

BENEATH THE SURFACE · RTLS

Positioning without the sky.

A self-contained unit that picks up where GPS leaves off: under a roof or underground.

01. WHERE GPS FADES

- Covered yards, warehouses, basements, tunnels
- Outside, GPS stays the right tool

02. THE DEVICE LOOKS

- A camera reads the space against a map made once
- Night vision, lidar or radar for dark or dusty areas

03. KNOWS WHERE IT IS

- No anchors, no beacons, no satellites
- 10 cm to 2 m, set by the quality of the map

GPS, CONTINUED concept

Outside GPS, as today. **Under the roof** the unit takes over in the same coordinates; the parent system never notices.

HANDS POSITION TO

TLS

works today

Your telematics or control platform

as GPS or API

IF IT LOSES ITS PLACE

Searches again, then raises an alarm

no guessing

Concept visual. The device is a working prototype; the scene is illustrative.

GPS, continued

Keeps flowing where satellites cannot reach.

Nothing to install

Only power and Wi-Fi on the vehicle itself.

10 cm to 2 m

Accuracy follows the map, down to the pallet.

Seamless handover

Same stream out. Your platform never notices.

GPS does its job on the road. The gap is the last hundred metres: a covered depot, a warehouse, a basement car park, where the dot on the map freezes. RTLS closes that gap. A self-contained unit on the vehicle recognises where it is from a map of the place and keeps reporting, in the same coordinates if you wish, so the platform behind it sees one unbroken track. Nothing to install in the building. It grew out of our own navigation work for robots and vehicles and a Horizon Europe programme with the German Aerospace Center and TTTech.

RTLS supplies the position. Your system does the rest.

Add it to a telematics platform, to TLS, or to the assets you rent out. Rules, alerts and reports stay where they are today.

STATUS Working prototype, built and sold by M2M Solutions. Not yet deployed at a customer site. We are looking for the first pilot partners: telematics providers who want coverage under the roof, and equipment rental companies.



Scan for the full picture,
or to book a chat with us.

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HOW IT WORKS

- 01 Map.** The space is mapped once: the yard, the hall, the ramp, the basement. The quality of that map sets the accuracy you get afterwards.
- 02 Mount.** One self-contained unit goes on the vehicle or asset. It needs power and a Wi-Fi connection, nothing in the building.
- 03 Look.** The unit's camera recognises where it is against the map. For dark, dusty or featureless areas it can carry other sensors: night vision, lidar, radar.
- 04 Report.** It computes its own position, between 10 cm and 2 m, and sends it on. It can speak in GPS coordinates, so the parent system sees one continuous track; TLS works with it today, other platforms through an API.
- 05 Say so.** If the unit cannot place itself it keeps searching, then raises an alarm. It never reports a guess as a position.

When the picture goes

Lights off, a corridor with no features, a lens covered in dust. The unit does not remember a last position and does not dead-reckon; it searches again and, if it still cannot place itself, it tells the master system, which decides what to do with a blind asset. For sites like that, the sensor options in step 03 are the answer.

WHAT RTLS BRINGS

- 01. GPS, continued:** outside, GPS stays in charge; in a mapped covered space the unit takes over in the same coordinates.
- 02. Our own hardware:** a unit designed and sold by M2M Solutions, with the sensors chosen for the site: camera, night vision, lidar, radar.
- 03. Nothing in the building:** no anchors, beacons or cabling to install and maintain; the map is made once.
- 04. Integration path:** TLS today; your telematics platform, asset register or WMS through an API.
- 05. Who it is for:** telematics providers, equipment rental companies tracking the assets they lend, and site operators running TLS.
- 06. Research link:** built alongside a Horizon Europe programme on vision-based navigation with the German Aerospace Center and TTTech.

ONE COMPANY, THE WHOLE SITE

RTLS

REAL-TIME
LOCATION SYSTEM

Start here. Where every vehicle and asset is, indoors, without GPS.

TLS

TRANSPORT
LOGISTICS
SYSTEM

Vehicles from arrival to departure: slots, gate, yard, position, exit.

WMS

WAREHOUSE
MANAGEMENT
SYSTEM

Inventory and warehouse operations in real time.

M2L

ADVANCED PICK
TO LIGHT
SYSTEM

Picking guided by light, fast and error free.

ILS

INTERNAL
LOGISTICS
SYSTEM

Material flow between stores, workshop and line.

AMR

AUTONOMOUS
MOBILE ROBOTS

Material moved without adding people.

Veasy

VISITOR
MANAGEMENT

Contractors and visitors registered, expected, let in.

Start with RTLS, then see what else works for you. One data model, one supplier, from the gate to the back of the shop.

BUILT IN

Nothing to install

No anchors or beacons in the building; the unit carries everything it needs.

No guessing

A position is reported only when the unit knows it; otherwise it raises an alarm.

Your system decides

RTLS supplies the position; rules, alerts and reports stay in the platform you run today.

Let's orchestrate your piece of the world.

Where does your GPS track go quiet today, and for how long?
We are looking for the first pilot partners: telematics providers and equipment rental companies.

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