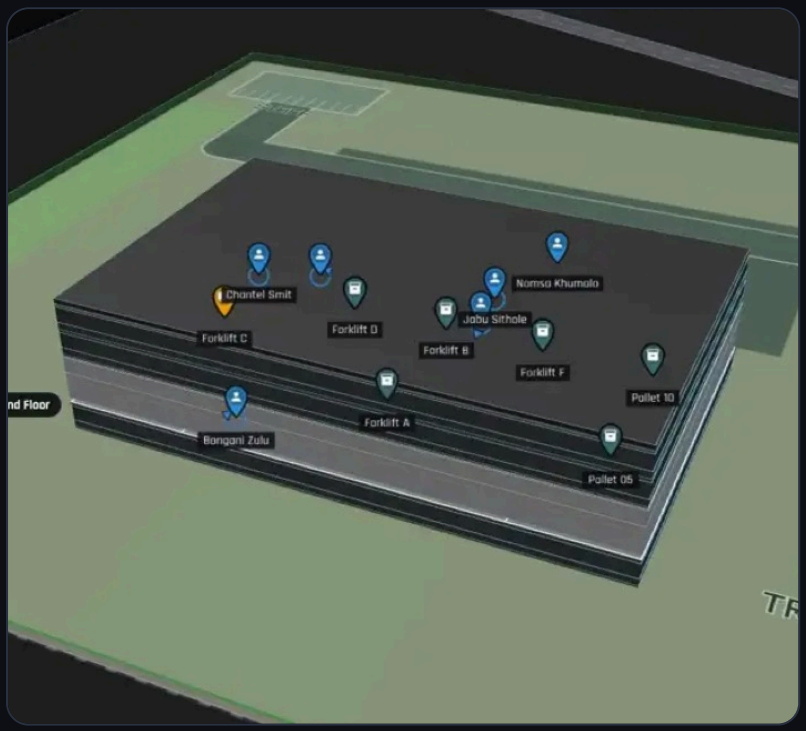
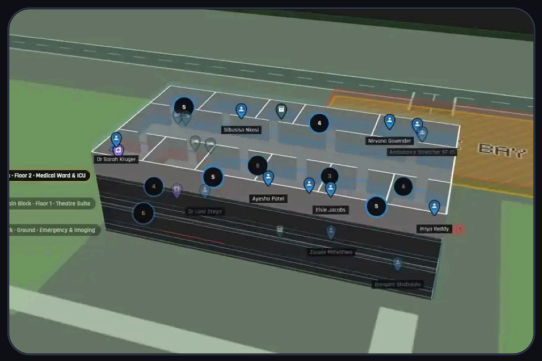
MeshTrack

Know who and what is where, right now.

One operational tracking platform for people, equipment and vehicles: indoors, underground and outdoors, on the technology that suits each place, all on one live map.







EVERY PLACE

Buildings, plants, yards, roads, open pits and underground levels.

EVERY TECHNOLOGY

Wirepas mesh, Bluetooth, GPS/LTE, phones and connected sensors.

EVERY TEAM

Control room, supervisors, field teams and installers, on web and mobile.

MINING · HEALTHCARE · LOGISTICS & WAREHOUSING · INDUSTRIAL & MANUFACTURING · OFFICES, CAMPUSES & RETAIL

ONE PLATFORM FOR OPERATIONAL TRACKING

The questions every operation asks, answered from one live map.

A vehicle on GPS, a person underground on a mesh, a pump on a hospital ward, a forklift in a warehouse: it is all operational data. MeshTrack puts it on one map, with the alerts, reports and history to act on it.

"Where is it, right now?"

Search any person, asset or vehicle and the map flies to it: the site, the building or level, the zone and when it was last seen.

"Who is on site, and is everyone accounted for?"

Live head-counts by site, level and zone, and a muster roll-call from each person's last known position.

"Why do we keep buying what we already own?"

Utilisation and idle reports show what is used, what stands idle and where it was kept back.

