



360° Radar Automatic Incident Detection for Tunnels



360° long-range
radar AID



Works in all tunnel
lighting conditions



Automatic
camera control



Integrates with
tunnel SCADA
systems



Powerful software
with rule-based
alerts



Maintenance-free
radar for
10 years

Why 360° radar?

Portal-to-portal coverage, and beyond

Works in all tunnel lighting conditions

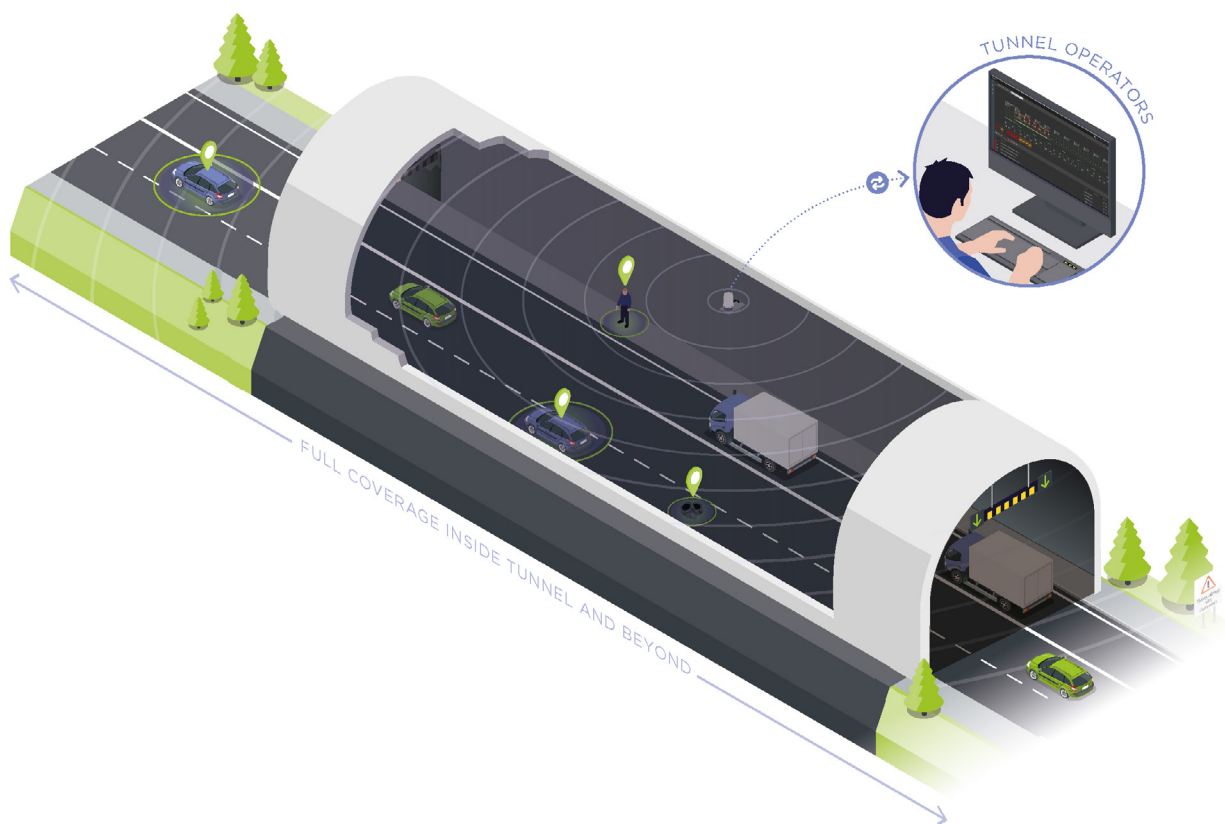
Navtech's technology uses radio waves to illuminate and track objects of interest in the tunnel. Together with long-range **360° coverage**, this means uninterrupted performance in all conditions:

- ✓ **High contrast lighting** at portals
- ✓ **Headlight glare**
- ✓ **Reflections** from walls and road surfaces
- ✓ **Dust and dirt**
- ✓ **Smoke (hot and cold), fire and hot gases**



Bergeland Tunnel, Norway:
3 radar installed across 700m

Portal-to-portal coverage



Comprehensive AID

360° radar cover both **inside and outside the portal** detecting **vehicles, pedestrians, debris** and more. The same system can also provide traffic data.

