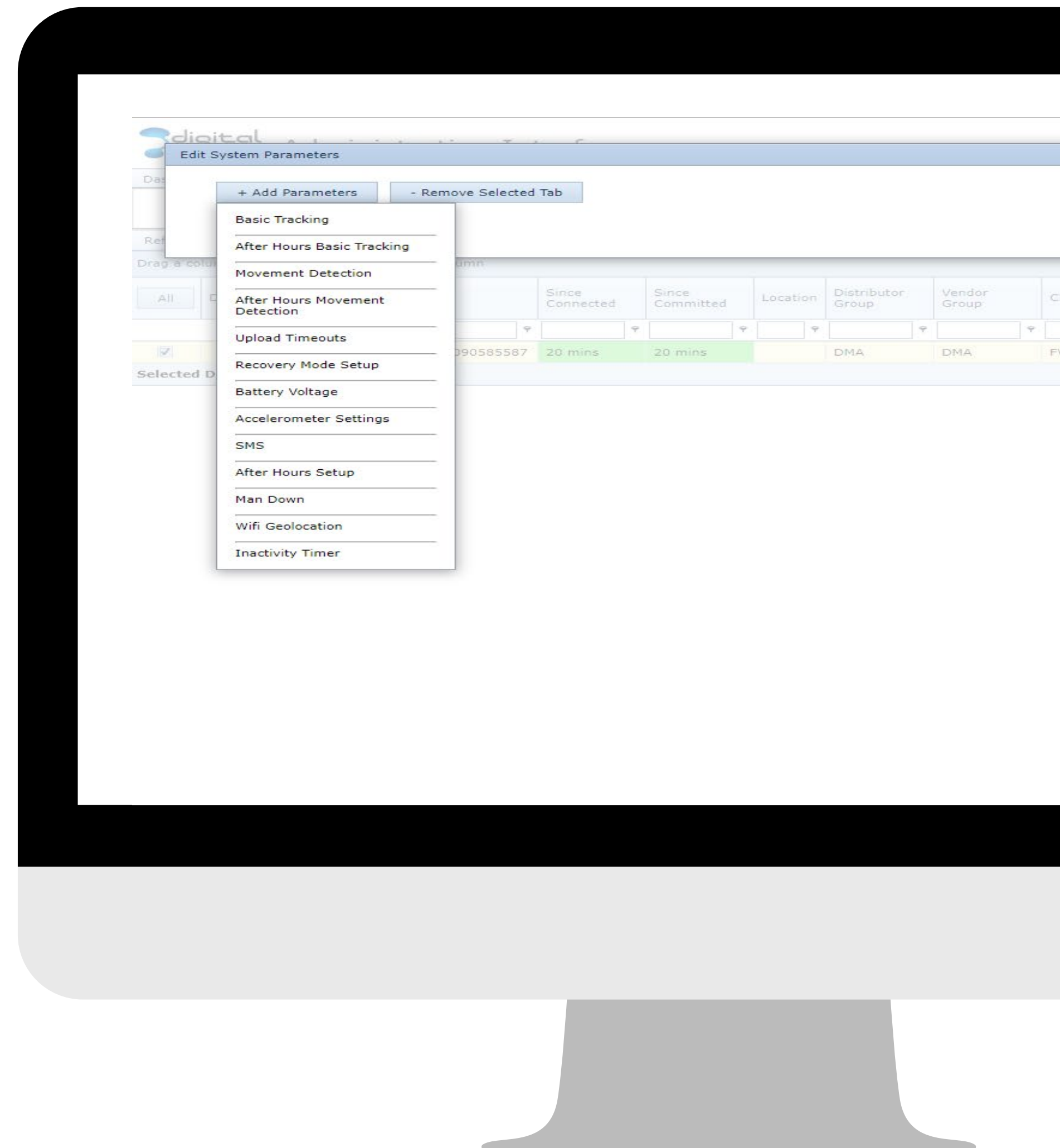




## OVER THE AIR DEVICE MANAGEMENT

- Configure Device Parameters
- Update Firmware & Debug
- Remote Installation Tools for Technicians

[> Learn More about OTA Device Management](#)





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