A SUPER-CONNECTED CITY WHERE PEOPLE AND BUSINESSES THRIVE

Sunderland, Our Smart City - Background and Context

- City Plan – By 2030 Sunderland will be an connected, international city with opportunities for all

- Digitally connecting people and places is vital to deliver the aspirations of the city plan under of three key themes of Smart Dynamic City, Smart Healthy City and Smart Vibrant City

- Next generation fibre and mobile infrastructure underpins the connectivity required so we can deliver a whole range of benefits for Sunderland residents, businesses and visitors

- A city wide partnership involving the Health, the Education and the Business Sectors

- The partnership is already starting to deliver significant improvements to health, care, education and enterprise

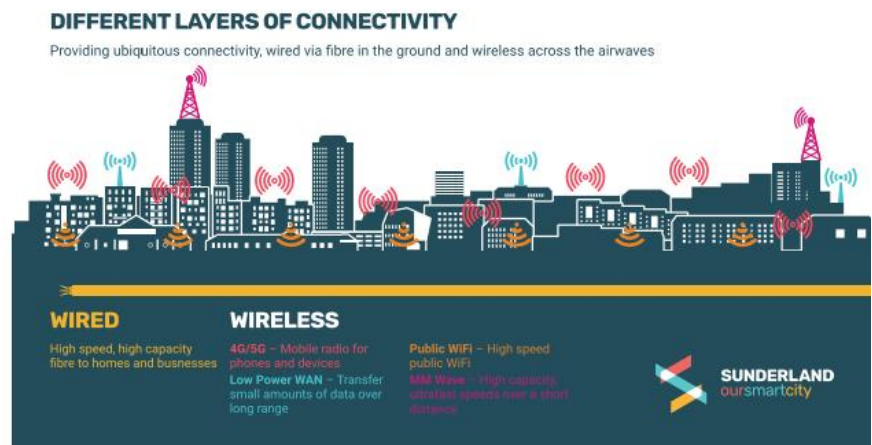- Importantly this is about delivering social and economic good – leaving no-one and nowhere behind

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

NO ONE AND NOWHERE LEFT BEHIND

Smart City Developments - Connectivity

- 5G Ready Communications Ring launched Dec 2019 – delivering free, ultrafast wi-fi to a number of locations; over 3,000 connections every month

- Successful 5G Create bid to DCMS in July 2020 attracted over £4.8m to Sunderland; looking at 5G's ability to boost productivity at the Nissan plant and supply chain

- Successful MHCLG, Getting Building Fund in Aug 2020 attracted £4.5m to Sunderland to implement 5G in the City Centre and Riverside alongside a city-wide Low Powered Network to support the Internet of Things

- Award of a £2.9m contract to CityFibre in November 2020 as an anchor tenant for the Council's network

- CityFibre to invest over 62m in the city providing gigabit-capable full fibre connectivity to over 90% of premises – significant social value for the city

DIFFERENT LAYERS OF CONNECTIVITY

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

WIRED
High speed, high capacity fibre to homes and businesses

WIRELESS
4G/5G – Mobile radio for phones and devices
Low Power WAN – Transfer small amounts of data over long range

Public WiFi – High speed public WiFi
MM Wave – High capacity, ultrafast speeds over a short distance

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Smart City Developments – Use Cases

Delivering a range of use cases to make a transformational difference to the lives of the people and businesses of Sunderland;

- Assistive Technologies – now deployed to over 1,050 homes across the city helping to keep people safe in their own homes, supported by an app that allows families, carers and social care professionals to monitor wellbeing

- Smart video sensor devices monitoring vehicle, cycle and pedestrian flows for key routes in the city enabling real time interventions and informing future initiatives and urban planning

- Smart sensors in waste bins are enabling more effective cleansing routes

- Working with Digital Catapult to deliver two local challenges;

  Transport – e-mobility hub

  Smart Building Solutions – optimise energy efficiency/reduce waste

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Smart City Developments - 5G/Internet of Things Opportunities

Search underway for a '5G Neutral Host Joint Venture Partner' - 20 year partnership to deliver ubiquitous 5G across Sunderland

- Initial business case to deliver a city-wide IOT backbone and 5G in the City Centre and Riverside Sunderland by March 2022

- Smart District / Smart Campus – progressing opportunities

- Living Lab – showcasing how technology can be translated into everyday life / research opportunities that follow

- Education, Enterprise and Skills working group – driving forward significant opportunities

- Progressing Digital Careers in Sunderland

- Progressing Enterprise Support in Sunderland – aspiration of 500 new tech start-ups in next 5 years

Smart City Developments – Smart City Platform

- Develop a Smart City Technology Platform – ensuring the Smart City Platform is sustainable and data is accessible

- Open Data Portal – evidencing challenges and opportunities/new business ideas

- Culture House – advanced analytics suite; hub and spoke model

"How best to harness the opportunities afforded by next generation connectivity to support the collective and individual digital ambitions of city partners?"

SUNDERLAND OUR SMART CITY MODEL

DATA ANALYSIS AND VISUALISATION

5G Enabled manufacturing

Smart transport

Smart and connected homes

Connected healthcare

Connected retail

Smart city services

Smart energy grid

SMART CITY OPERATIONS CENTRE

HOW THE CITY IS FUNCTIONING AND BREATHING

REAL TIME CONTROL AND ANALYITICS ACROSS THE CITY

SMART CITY SENSOR NETWORK

FIBRE NETWORK

PUBLIC WIFI

WIRELESS MM WAVE

WIRELESS 4G/5G

WIRELESS LOW POWER WAN

UBIQUITOUS CONNECTIVITY

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