City of Smart Sunderland

Sunderland
City Council

No One
and Nowhere
Left Behind

Sunderland: Our Smart City Model

Smart transport

Smart and connected homes

Connected healthcare

5G Enabled manufacturing

Smart energy grid

Connected retail

Smart city services

DATA ANALYSIS AND VISUALISATION

SMART CITY OPERATIONS CENTRE

HOW THE CITY IS FUNCTIONING AND BREATHING

REAL TIME CONTROL AND ANALYITICS ACROSS THE CITY

SMART CITY SENSOR NETWORK

NO ONE AND NOWHERE LEFT BEHIND

FIBRE NETWORK

PUBLIC WIFI

WIRELESS MM WAVE

WIRELESS 4G/5G

WIRELESS LOW POWER WAN

UBIQUITOUS CONNECTIVITY

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Smart City Developments

- Delivery of an ultra-fast free wi-fi service

- City-wide fibre investment from CityFibre. Virgin Media and Netomnia – over £80m

- Delivery of a range of transformational projects – assistive technologies, smart video sensor devices, smart building solutions, e-mobility

- DCMS 5G Create - first private 5G network operational in the city enabling delivery of the 5G Create automated logistics pilot at Nissan/Vantec

- Digital Careers partnership secured

- Technology Start-up partnership secured

- Digital inclusion programme underway

- DLUHC funding for 5G networks - kick-started a Smart City / 5G Neutral Host Partner Procurement
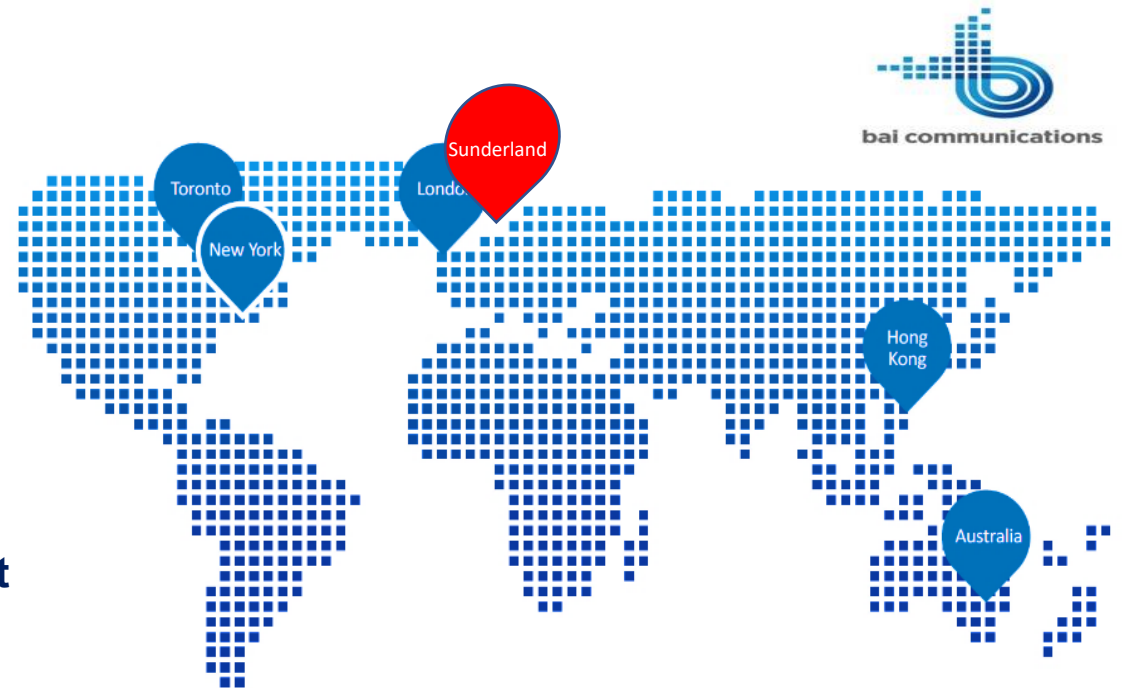