"What happened, and when?"

Replay a person, a vehicle, a level or a whole site, with every zone entry and exit alongside.

WHAT YOU GET

Every place

Indoors, underground and outdoors on one live 3D map, from the whole operation down to a single room or level.

Every technology

Wirepas mesh, Bluetooth gateways, GPS/LTE trackers, phones and connected sensors, mixed on one site.

Every role

Web app for the control room, a mobile app for everyone, and MeshTrack Field for installers. Unlimited users, access set per site.

Live and history

The live map, and 90 days of replay from half speed to 15×, with archive retrieval up to 12 months.

Action, not just data

Alerts to named people by email, push, SMS or Telegram. About 40 ready-made reports, and personal dashboards.

Open

REST API, event stream and signed webhooks, so location and alerts feed your WMS, TMS, ERP, maintenance or BI tools.

What it pays back

Answers in seconds. Head-counts, roll-call and zone reports come off the same live record, so the answer is current every day, not assembled when someone asks.

Capital and hours back. Find anything in seconds, check the map before buying a duplicate, off-hire the idle rental and right-size the fleet on real utilisation.

Improve off your own data. Dwell per zone, busy hours and utilisation: the first honest picture of how your operation runs, and the basis for changing it.

TECHNOLOGY-AGNOSTIC

The right technology for each place, on one map.

No single technology works everywhere: GPS stops at the roof line and the shaft collar. MeshTrack uses each where it works best, and hands over at the gate, the dock door or the shaft.

	Wirepas mesh	Bluetooth gateways	GPS/LTE trackers	Phones
How it works	The tag hears battery anchors around it and reports hop by hop, through the mesh, to a gateway.	A gateway hears the tag. The position is the room or zone of the nearest gateway.	The tracker fixes its own position from satellites and reports over LTE.	"Track this phone" in the MeshTrack app: GPS outdoors, beacons indoors.
Best for	People and equipment where GPS doesn't reach: underground, inside buildings, on plants.	Rooms, zones and corridors where a network already runs.	Vehicles, surface fleets, and people or assets outdoors.	Supervisors, porters, visitors and staff who carry a phone.
Typical accuracy	About 5 m with anchors 10–15 m apart; room level at 10–12 m.	Room or zone level.	A few metres under open sky.	GPS outdoors; room or zone indoors.
On site	Battery anchors, no cabling. At least one gateway per level.	Gateways with network and power.	Nothing: a tracker and a SIM.	Nothing outdoors; beacons indoors.
Power	Anchors last 5+ years, depending on the battery.	Coin-cell tags: months to years, set by the interval.	Vehicle power, or battery for personal and asset trackers.	The phone's own battery.

Sensors and more

- Temperature, humidity, movement, tamper and battery from the tags themselves.
- Other sensors over LoRaWAN, Sigfox, Wi-Fi, LTE and IDLINK through Sethala Nexus, on the same dashboards, alerts and API.
- RFID and NFC tag types, scoped per project.
- Wi-Fi carries gateway backhaul and sensor data. MeshTrack does not use Wi-Fi for positioning.

Why the mesh matters where GPS can't go

- Needs no Wi-Fi, GPS or cellular signal, and keeps running on battery anchors through a power trip.
- Self-healing: it routes around a failed or blocked anchor.
- Delay is a design choice: a "Fast" design delivers a position in about 2 seconds.
- On a 2.9 km underground route, 13 powered points with Wirepas, against 79 with Bluetooth gateways.

Mix them on one site

On the road. Trucks between depots on GPS/LTE trackers, with geofences for gates, docks and customers.

Across the floor. Forklifts, cages and people on Wirepas tags, zone by zone.

