

High speed mobile coverage will be delivered across London Underground alongside a new full-fibre network

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Customers on London Underground will be able to access full mobile connectivity and internet access within every station and tunnel, the Mayor of London has announced.

Transport for London (TfL) has awarded a 20-year concession to BAI Communications (BAI) which will enable mobile coverage on the whole Tube network, helping to remove one of the most high-profile mobile 'not-spots' in the UK.

The concession will see a backbone of mobile and digital connectivity established across London.

Uninterrupted 4G mobile coverage has already been introduced on the eastern half of the Jubilee line and will be expanded in phases to ticket halls, platforms and tunnels on the Tube network over the next three years, with all stations and tunnels due to have mobile coverage by the end of 2024. This will allow customers to check the latest travel information, keep on top of their emails and the latest news, catch up on social media, watch videos or make calls throughout their journeys.

London's Tube tunnels will also be used to provide full fibre connectivity across the city, which can then be connected to buildings and street assets like street lighting and bus stops. This will help to further increase mobile coverage through small mobile transmitters, as well as leveraging the power of 5G to deliver city-wide improvements and future growth. The new high-capacity fibre network will bring fibre directly into London's neighbourhoods, creating new opportunities to serve homes and businesses with gigabit-capable speeds and supporting digital inclusion.

BAI, who was awarded the concession after a competitive tender process, is a leading global provider of 4G and 5G connected infrastructure. The agreement will build on BAI's significant experience of deploying communications networks in highly dense urban environments across the world, including New York, Toronto and Hong Kong. The neutral host network being delivered as part of this concession will be the most advanced network of its kind in the world and available for use by all mobile operators. The infrastructure will also be 5G ready, allowing for a seamless upgrade for mobile operators in the future.

The London Underground network is one of the world's largest underground networks and prior to the pandemic was used by more than five million passengers a day. Once fully delivered, more than 2,000 kilometres of cabling are expected to be installed within tunnels and stations, all of which will be fitted outside of operational hours. In addition to benefiting customers, providing 4G on the network will generate additional revenue for TfL across the 20-year length of the concession, as well as helping operational teams by providing better connectivity while underground.

To help reduce future disruption, TfL has already begun installing the necessary cabling within a number of stations and tunnels to help reduce the need for additional closures and ensure mobile connectivity can be introduced more easily. This includes cabling already installed on the Jubilee and Victoria lines, as well as within the Northern Line Extension. Work will now begin to prepare some of London's busiest stations for mobile connectivity, including Oxford Circus, Tottenham Court Road, Bank, Euston and Camden Town, ahead of them being some of the first to be connected by the end of 2022.

Sadiq Khan, the Mayor of London, said: "I promised Londoners that if they re-elected me for a second term as Mayor I would deliver 4G throughout the Tube network. It's already up and running on the eastern half of the Jubilee line and I'm delighted to announce today that I am fulfilling that commitment and full internet access will be available across the Tube, with key central London stations such as Oxford Circus and Euston set to benefit before the end of next year.

"Protecting jobs and stimulating our city's economy is a top priority for me as London rebuilds after this pandemic, and investing in London's connectivity and digital infrastructure is central to this."

Shashi Verma, Chief Technology Officer at TfL, said: "London Underground was born in the 19th century, and this concession to deliver mobile coverage to the whole Tube network ensures it continues to adapt for customers in the 21st century.

"Providing mobile connectivity to customers within the tunnels and on platforms across London will help them stay connected more easily, and will both provide a long-term revenue stream for TfL and support economic growth across the city."

Billy D'Arcy, CEO of BAI Communications UK, said: "Our long-term partnership with TfL will completely transform the passenger experience, as well as helping to boost London's economy and providing social benefits for years to come.

"By building the most advanced network of its kind in the world here, we are helping London leapfrog other major cities in terms of connectivity and ensure that the capital remains the most attractive place for investment. Across the length of this concession, we fully anticipate investing in excess of £1 billion across the Connected London programme.

"We will also establish a new city-wide high-capacity fibre network throughout London and leverage the power of 5G and the Internet of Things to unlock new opportunities for technological innovation. Our extensive credentials delivering large-scale connected infrastructure and networking solutions position us perfectly to capitalise on the fast-growing commercial appeal of 5G enterprise solutions and smart city applications."

London First CEO John Dickie said: "This decision is great news for London and comes at just the right moment to give the city's recovery a boost. The increase in connectivity and productivity this investment will bring is welcome news for businesses and passengers alike.

"The new fibre backbone's effects will go beyond transport, helping the whole of London to get high speed connectivity and supporting the capital in the race to harness smart city technology to improve urban life."

Since March 2020, TfL has been running a pilot of mobile connectivity on the eastern half of the Jubilee line covering station platforms and tunnels between Westminster and Canning Town. The pilot section will now be adopted by BAI, which will work to upgrade any assets to its proposed network-wide design.

The network will also help to create a smarter, safer London. It will host the Home Office's new Emergency Services Network, which will replace the existing Airwave system currently used by the Police, Fire Services and emergency response teams across Great Britain. TfL has ensured that the latest requirements for the Emergency Services Network are fully incorporated and addressed within the network design.

For more information about TfL's telecommunications programme – visit <https://tfl.gov.uk/info-for/business-and-commercial/creating-a-connected-london>

Photo credit: Transport for London