tended

Case study

How Siemens Mobility uses Tended's geofencing Wearables to support its safety strategy

SIEMENS

Background

Siemens Mobility is a leading provider of transport solutions and has been an integral part of the UK rail industry for over 160 years. The company is a champion of sustainable and efficient transport solutions and provides services to infrastructure managers, including Network Rail, Transport for London and London Underground.

As part of its commitment to worker safety, Siemens was looking for an effective solution to mitigate risks to its workers during D&C resignalling works. As this project was undertaken near open running lines, Siemens required a solution that could prevent near misses and fatalities by helping workers stay within designated safe working limits.

Siemens was also looking for a solution to keep track of plant and vehicles as part of signalling upgrades in Cornwall. This forms part of a £100m project, spanning a route across Cornwall, including Truro, Falmouth and Liskeard, set to change the way the railway is run in South West England.



To support its safety strategy, Siemens implemented Tended's geofencing technology to provide additional workforce protection, as well as plan worksites more efficiently and monitor critical assets.



Due to the simplicity of Tended's solution, the deployment of geofencing was carried out entirely by Siemens without the need for Tended's on-the-ground support.

The project has been a success due to its team's drive and support in championing the use of geofencing and so seamlessly integrating the technology into day-to-day operations.

Due to the inherently high-risk nature of trackside environments, Siemens needed a solution that could support positive behavioural change and promote long-term safer decision-making by its trackside teams.

This would help to cultivate safer trackside working environments in line with its progressive health and safety strategy.

Solution

Overcoming safety challenges

After assessing different options and innovations to improve track worker safety, Siemens concluded that Tended's geofencing solution was best suited to address its safety challenges. The decision was supported by the technology not requiring any infrastructure or base stations to be set up onsite, making it incredibly quick and simple to deploy.

Tended's innovative approach to problem-solving was also an important factor as the technology will continue to develop to meet the needs and challenges onsite. Tended also offers behavioural science support to help with engagement throughout deployment and implementation, helping to ensure a successful roll out.



Tended's geofencing technology was implemented by teams that were undertaking lift and packing of on-track ballast and other p-way activities carried out during shifts near open lines. It was also used by off-track teams carrying out de-vegetation and other activities when in a separated site of work.

Brought in as secondary protection to support the site warden, Tended's technology was integrated into Siemens' safe systems of work to reduce the risk of a track worker straying from a safe working area or accessing or leaving the site outside a position of safety.



Siemens has used Tended's system both when working separated and in safeguarded possessions, to improve safety.

Tended's geofencing solution was used by teams working in line blockages next to adjacent open lines running at over 100 mph, and also when teams have needed to safely set up and operate within larger possessions with plant and machine movements.

The system was implemented across an expansive 70-mile worksite with a 30-hour blockade in South West England. Siemens applied the technology to help improve site safety as well as give the ES complete visibility of its 10 RRVs operating across this extensive worksite.



"We have implemented Tended's geofencing technology to support site safety and efficiency. It provides a warning and additional protection for our track teams when working separated from open lines, helping them regain situational awareness and reducing the risk of them stepping outside of safe working limits.

"The accuracy of Tended's system has helped us to ensure the correct placement of marker boards while also providing the exact location of OTP and OTM and onsite assets such as trolleys. This visibility helps ensure that all equipment has been cleared from the line at the end of the works."

- Eddie Bell, Lead Possession Planning Engineer, Siemens Mobility

Planning

Helping teams keep a safe distance from hazards

Safe zones for Siemens' teams were mapped out in advance by Tended's planning service. Using the mile and chain limits, the site access point and CESS were mapped separately to enable teams to locate the correct access point and also step into the CESS if needed should the line block need to be temporarily returned to the signaller. Using the dashboard's measurement tool, Tended ensured the safe zone was exactly 2 m away from the open line.

Siemens has now been one of Tended's first customers to deploy our new automated geofence drawing tool which enables planners to map a safe worksite in just a few minutes.



Briefing

The team were briefed about geofencing after their usual safety briefing. The COSS gave a 1-minute explanation of geofencing and that it would be used as an additional layer of protection for adjacent line open (ALO) working.

The COSS demonstrated the Wearable alerting upon leaving the safe zone so that the workers were familiar with the alerting and how the Wearable would work.



