About us

Australian owned and operated

100% of our manufacturing process and facilities are in Australia and New Zealand

We have rapid deploy solutions that are mobile and can be moved from area to area by our team or onsite operators

We provide all-in-one offerings that includes the sensors, the network connectivity and the application. Having the expertise to take you through all the phases of an IoT project allows us to offer tailored solutions as well as direct support in case of problems with any of the components.

Our organisation has over a decade of experience in networking technologies and security, which form an integral part of the underlying architecture required for IoT networks.

Greenmesh can be utilised in many industries

- **Heavy machinery**
- **Earth moving**
- **Construction**
- **Mining**
- **Tunnelling and excavation**
- **Warehouse and factories**
- **Manufacturing**
- **Healthcare and Aged care**
- **Supermarket and Retail**
- **Ocean and Marine**
- **Airports**
- **Railways**
- **Transportation**
- **Cold storage Logistics**

Contact us

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Intelligent AI realtime continuous Environment Monitoring solution

Rapid deployment of mobile solutions for continuous monitoring. Always on, anytime and anywhere.

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Intelligent AI real time continuous Environment monitoring

Rapid deployment of mobile solutions for continuous monitoring.
Always on, anytime and anywhere.

Greenmesh environment monitoring is a complete end-to-end environment monitoring solution developed in Australia for industries such as mining, heavy earthworks, tunnel boring and large infrastructure and construction projects. Greenmesh utilises advanced Ai and machine learning technologies, as well as purpose-built sensors to aid companies in monitoring their worksite environment by providing continuous real time monitoring with early detection and warnings of potential hazardous conditions. Greenmesh also monitors allows for the automation of tedious tasks to attain workplace efficiencies, whilst maintaining high levels of safety and insights for workers on site.

Environment Monitoring:

Greenmesh provides the rapid deployment of mobile solutions that can perform continuous real-time monitoring of air quality including silica dust, carbon footprint, hazardous gases and various other elements including:

- CO_2 **Carbon Dioxide**
- CO **Civil CO**
- **Particle Matter** 1.0/2.5/10
- **Civil Gas**
- CH_2O **Formaldehyde**
- NH_3 **Ammonia**
- O_2 **Oxygen**
- O_3 **Ozone**
- H_2S **Hydrogen Sulfide**
- NO_2 **Nitrogen Dioxide**
- SO_2 **Sulfur Dioxide**
- Cl_2 **Chlorine Gas**
- TVOC **Total Volatile Organic Compounds**
- RCS **Respirable Crystalline Silica**

Air quality monitoring and detection of various hazardous air particles such as silica dust and other respirable dust substances

Monitors the air quality and air composition in mining and drilling environments (outdoor or underground) for particles such as crystalline silica dust, and automatically alerts control rooms of any abnormalities in the air.

Particulate sensing parameters

Sensing technology	Optical refraction technology (ORT) Light-scatter photometer (OPC)
Particulate measurement	Target RCS identification range 1 to 10 µm
Max. typical dust loading*	150 mg/m³
Continuous range	25 mg/m³
Displayed data	RCS mg/m³ Total particles/litre
Resolution	1,000t h of a mg
Averaging period	15 minutes, 1, 4, 8 and 12 hours (rolling average)
Sampling interval	1 to 60 seconds
Particle count	>600 particles/second
Total airflow rate	~1.5 L/m (nominal)
Typical RCS accuracy	±25%

Bushfire smoke detection, monitoring and alerts for when hazardous chemical levels are reached

Monitors the air composition and detects bushfire smoke components in the environment (outdoor or underground) such as carbon monoxide, nitrogen oxides, organic chemicals, black carbon and carbon dioxide, and automatically alerts control rooms of any abnormalities in the air.

Carbon Footprint monitoring and reporting

Monitors the air quality and composition of greenhouse gases in the environment such as carbon dioxide, methane, ozone, nitrous oxide, chlorofluorocarbons, and water vapor that contribute to a carbon footprint.

Reports of these emissions can be exported for carbon footprint qualification analysis and to make educated decisions to mitigate carbon emissions.

Ventilation units monitoring and alerts

Monitors on real time the condition of flow through ventilation units which monitors airflow, heat stress, gas, dust, silica, mine flies and diesel particulate. Alerts are sent to authorised personnel when units are faulty or not active to ensure the ideal air quality levels are maintained.