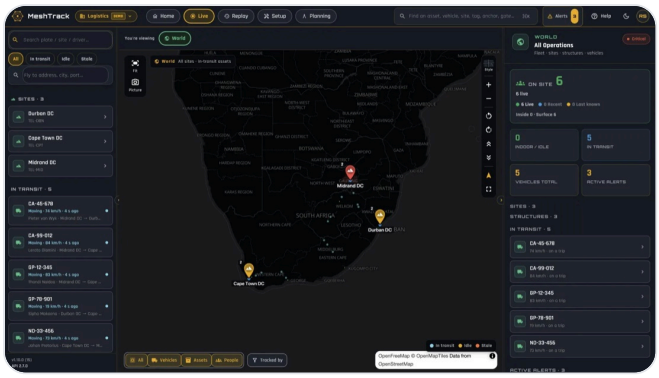
In the workshop. Tools and equipment by room or bay, from Bluetooth gateways on the network.

In the cold room. Sensor tags reporting temperature, with alerts when it drifts.

THE PLATFORM · SEE IT

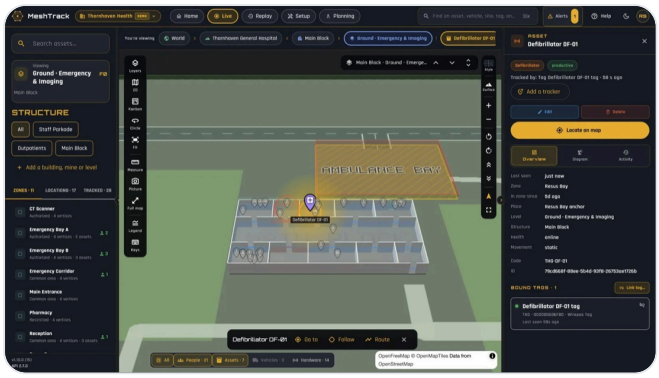
One map, from every site down to a single room.

Every site is modelled as World › Site › Structure › Level. A structure is a building or a mine, so you zoom from all your sites to one floor or one mine level without changing screens.



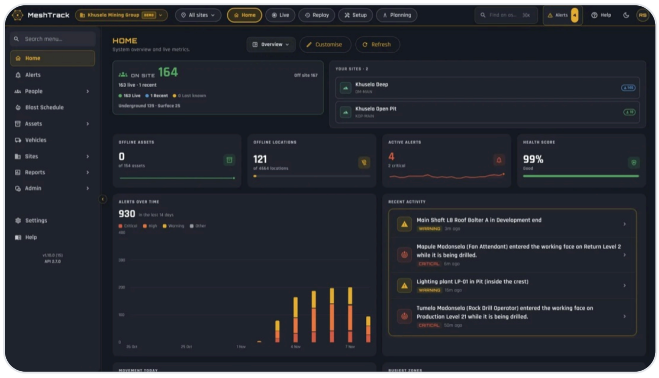
Live map in 2D and 3D

Orbit, fit, layers and measure, with Dark, Light, Satellite and Survey map styles. Filter by people, assets and vehicles, or switch between Surface and Under on sites with work below ground.



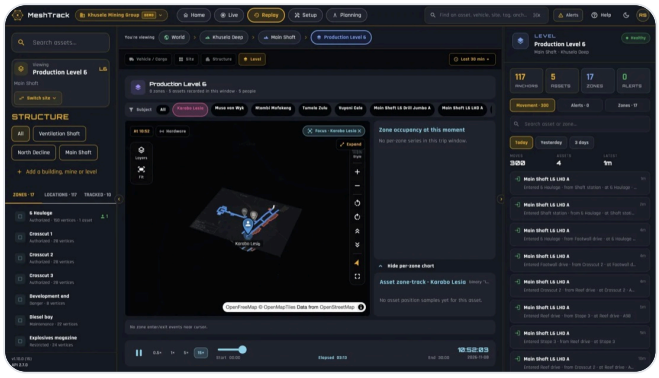
Search, and fly to it

Press Ctrl+K and type a name. Search finds any person, asset, vehicle, site, tag, anchor or gateway, flies the map there, opens the right level and shows its details. From the result: go to it, follow it, or replay its route.