Automatic camera control

Navtech's ClearWay solution detects incidents in tunnels using radar and can **automatically direct cameras** to the incident location, for **visual context**.

ClearWay system

360° radar for incident detection. Cameras integrated for visual context.



360° long-range radar AID



Works in all tunnel lighting conditions



Automatic camera control



Powerful software with rule-based alerts

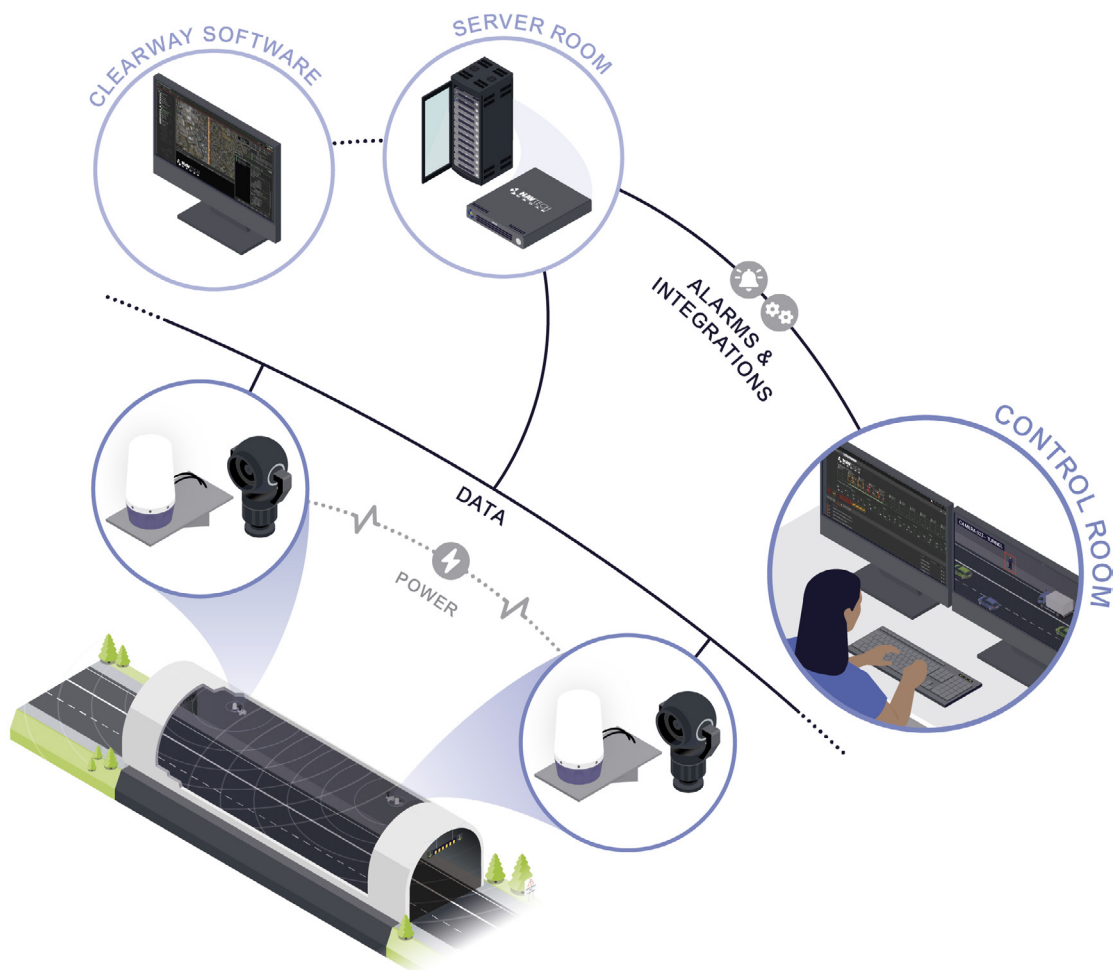


Integrates with tunnel SCADA systems



Maintenance and service free radar for 10 years

ClearWay system architecture



Operator effectiveness

Navtech's AID solution **saves operators valuable time** by removing the need to monitor multiple camera feeds. The system **detects an incident within 10 seconds**.