Onsite and building materials stock availability tracking and monitoring

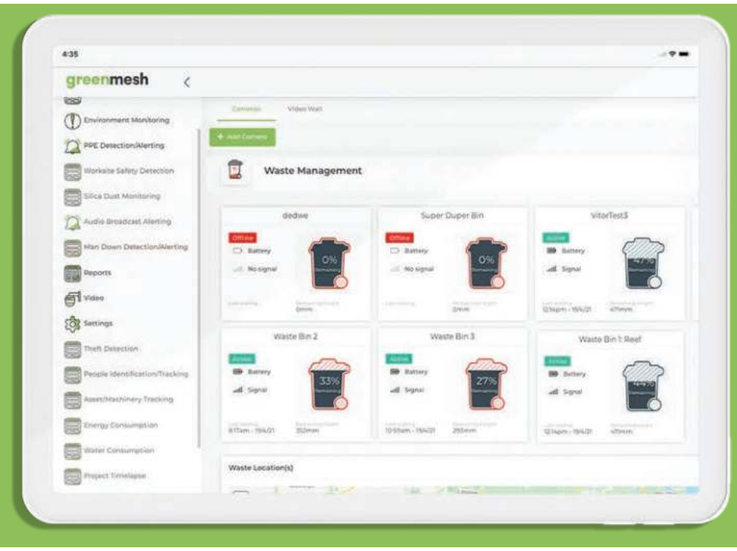
Keep track of building stock levels and availability of construction materials such as soil, gravel, crushed rock concrete, etc in silos. Send alerts to authorised personnel when materials run down to a certain threshold (weight, volume, percentage) to ensure materials stay replenished and do not run out.

Energy and water consumption monitoring

Monitors and provides a report consolidating worksites' overall electricity and water consumption on per day, week, month and year (to date). This data is also available for all individual circuits and water sources. Create and manage email and SMS alerts for when certain power consumption levels are reached.

Waste management monitoring

Monitors and differentiate the type and quantity of waste generated on site, proportions of waste, recycling vs landfill waste, and sources and movement of waste, which provides data for waste management plans.



Vibration Monitoring and alerting

Monitors the sites' vibration performance in real time and has the ability to set thresholds based on compliance limits and triggers immediate alerts to prevent regulatory thresholds from being breached.

Gas monitoring

Fixed and portable gas monitors detect the presence of toxic, asphyxiant and explosive gases such as carbon monoxide, methane, hydrogen sulfide and oxygen deficiency/enrichment.

This also assists with workplace ventilation management.

Fuel tank monitoring, effluent tank monitoring and other similar liquid storage.

Monitor fuel tank levels in real time and receive alerts when tank levels reach a certain threshold.

Effluent tanks solutions provides real-time monitoring of portable and drop toilets so that maintenance teams can optimise their cleaning schedules.

This also helps manage the lifecycle of highly specialised and expensive equipment.

Workplace Project Timelapse

(With onsite cameras and via satellite imagery)

Periodic satellite imagery of projects will allow companies to create a historical progression timeline of the development which is beneficial because they can look back on the progress and the development can be analysed for construction purposes.

Theft detection (people/vehicles entering and leaving the site) with real time notification direct to security guard's mobile phones/devices

Monitor people and vehicles who enter and leave worksite, with real time notifications being directly sent to security personnel on duty via their phones or devices.

Our electronic Asset tracking devices will track assets in real time and have the ability to monitor the usage statistics of vehicles. This provides companies with real-time visibility of their assets throughout the day which avoids equipment loss, theft and ghost assets as well as automating regular machinery maintenance.

Utilise tags and facial recognition to implement site safety monitoring and automate time attendance by monitoring and reporting when workers enter or leave worksites.

Video Surveillance and on site property maintenance detection

Ai capabilities are integrated with cameras to accurately monitor and detect for property damage, protect heritage buildings, identify graffiti etc and provides real time location information.

Monitoring Capabilities

Temperature	—30~70℃	0.1%	RS485
Humidity	0~100%RH	0.1%RH	Tas±3%RH
Illuminance	0~200K Lux	10 Lux	±5%
Dew point temperature	—100~40℃	0.1℃	±0.5hPa
CO2	0~5000ppm	1ppm	±75ppm+2%rdg
Civil CO	0~500ppm	0.1ppm	±2%FS
PM1.0/2.5/10	0~1000μg/m3	1μg/m3	±3%FS
TVOC	0~5000ppb	1ppb	±3%
CH2O	0~5000ppb	10ppb	±3%
O2	0~25%VOL	0.1%VOL	±2%FS
O3	0~10ppm	0.01ppm	±2%FS
Air quality	0~10mg/m3	0.05 mg/m3	±2%FS
NH3	0~100ppm	1ppm	±2%FS
H2S	0~100ppm	1ppm	±2%FS
NO2	0~20ppm	0.1ppm	±2%FS
Odour	0~50ppm	0.01ppm	±2%FS
SO2	0~20ppm	0.1ppm	±2%FS
Cl2	0~10ppm	0.1ppm	±2%FS

Civil gas