Home dashboards

Everyone on site, split into Inside or Underground and Surface, each counted as Live, Recent and Last known so nobody quietly drops out of the number. Tiles for offline devices, active alerts and site health; charts for movement, busiest zones and busy hours.



Replay

Play back a person, a vehicle, a level, a structure or a whole site over 30 minutes, 2 hours, 24 hours or a custom range, at 0.5× to 15×, with zone entries and exits alongside. The answer after an incident, a missing item or a near miss.

Zone board

A Kanban view of a level that lists who and what is in each zone, for the control desk.

Follow

Follow a person, asset or vehicle and the map keeps it in view as it moves.

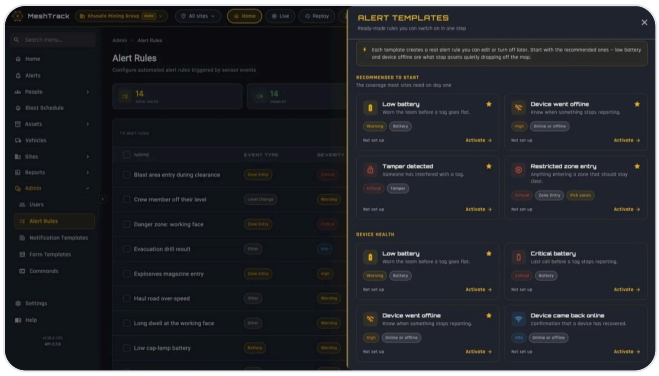
Picture of the view

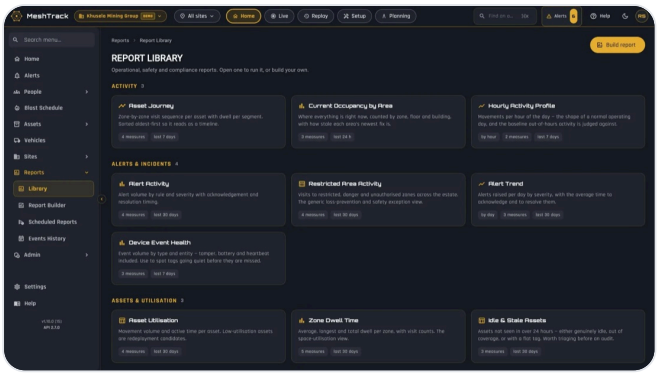
Save the current map view as a picture for a report, a briefing or an incident file.

Screens show fictional demo sites. Map data © OpenStreetMap contributors. Imagery © Esri, Maxar, Earthstar Geographics.

THE PLATFORM · ACT ON IT

Alerts to the right person. Reports on tap.



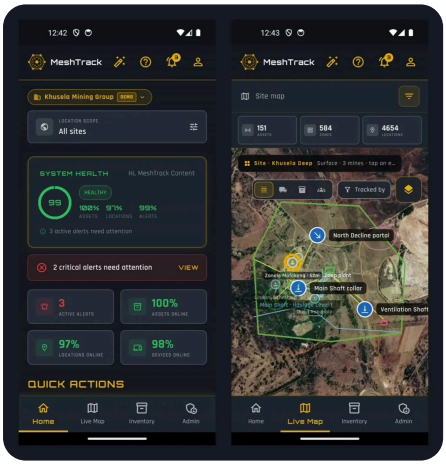


Alerts and rules

- Templates for low battery, device offline, tamper, restricted-zone entry, left a zone, movement stopped, temperature and humidity, each switched on in one step.
- Four severities; every alert moves Open › Acknowledged › Resolved, recording who acted and when.
- Email, push, SMS or Telegram, with throttling so the team isn't flooded.

Reports

- About 40 ready-made reports: activity, alerts and incidents, assets and utilisation, device health, operations, people, and safety.
- A Report Builder for your own measures, groupings and time ranges.
- CSV export, scheduled delivery by email as CSV or PDF, and saved reports as dashboard widgets.