Adds value to existing systems

Combine radar's reliable **detection in all lighting conditions** with your **cameras high-resolution visuals** for more effective incident management.

Design, installation and commissioning

Our team follows proven design, installation, commissioning and performance verification processes.

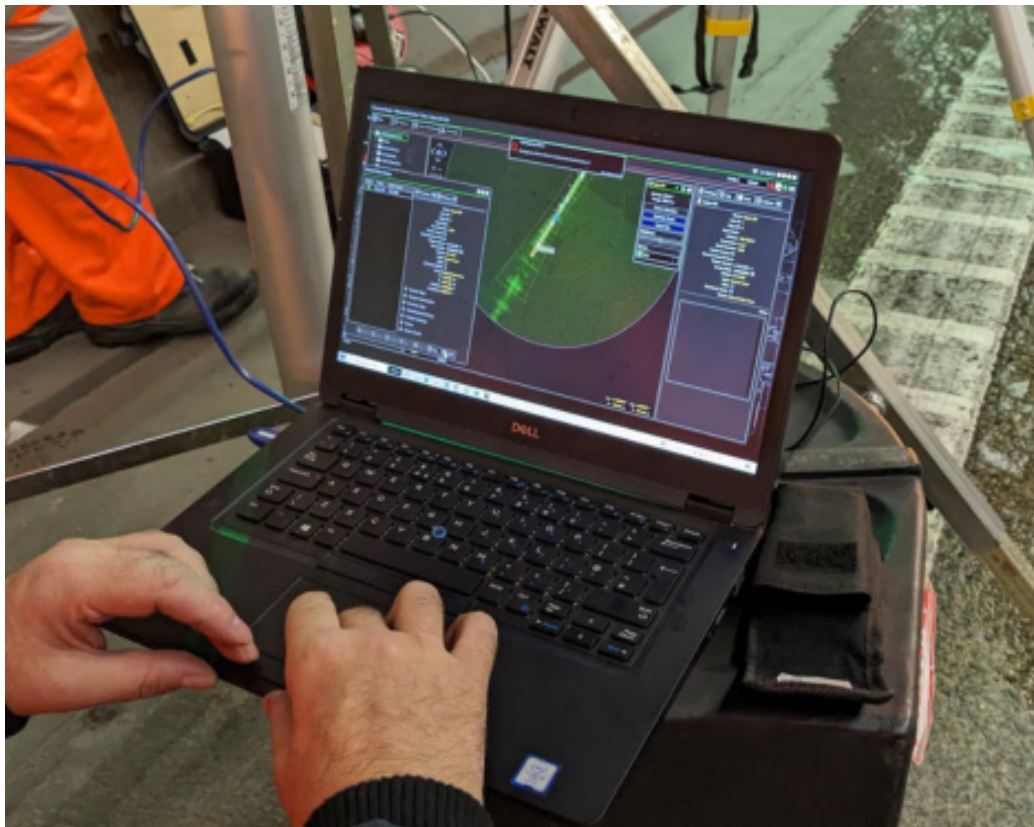


System design

We start by understanding your needs and collaborating on an initial system design. Our engineers then conduct a **detailed site survey** to confirm the design and ensure it will meet performance specifications.

Project delivery

Following radar installation, **we verify the system meets your performance and coverage expectations.** Powerful software raises incident alerts and keeps false alarms to a minimum.



Key tunnel projects

Used in key strategic tunnels to provide the highest levels of tunnel safety.



Ryfast Tunnel, Norway
102 radar installed
Across 28.8km



Hindhead Tunnel, England
12 radar installed
Across 3.5km



Eysturoy Tunnel, Faroe Islands
42 radar installed
Across 11.2km



Bergeland Tunnel, Norway
3 radar installed
Across 700m



Stockholm Bypass, Sweden
Selected for tunnel portals
and approach

Key highway projects

The same system is deployed on highways around the world.