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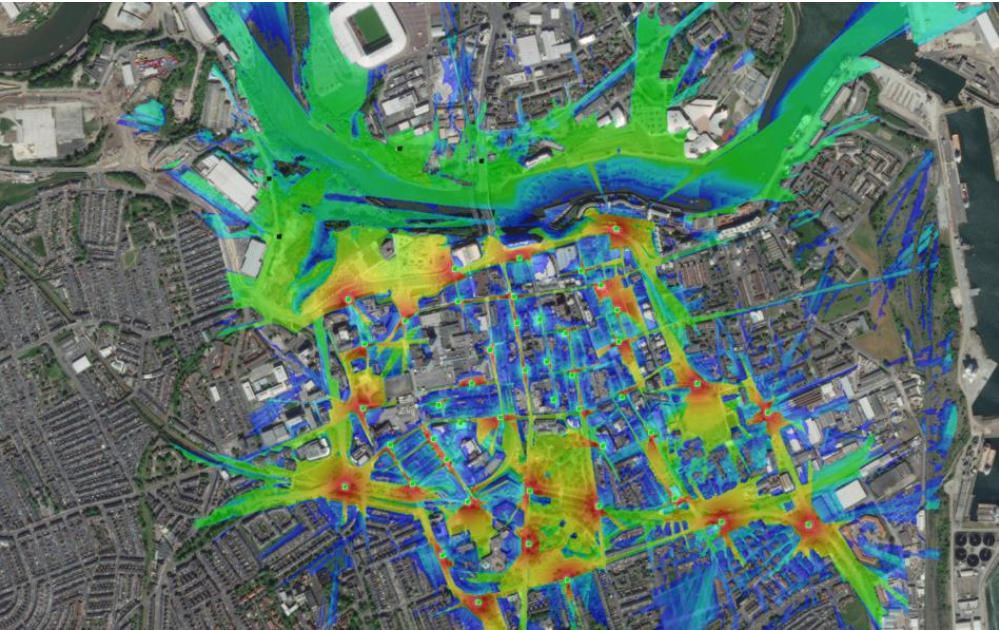oursmartcity
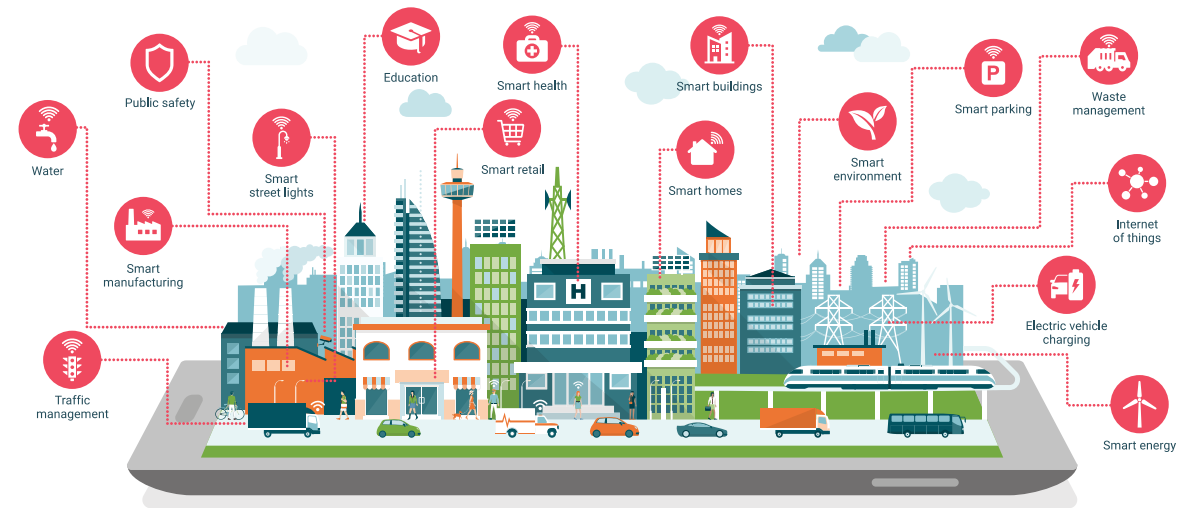
Smart City Partnership