Three apps

The **web app** for control rooms and managers. The **MeshTrack mobile app** on iPhone and Android puts the live map, search, inventory and alerts in everyone's pocket. **MeshTrack Field** is for the technicians who install and look after the network, and works offline.

Integrations

A REST API and event stream for everything on the map, and webhooks signed with HMAC-SHA256, filtered by severity, with a delivery log and automatic retries. Your own logo in the app, and co-branding for partners.

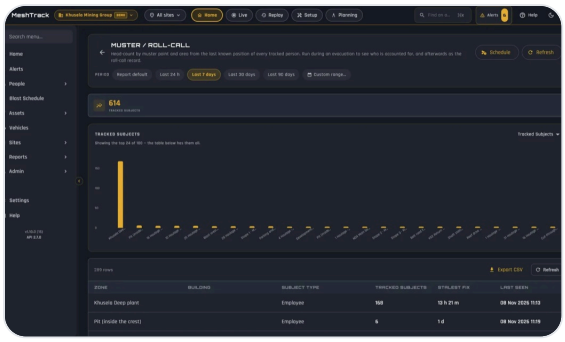
Roles and access

Viewer sees and changes nothing; Operator acts on alerts; Admin manages the setup. Access is set per site, users are unlimited, and each customer is a separate tenant.

PEOPLE · EQUIPMENT · VEHICLES

Everything that moves, on the same map.

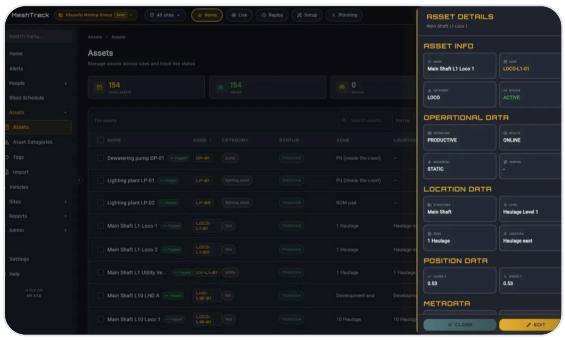
People, equipment and vehicles are all first-class in MeshTrack, so the trip, the dock and the person at the machine are one story.



PEOPLE

Who is on site, where, and since when.

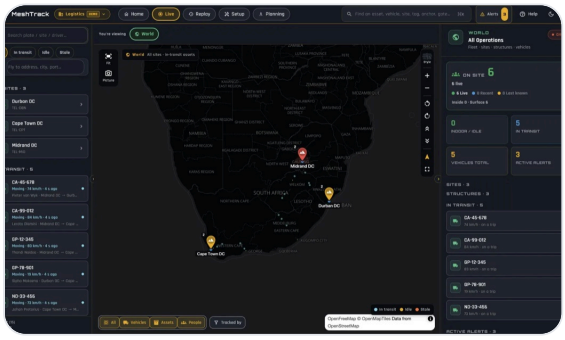
- Staff, contractors and visitors linked to their tags, shifts and rosters, counted level by level.
- A quiet tag stays counted at its last known position, showing how old that position is.
- Muster / Roll-Call and unaccounted-personnel reports, with drill results on record.
- Restricted-zone alerts, a movement-stopped rule, and panic buttons on supported tags.



ASSETS AND EQUIPMENT

Every tagged item, with its status and its history.

- Organised by category, with operating status and your own fields from templates.
- Live location by zone, level and structure, plus tag battery and tamper status.
- Utilisation and idle reports, and alerts when an item leaves its area or goes quiet.
- Bulk CSV import of devices, tags, assets and employees.



VEHICLES AND GEOFENCES

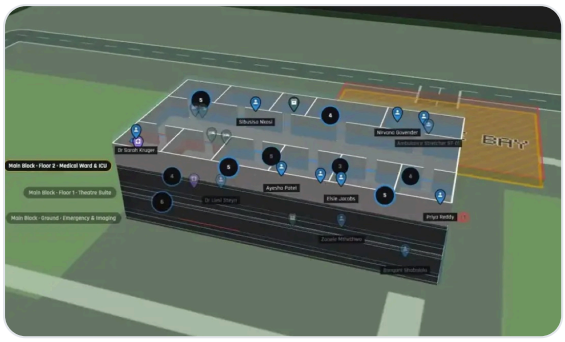
Vehicles alongside your people and equipment.