Transmission Gully Motorway, New Zealand
72 radar installed
Across 27km motorway



Kwinana Freeway, Australia
13 radar installed
Across 13km freeway



National Highways SVD rollout, England
1200 radar installed
Across 250miles of All Lane Running motorway

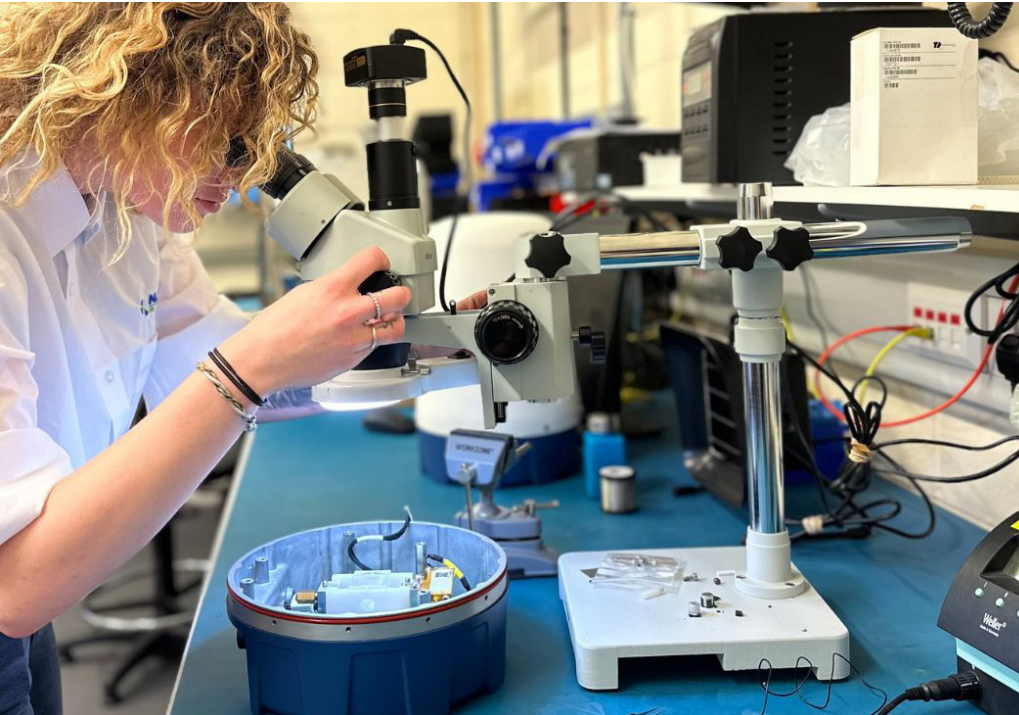
Your technology partner for the lifetime of the system

Giving you access to our expert customer service team, a support package maintains the optimal performance of your Navtech Radar solution.

NavCover+

NavCover plus

A comprehensive hardware and software support package, providing assistance during UK office hours. We adhere to **ITEL processes** and provide a convenient **customer portal** for managing support requests within set service levels.

