



Telent Public Wi-Fi Installation in Britain's biggest and busiest train stations.

The 2019 National Rail Passenger Survey identified reliable connectivity as a priority for passengers. To meet this passenger expectation, Network Rail awarded a contract to Telent to deliver Free Unlimited Public Wi-Fi at 19 of Britain's biggest and busiest stations, transforming the passenger and visitor digital experience.

To deliver the Network Rail requirements Telent designed, installed, tested, and commissioned a simple, user-focused solution to provide continuous coverage across the entire area of each station. A key part of the delivery of the network was collaboration with technology partner Global Reach who ensured that the portal services met all of the strict criteria on Data Protection and content filtering to provide user protection.

Unlike Public Wi-Fi technology available at other large-scale overground and underground stations and many retail areas, the service does not require users to enter any personal information; they simply access via the '#FreeStationWiFi' SSID, agree to the terms and conditions and click 'Connect'.

Challenges

Although an uncomplicated solution for the end user, the programme to install the infrastructure required to deliver high-quality connectivity faced significant challenges including:

- the initial scope doubling while the completion date remained the same.
- onsite activities paused for three months due to the Covid pandemic and the first national lockdown.

- time sensitive access to complete works in public areas
- original features at heritage stations requiring asset adaptations.

To ensure the completion date was achieved, Telent developed an accelerated programme increasing the installation teams from two to ten, with 10 to 12 individuals working in each team. More than 85km / 50 miles of different cable types have been installed as part of this programme, which will continue to run until March 2025.

Engagement and communication

With installation being carried out in public areas, it was imperative to engage with station managers to explain the project and the benefits prior to works starting which helped to gain early buy-in. Establishing these relationships enabled the team to secure the required onsite hours and ensure necessary engineering isolations to make the most of the hours available.

Maintaining exceptional lines of communication with stakeholders involved was critical. The successful communication was instrumental in resolving logistical challenges, including working around existing works already underway at King's Cross and Bristol stations.

With every station being unique, each required bespoke design and installation solutions, including individual systems for mounting equipment and frequently having to 'wrap' hardware to blend in with the architecture of heritage buildings. One example was wrapping an Access Point (radio) to make it blend into the wall behind.

Weekly delivery team SCRUMS provided a platform to raise ideas, address issues, plan for and react to project developments, culminating with the final Public Wi-Fi installation being commissioned during the 2021 Christmas period.

Passenger experience and connectivity

With nearly half a million people accessing the Wi-Fi services managed by Telent every month and customer satisfaction results showing 87% of users agree the Wi-Fi enhanced their station experience, the feedback has been excellent, coupled with on average a circa of 800,000 returning and new users per month benefiting from the free, child friendly service.

Certified 'Friendly Wi-Fi', the service filters illegal or harmful content, keeping children and families safe online whether using social media, streaming music, podcasts or videos, browsing the internet, making video or voice calls for work or pleasure or gaming.

Featuring the latest technology, including Wi-Fi 6, to future-proof the service, average download speeds are faster than most home broadband services. The Wi-Fi service allows users to connect at an enabled station and seamlessly reconnect upon arrival at another enabled station.

A private network on the system enables station staff to access information quicker, enabling them to provide better support to passengers, particularly during periods of disruption. The upgraded network infrastructure has also improved CCTV data links, enhancing public and workforce safety and is being used to download on-board data for train operating companies, reducing mobile data costs.

Telent maintains and manages the network, which includes the monitoring of over 700 access points and switches covering proactive monitoring, reactive fixes and planned works. Monitoring is 24/7, 365 days a year, all of which is carried out remotely, to ensure the service is always available for users.

Delivered on time, under budget and putting the passenger first, the Telent team along with our technology partner have gone above and beyond to deliver this high-profile, successful project.

"The Wi-Fi networks are doing exactly what they were created to do – improve the station experience for the millions of passengers that travel through them, and provides a free of charge service that is vital for the commuters and tourists travelling through the stations everyday. We're pleased that Network Rail has the trust in our expertise and experience to continue to deliver following the successful installation and first year of running the Wi-Fi's service."
- Gerard Donohue, Group Chief Technology Officer at Telent



- London Kings Cross • London Bridge • London Euston • London Liverpool Street
- London Charing Cross • London Cannon Street • London Victoria • London Waterloo
- London Paddington • Guilford • Clapham Junction • Reading • Bristol Temple Meads
- Birmingham New Street • Liverpool Lime Street • Manchester Piccadilly • Leeds Central
- Glasgow Central • Edinburgh Waverley