- A **first of its kind** 'Smart City and 5G Neutral Host' Joint Venture

- 20 year Strategic Partnership; A pivotal next step in achieving our Smart City Vision and the significant resulting benefits

- Fund, build & manage a network of networks

- Deliver transformational use cases – making a real difference for local businesses and residents

BAI Communications will:

- Invest significant financial and organisational resources and global communications expertise in Sunderland

- Become the aggregator of a strong supplier eco-system to support the Joint Venture

- Work in partnership to develop Sunderland as a **leading UK Smart City** and a **Global Centre of Excellence**

Smart City – Delivery Plan

- City Centre 5G / Ultrafast, free Wi-Fi
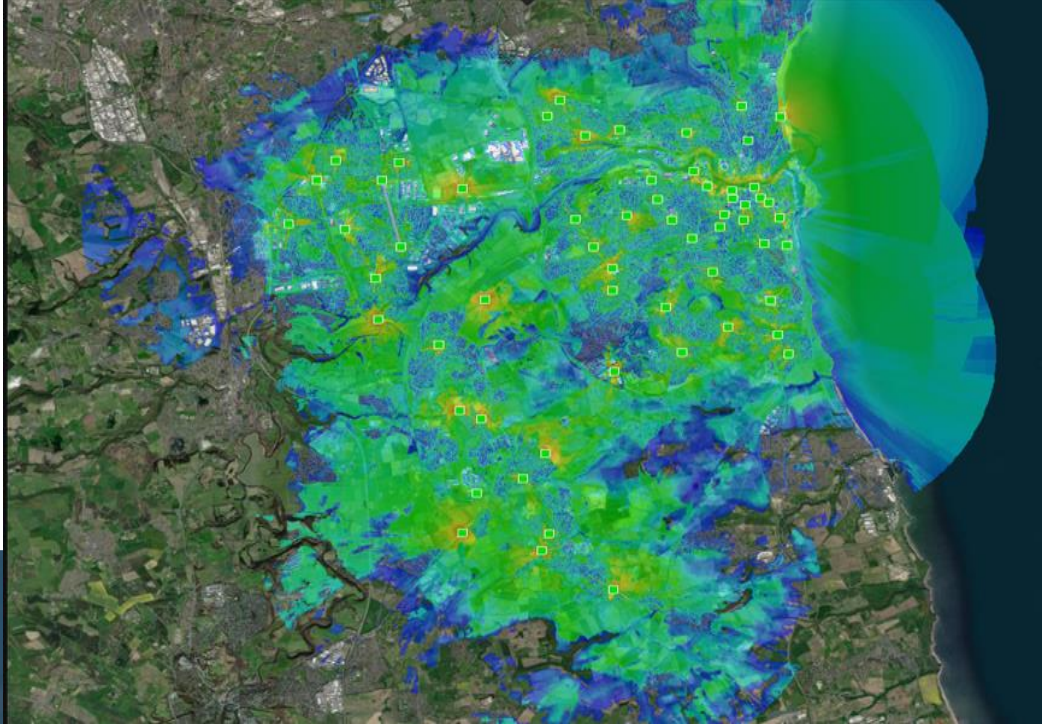
- City-wide LoRaWAN (long range, low powered network)

- Roker Ultrafast, free Wi-Fi

Smart City – Delivery Plan

Stadium of Light

City Hall

Sunderland Train Station

University of Sunderland

Riverside Footbridge

Riverside Housing

Culture House

HICSA

Car Park

Eye Hospital

Smart Healthcare

**Smart Living**

Transformed Public Service Delivery

Smart Manufacturing

Smart Education

Smart City – Innovation

- The sensor network –

  - 30 air quality sensors
  - 72+ traffic and motion sensors

- Currently exploring –

  - Road temperature sensors (supporting winter gritting)
  - Life buoy/throw line sensors
  - Legionella water monitoring
  - Surface water / flood management
  - Pest control
  - CCTV
  - Smart Bins
  - Building Emissions
  - Digital Twining