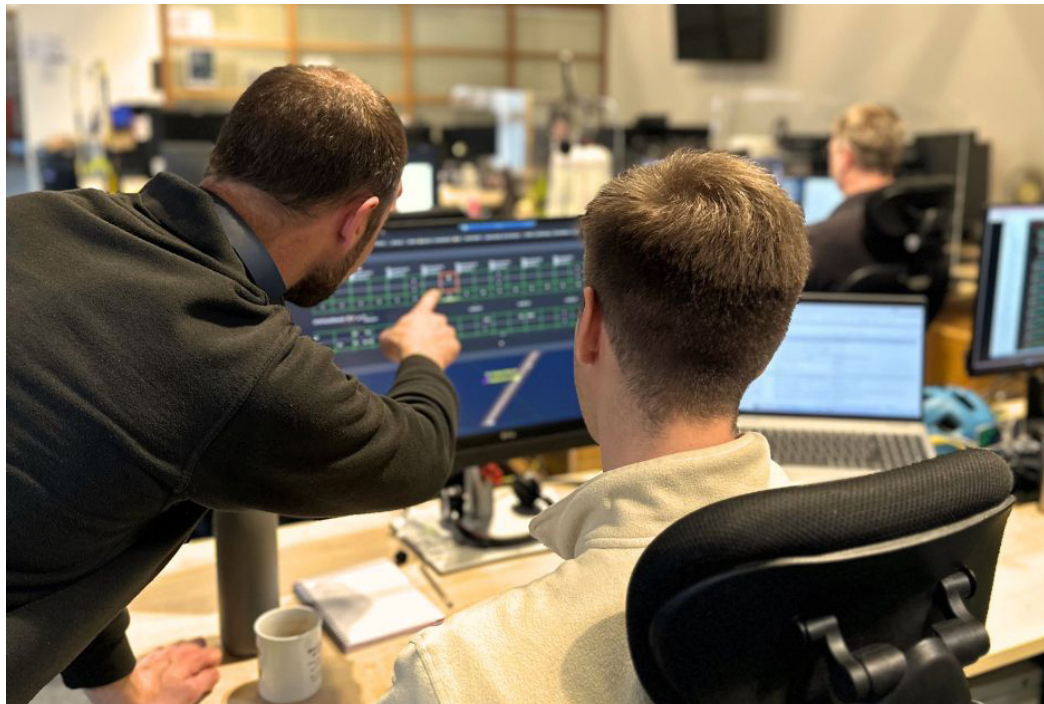


NavCover hardware

A priority service for hardware repairs in the unlikely event of a problem. Benefit from guaranteed turnaround times.

NavCover software

We provide expert software support to keep your system operating at its best. Wherever your installation is in the world our team can **connect remotely** to resolve any issues.



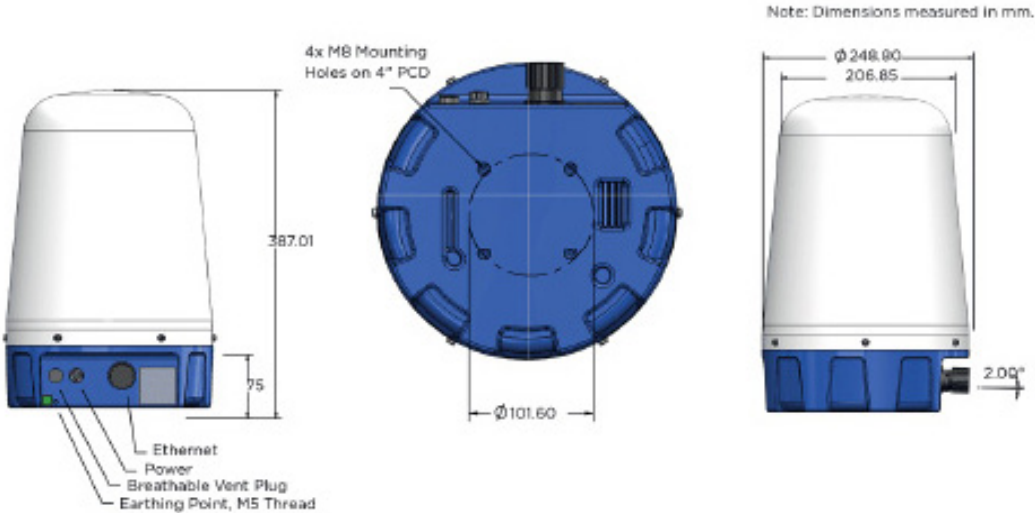
Enhanced services are available giving you **access to 24/7 assistance** and service levels that align with your organisational needs.

Performance guaranteed

The performance of our ClearWay system is guaranteed from the design stage. We deliver to specified performance metrics, including detection rate, false alarm rate, and time to detect requirements.

SYSTEM OVERVIEW	
Multiple system capabilities	<p>Automatic incident detection including stopped, slow and queuing vehicles, wrong-way driving, debris, pedestrian and wildlife</p> <p>Hard shoulder and emergency bay monitoring</p> <p>Traffic data including travel time, vehicle count and classification</p>
CTS175-X radar	<p>Networked 360° radar for portal-to-portal coverage and beyond. Radar spacing up to every 300m</p> <p>Works in all tunnel lighting conditions</p> <p>Operating at 76-77 GHz, 24V DC and PoE variants available</p> <p>No calibration, cleaning or maintenance for 10 years</p>
Integrations and remote access	<p>Integrates with tunnel cameras, SCADA and Video Management Systems</p> <p>Remote system commissioning and optimisation</p>

View technical specifications



Safety is everything.



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Navtech complies with the following ISO standards

ISO 9001:2015 Quality

ISO 45001 Health and Safety

ISO 27001 Information Security

ISO 14001 Environmental

ISO 20000 IT Service Management

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