- GPS/LTE trackers on your own SIMs: position, speed, trips and driver, with CAN data on supported models.
- Readings stored out of coverage and sent when the tracker reconnects.
- Geofences as polygon, circle or corridor: depots, customers, checkpoints, yards, no-go areas and route corridors.
- Triggers on entry, exit, dwell, and speed inside a geofence; every trip on replay.

Tracking of people is open, never covert. People's positions are visible only to Admins, or to users given a separate people-tracking permission.

BUILT FOR YOUR OPERATION

One platform, shaped to the way each industry works.

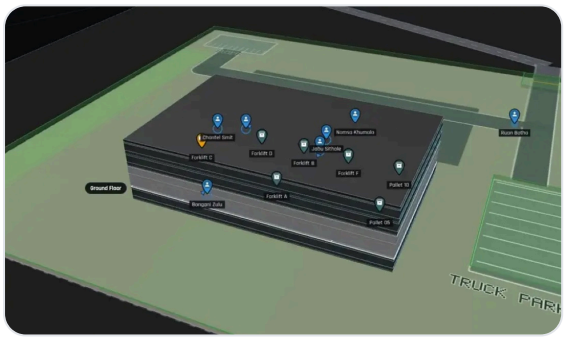


HEALTHCARE

The pump, the defibrillator, the wheelchair: on the map, in its room.

- Porters and nurses search on their phones; the map opens on the floor and room.
- Utilisation and idle reports by category and ward, before buying more.
- Alerts when equipment leaves its ward or anything enters the pharmacy, theatres or stores.
- Temperature and humidity for rooms and fridges; one platform across a hospital group.

Typically: Wirepas mesh or Bluetooth gateways indoors, sensor tags, the mobile app.



LOGISTICS & WAREHOUSING

Yard, fleet and warehouse on one map.

- Trucks between depots with trips, speed and driver, and every route on replay.
- Gates, docks, yards and customers as geofences, with entry, exit and dwell.
- Forklifts, cages, trolleys and scanners found inside the DC, with utilisation.
- Dwell, busy hours and congestion, fed to your WMS, TMS and BI through the API.

Typically: GPS/LTE on vehicles and trailers, Wirepas or Bluetooth inside the DC.



INDUSTRIAL & MANUFACTURING

Know who is in the plant, and what is where.

- Restricted and danger zones on your own plans, with alerts the moment someone enters.
- Contractors and visitors on the map alongside your own staff.
- A head-count by muster point when the siren goes, on the mobile app for wardens.
- Tools, instruments and mobile plant with utilisation, tamper and battery status.

Typically: Wirepas mesh across the plant, Bluetooth in workshops, GPS in the yard.

MINING · UNDERGROUND AND OPEN PIT

Who is underground, right now.

People and equipment counted level by level on a Wirepas mesh that needs no GPS or cellular signal, and the surface fleet on GPS, all on one map.





UNDERGROUND

- Underground Now by level, and a shaft cross-section with depths and who is on each level.
- Muster / Roll-Call by muster point, with unaccounted personnel named.
- Blast Schedule: a shot stays Not clear while anyone is in scope, and the clearance is kept as evidence.
- Cap-lamp tags, and Group I (EPL Ma) tags and anchors for gassy and coal mines.

OPEN PIT AND SURFACE

- Geofences for pits, haul roads, workshops, ROM pads and blast areas.
- Entry, exit, dwell and speed triggers, and trips, speed and driver for every vehicle.
- Pedestrian-near-machine awareness alerts.
- Equipment underground and on surface with utilisation and idle reports.