- Developing a city-wide data architecture/dashboard –

  - Collating/aggregating data from many sources to inform real time response/a city wide position
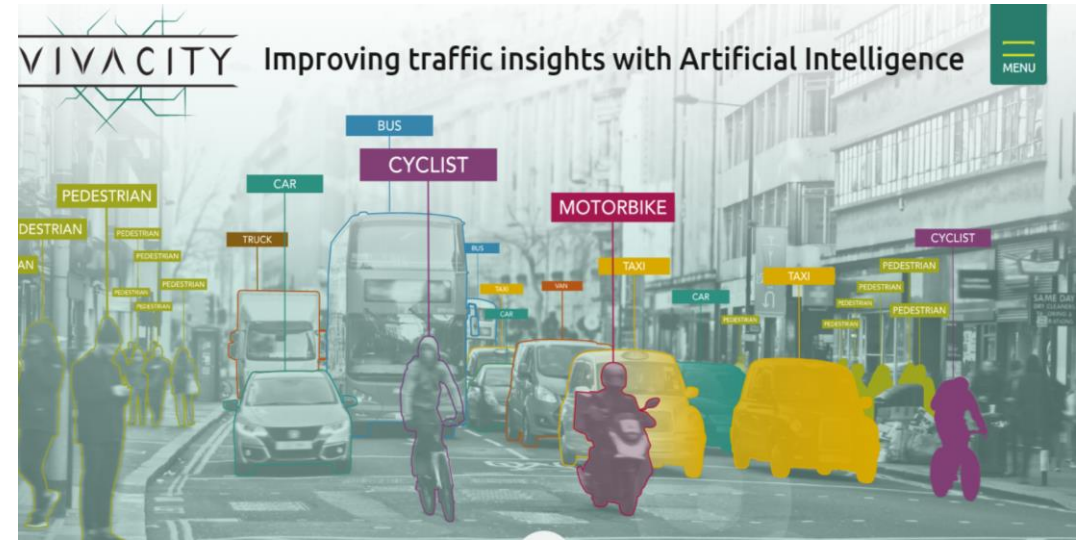
Sunderland Citywide App / Wi Fi Messaging Platform

Smart City Engagements

Health & Assistive Care
- Technology enabled demonstrator homes
- Assistive technologies and telehealth solutions – supporting the service to scale and expand
- Data and systems – supporting Community Equipment Stores and data opportunities
- Connectivity – opportunities around current and future connectivity requirements
- 'Uber' model of social care – supporting new models of service delivery

Manufacturing
- SASMI 5G enabled demonstrator hub
- Data/connectivity opportunities and digital twinning
- 5G Enabled Factory
- 5GCAL V2 / City Shuttle – progressing x 3 use cases for CCAV funding bid
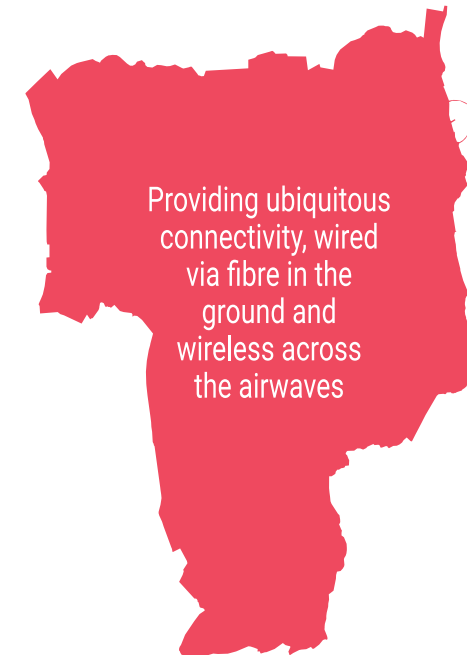
Smart City Engagements

Culture/ Sports/ City Experience
- Expo Sunderland / Major Events
- Digital Play Parks
- British e-sports
- Sunderland Museum Winter Gardens

Education, Enterprise and Digital Inclusion
- Digital Careers Partnership
- Digital Enterprise Partnership
- 5G/IOT accelerator
- Digital Inclusion – extension of public Wi-Fi network for social purposes, working with providers to maximise opportunities across the city

Providing ubiquitous connectivity, wired via fibre in the ground and wireless across the airwaves

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