Results

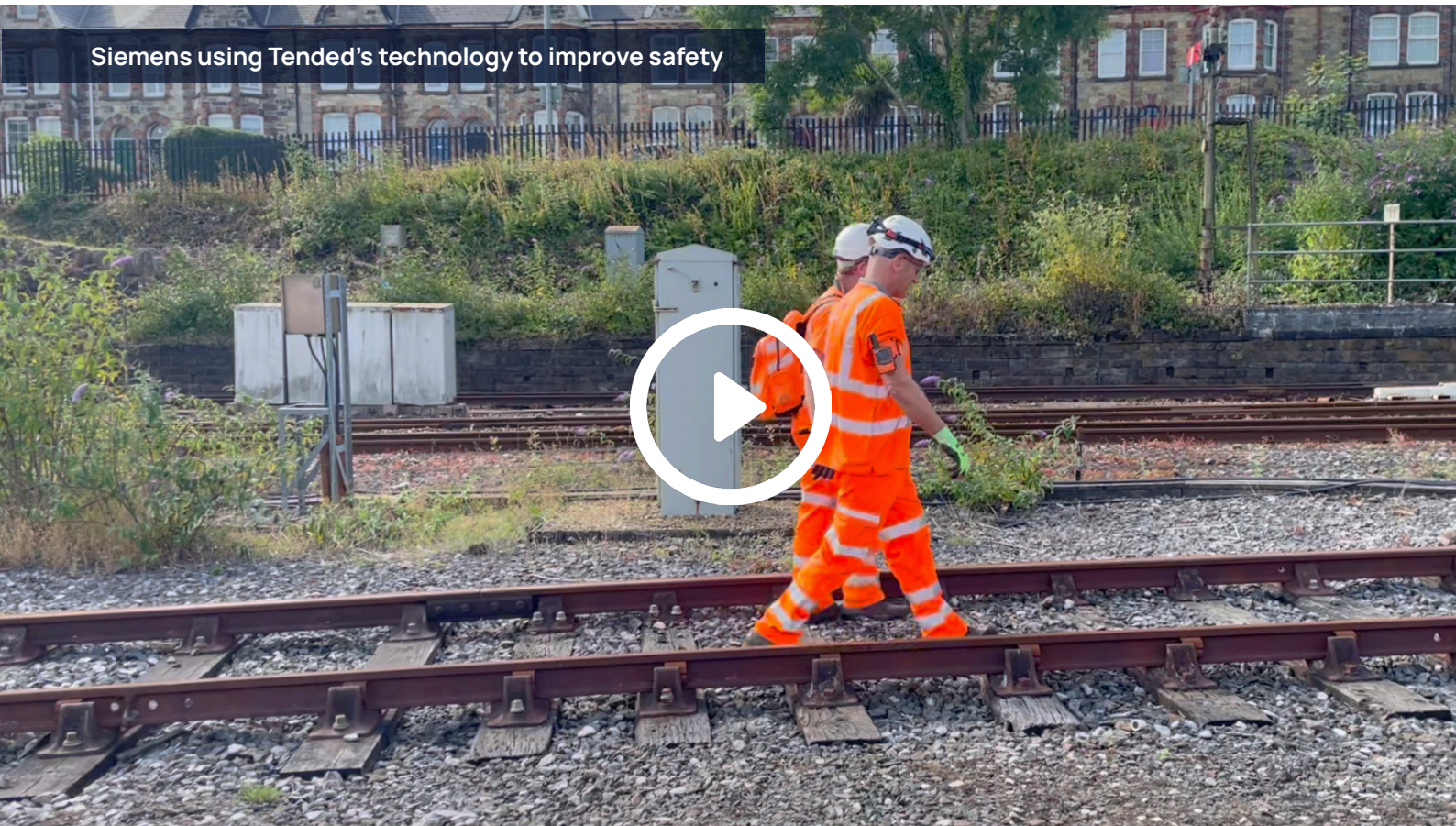
Siemens successfully implemented geofencing as an additional form of protection for its p-way civils and off-track teams. The Wearables alerted workers on three occasions when they unintentionally exited safe working limits. By instantly regaining situational awareness, the workers moved back into the safe zone, reducing the risk of a near miss or accident occurring on the open line.

Using the data gathered from Tended's solution, Siemens is proactively looking for opportunities to reduce risk in future and help prevent incidents.

Siemens will continue to use Tended's geofencing solution for future works, specifically for ALO works as well as separated and in possessions.

"This cutting-edge technology has revolutionised our operations, granting an unprecedented level of visibility into our worksites. With the incorporation of geofencing, our operations team continues to discover fresh applications, thanks to our close collaboration with Tended. We are actively exploring other areas this technology can support us on-site with our dedicated engineering supervisors and look forward to finding new ways to enhance our operational safety and efficiency."

- **Eddie Bell, Lead Possession Planning Engineer, Siemens Mobility**





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