MeshTrack supports your Regulation 16.7 duty and your emergency plan with awareness and records. It is not a certified collision-avoidance or rescue system, and works alongside the mine's own procedures and systems.

OFFICES, CAMPUSES & RETAIL

Find shared equipment, and see which spaces are busy, and when.

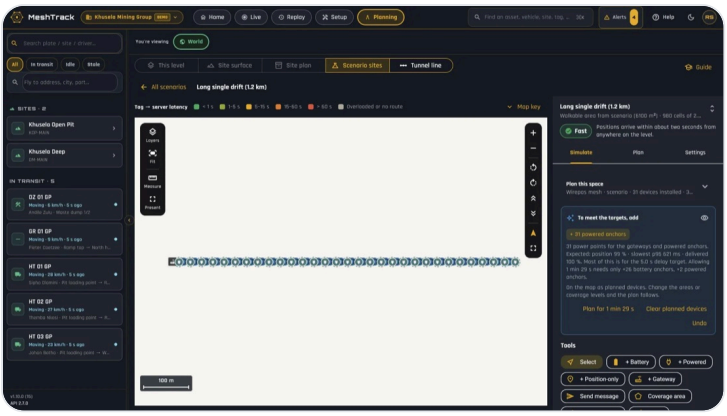
Ready-made planning presets for offices and retail floors. Tag laptop carts, scanners and shared kit; read occupancy and busy hours by zone to plan space and staff.

Your industry isn't listed?

If people, equipment or vehicles move through your operation, MeshTrack can track them. Planning presets also cover hospitals, warehouses, offices, mines, industrial sites and retail, and we design the mix of technologies with you.

DESIGNED BEFORE IT'S INSTALLED

Plan the network before anyone climbs a ladder.



A 1.2 km drift planned before installation: a Fast verdict, and the anchors and gateways it needs.

- Bring in the site from CAD (DXF and DWG), images or LiDAR scans, placed and scaled on the map.
- Mark zones and routes, then let the Planning tool recommend battery anchors, powered anchors and gateways.
- A Fast, Slow or Gaps verdict with the expected delay, before you buy anything.
- Presets for warehouses, hospitals, offices, mines, industrial sites and retail.
- The reviewed plan is applied in Setup; the mobile setup wizard takes about 12 minutes per area.

HARDWARE WE WORK WITH

Vendor- and technology-agnostic: named hardware families, chosen per site. Any Teltonika GPS tracker works.

Vendor	Wirepas	Bluetooth	GPS / LTE
Teltonika	EYE Sensor Mesh tag; indoor anchors and gateways		FMB920, FMC130 vehicle trackers; TMT250, GH5200 personal trackers; ATC700, ATC704, ATC774 asset trackers
BlueUp	Brick anchor; BlueBeacon Ultra and Card BUT tags; TinyGateway PoE Outdoor		
Minew		G1 gateway; MBT02 and BeaconPlus tags; S1 sensor; MWC01 SOS badge	
MOKO		MKGW1 gateway; BXP-D, MK Button and MK Sensor tags	
Extronics	iTAG XB20, XB10 badges and tags, and XB40 anchors (Group I, EPL Ma), in Wirepas and Bluetooth versions		
Deeprock	Cap-lamp tag; mining anchors and gateways		

Hazardous areas

Group I, EPL Ma tags and anchors for underground mines where methane or coal dust can occur; Group II devices for surface hazardous areas on request. Your hazardous-area classification decides what goes where, and we confirm the certificate for each model before you order.

On your network

Gateways connect outbound only, on TCP 8883 and 443, from a dedicated VLAN. Nothing needs to reach into your network. Backhaul over Ethernet or fibre, powered by PoE or 12–24 V DC; Wi-Fi backhaul only where it is dependable.

SECURITY, PRIVACY AND DEPLOYMENT

Your data, where you need it to be.

Hosted in South Africa

Run by Sethala, ISO 27001 certified, with a POPIA-aligned approach to data protection. Each customer's data sits in its own tenant.

