

A nighttime photograph of a city street intersection. The scene is illuminated by streetlights and building lights, creating a bokeh effect and light trails from moving vehicles. A tall street lamp in the center has a small antenna mounted on it. The sky is dark blue. On the left, there is a stone building with a shopfront that says 'Open every day 7am - 11pm'. On the right, there is a modern glass-fronted building with blue neon lighting along its edge.

Alternative models for indoor connectivity

Presentation to the Small Cells SIG
8th November 2018



Launched in 2007, WIG is one of the UK's larger digital infrastructure challengers. Headquartered in Edinburgh, we have operations centres in Bellshill and Solihull. We are backed by 3i Infrastructure plc

WIG builds and operates high capacity neutral host infrastructure that is made available to all mobile and other wireless operators

Neutral host/independent infrastructure business model can play a significant role in targeting challenging coverage areas and facilitating 5G

WIG operates over 2,000 neutral host assets across the UK and has investment programmes targeting six key areas:



Rural – new high capacity wide area infrastructure to enable rural connectivity



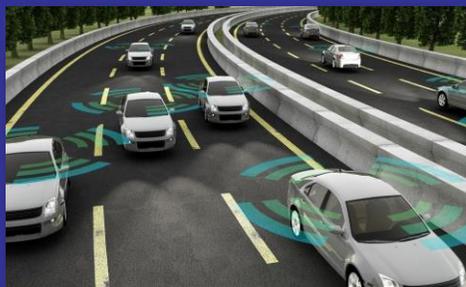
UK market leader for deployment of neutral host Indoor Networks



Urban - multi-operator fibre connected small cell network



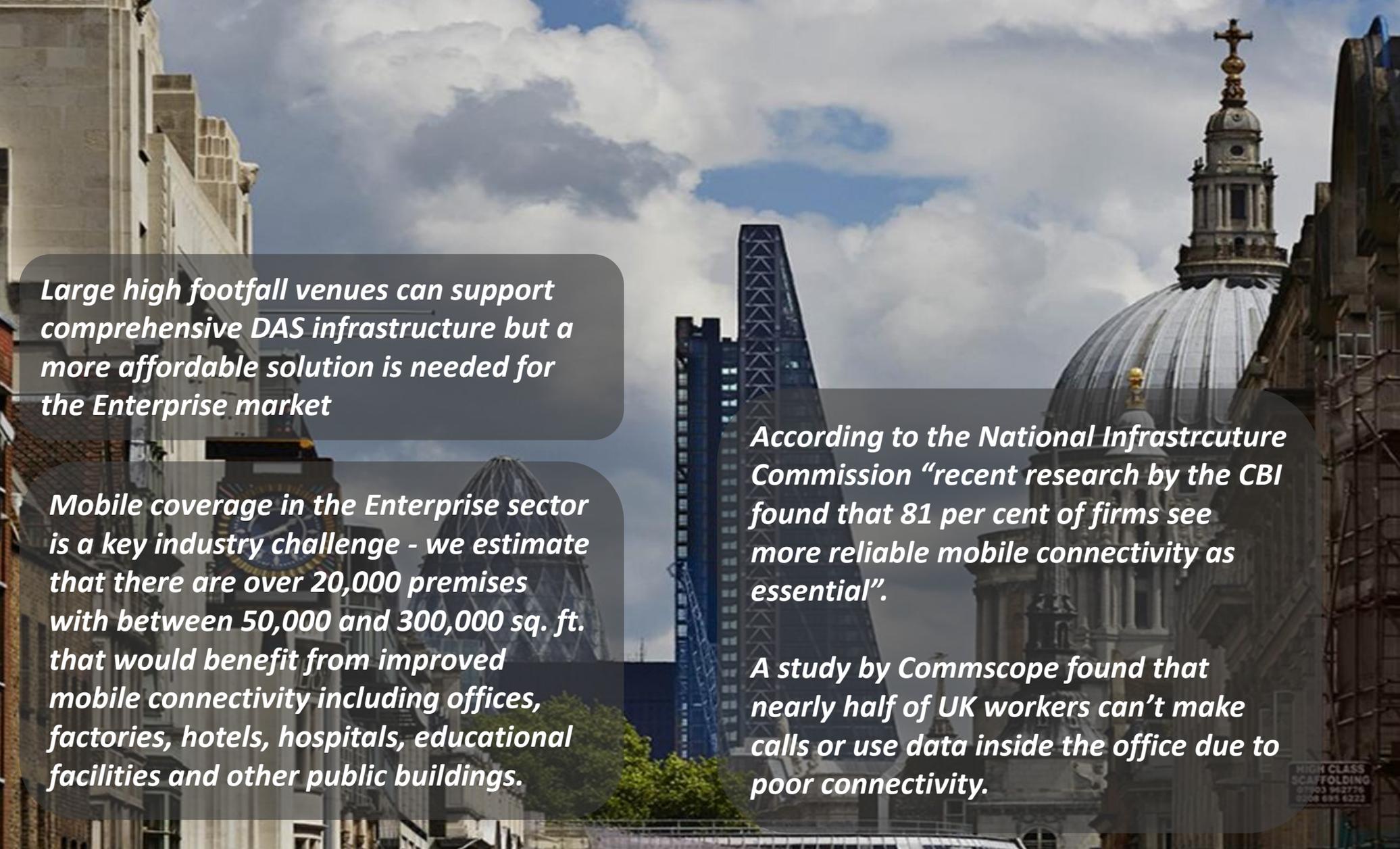
Stadiums and busy public venues – high capacity distributed antenna systems (DAS)



Transport - largest private investor in Midlands Future Mobility, the largest of UK's real world CAV test beds



Leading British bidder for 'Connected London' and mobile on the underground



Large high footfall venues can support comprehensive DAS infrastructure but a more affordable solution is needed for the Enterprise market

Mobile coverage in the Enterprise sector is a key industry challenge - we estimate that there are over 20,000 premises with between 50,000 and 300,000 sq. ft. that would benefit from improved mobile connectivity including offices, factories, hotels, hospitals, educational facilities and other public buildings.

According to the National Infrastructure Commission “recent research by the CBI found that 81 per cent of firms see more reliable mobile connectivity as essential”.

A study by Commscope found that nearly half of UK workers can’t make calls or use data inside the office due to poor connectivity.

WIG supports a dialogue between Ofcom, the MNOs and neutral providers to determine whether a tranche of shared spectrum can deliver better outcomes for consumers and stakeholders

- ***Whilst larger venues can afford a comprehensive DAS, a more affordable solution is needed in Enterprise buildings and two developments make this possible:***
 - ***First, on the back of the CBRS project in the US, a substantial new product set is emerging supported by shared access to licensed spectrum in the 3.6GHz band, allowing delivery of indoor connectivity with a single RF source***
 - ***Second, a new business model has emerged where neutral host operators collaborate with the MNOs to deploy infrastructure into Enterprise buildings and it is the building owners that pay under an IAAS (Infrastructure as a Service) model***
- ***The demand for mobile broadband continues to grow whilst the coverage challenge will only get tougher with higher frequencies and new building materials. The problem needs to be addressed now***
- ***Licensed spectrum is an option worth considering – 20 MHz of shared spectrum in the 3.6-3.8GHz band could unlock this innovation providing it is supported by key stakeholders including the MNOs. We therefore encourage Ofcom to take an innovative approach to exploring spectrum options***