ANT everywhere

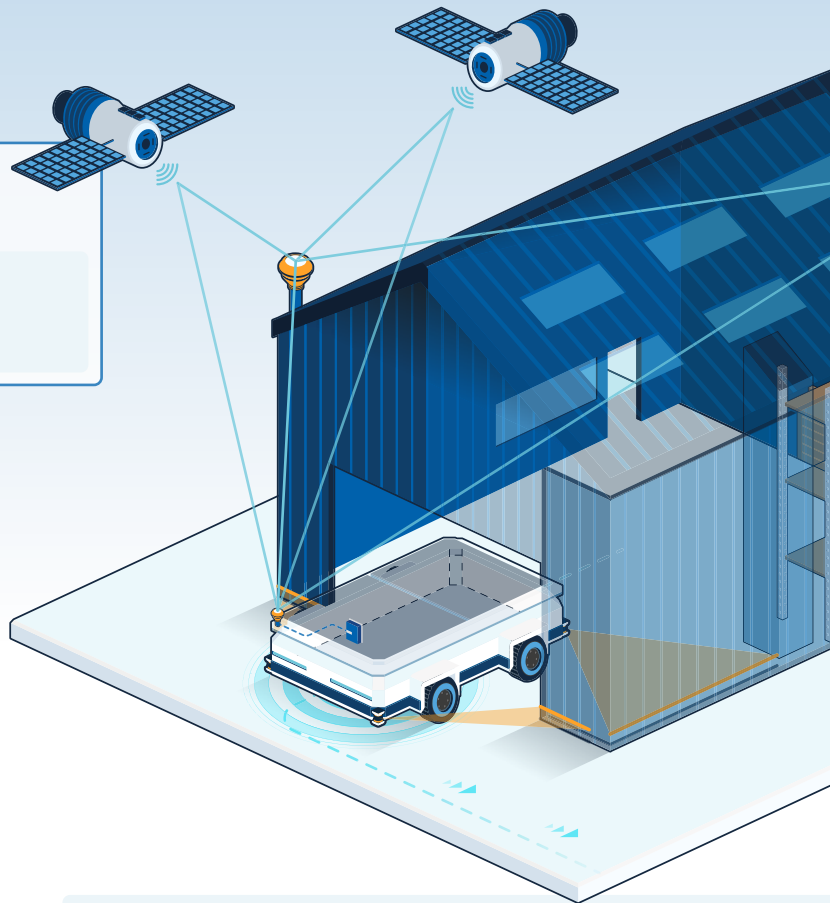## ENABLING A NEW ERA OF AGV & AMR OPERATIONS

BLUEBOTICS

An outdoor product extension for ANT navigation

Operating AGVs outdoors was traditionally a real challenge. For vehicles driven by natural feature navigation, the lack of features in the environment made it difficult to calculate a vehicle's position, meaning additional infrastructure often needed to be installed. While for older, traditional outdoor AGVs, the installation of GPS-based vehicles was complex and difficult, with the limitation that these vehicles could not function also indoors.

ANT everywhere meets the challenge of outdoor operation by adding high-precision GNSS as an additional data source when calculating a vehicle's position.

The result is that outdoor AGV operations become just as simple, robust and precise as those indoors — opening up a new world of customer applications.

Components:

- **1x GNSS base station** *(1x per site)*

- **1x GNSS receiver** *(1x per vehicle)*

- **ANT everywhere software extension**

- **ANT everywhere Support Package***

  **Mandatory for 1st installation*

APPLICATIONS

Transporting payloads between buildings

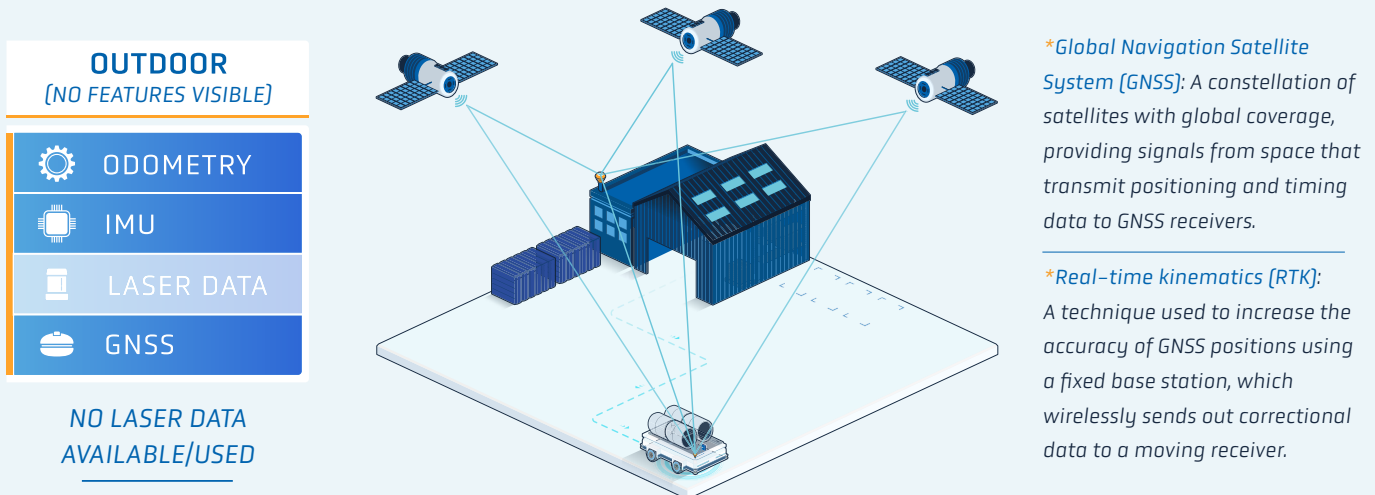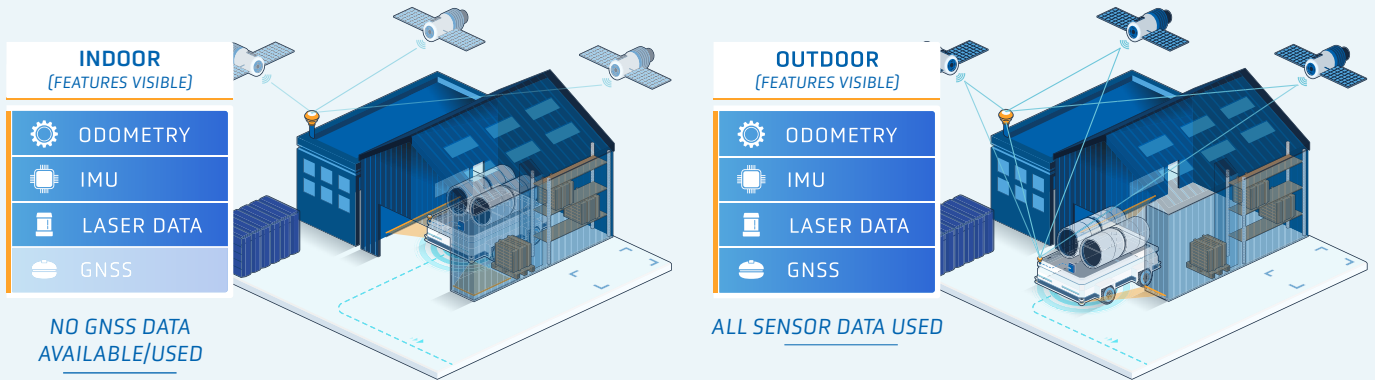Linking logistic and production sites

INDUSTRIES

- Aerospace
- Airports
- Automotive
- Agriculture
- Mining
- Paper & pulp
- Ports
- Steel & aluminium
- Tire production
- Wind turbines/offshore
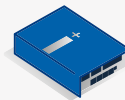
How ANT everywhere works

1. All sensors run simultaneously: odometry, laser data, IMU, GNSS* with RTK* positioning.

2. GNSS signals received by vehicle.

3. Fixed base station (e.g. on roof of building) sends RTK positioning 'corrections' to vehicle receiver.

4. ANT fuses all available data & uses most relevant.

Example use of sensor data during indoor/outdoor operation:

INDOOR
(FEATURES VISIBLE)

- ODOMETRY
- IMU
- LASER DATA
- GNSS

NO GNSS DATA AVAILABLE/USED

OUTDOOR
(FEATURES VISIBLE)

- ODOMETRY
- IMU
- LASER DATA
- GNSS

ALL SENSOR DATA USED

OUTDOOR
(NO FEATURES VISIBLE)

- ODOMETRY
- IMU
- LASER DATA
- GNSS

NO LASER DATA AVAILABLE/USED

Global Navigation Satellite System (GNSS): A constellation of satellites with global coverage, providing signals from space that transmit positioning and timing data to GNSS receivers.

Real-time kinematics (RTK): A technique used to increase the accuracy of GNSS positions using a fixed base station, which wirelessly sends out correctional data to a moving receiver.
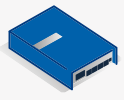
Compatibility

ANT everywhere is compatible with all ANT navigation products:

ANT lite⁺ ANT localization⁺ ANT localization

Speak to the team at **BlueBotics** to learn more.

BLUEBOTICS
Your Vehicle Navigation Partner

At BlueBotics we help companies meet the challenge of vehicle automation. We provide the navigation technology and expert support they need to bring their AGV, automated forklift or mobile robot successfully to market.