Or on your own servers

Where data has to stay on site, MeshTrack runs on your own servers under an on-site licence.

Open, never covert

One account per person, access set per site, and people's positions visible only to Admins or users given the people-tracking permission.

QUESTIONS WE ALWAYS GET

"We already have GPS on our vehicles."

MeshTrack takes GPS/LTE trackers too, and any Teltonika GPS tracker works. Your vehicles sit on the same map as the people and equipment around them, with trips, speed, driver and geofences.

"There's no signal where we work."

The Wirepas mesh needs no Wi-Fi, GPS or cellular. Tags report hop by hop through battery anchors to a gateway. GPS trackers store readings out of coverage and send them later.

"How accurate is it?"

It depends on the design, agreed before installation: from room or zone level to about 5 m on a Wirepas mesh with anchors 10–15 m apart. GPS gives a few metres outdoors under open sky.

"Will our people accept it?"

Tracking is open, never covert, and people's positions are visible only to those who need them. Equipment tracking follows the equipment, not the person.

"We don't want to be locked in."

MeshTrack runs on named hardware from several vendors, and your data leaves through the API, webhooks and CSV export.

"What if the internet drops?"

Choose the on-site option and the platform runs on your servers. The mesh keeps running on battery anchors, and GPS trackers store readings until coverage returns.

At a glance

90 days of replay online, with archive retrieval up to 12 months.

5+ years on a battery anchor, depending on the battery.

Unlimited users, with access set per site and per role.

Outbound only: nothing reaches into your network.

About 2 seconds from tag to map on a Fast mesh design.

Your data out through the API, webhooks and CSV.

START WITH ONE AREA

Prove it where the pain is, then grow.

You don't have to commit the whole operation to find out whether MeshTrack works for you. Pick one area, agree the success criteria up front, and add sites, buildings and vehicles on the same platform as you go.

THE FIRST THREE STEPS

1. **Design**
   Pick one area: a line, a ward, a DC, a yard, a fleet or a shaft. Bring plans (CAD or an image) or scan the rooms; the design is reviewed before anything is installed.
2. **Install and tag**
   Anchors and gateways go up where they are needed, trackers go on vehicles, and the people and equipment that matter get tags.
3. **Map**
   The live map goes on screen, alerts go to named people, and the history starts building from day one.

WHAT FOLLOWS

4. **Prove**
   Reports on tap and on schedule: head-counts, restricted-zone entries, utilisation.
5. **Right-size**
   Utilisation and dwell analytics. Stop buying and renting what you already own.
6. **Embed**
   Supervisors and field teams work from the mobile app, and every alert is acknowledged and resolved on record.
7. **Improve**
   Movement and dwell reviews that change layouts, fleets and flow. Then the next area.

WHERE CUSTOMERS USUALLY START

A hospital
One ward, or one equipment pool: pumps, wheelchairs or defibrillators.

A logistics business
One DC, or one fleet with its depots, gates and docks as geofences.

A plant
One area or line, with its restricted zones and muster point.

A mine
The lamp room or one shaft: a gateway, about ten anchors and 10–20 tags.

Tell us about your operation

What you need to find, the areas that matter and where you'd like to start. We'll come back with the mix of technologies, the design and a plan for the first area.

WHO WE ARE

Built by Sethala.

MeshTrack is developed by Sethala, a South African technology company with deep experience in IoT, RFID, location systems and operational software. For close to a decade the Sethala team has worked with IoT, RFID and location-based systems across South Africa, SADC and beyond.

ISO 27001
certified information security

~10 years
in tracking and IoT

Gauteng
serving South Africa, SADC and beyond

MeshTrack

Know who and what is where, right now.

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Screens in this brochure show fictional demo sites and companies. Map data © OpenStreetMap contributors. Imagery © Esri, Maxar, Earthstar Geographics. Features and hardware are confirmed per project in the agreed design. MeshTrack is not a certified safety, collision-avoidance or rescue system. © Sethala (Pty) Ltd.