

# How technology and data can support post pandemic recovery

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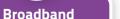


"To investigate, trial and develop emerging technologies and data solutions that can be adopted to assist in the successful mitigation of sustainability challenges across the region, encouraging further economic growth"



# **Connecting Cambridgeshire Programme Update**





- >98% of homes & businesses can now access superfast broadband
- >30% gigabit-capable fibre coverage achieved early ahead of national average
- All broadband delivery now based on Fibre to the Premise (FTTP)
- Developing fibre assets and connecting public buildings

#### Next steps

- Final phase of superfast rollout
- Working with Government to pilot Project Gigabit full fibre programme for hard to reach rural premises
- Targeting >85% full fibre by 2025



#### Public Access Wi-Fi

- Free CambWifi in >200 public buildings and open spaces
- CambWifi expanded to more city centres, market towns and village halls
- Supporting digital inclusion activities

### **Next steps**

- CambWifi extended to market towns in Huntingdonshire and coming soon to East Cambridgeshire
- Completion of CambWifi to 36 village halls to support local communities

### Mobile 2G - 4G - 5G

- Working with mobile operators to improve poor coverage and support 5G rollout
- Targeting partial notspots identified through detailed surveys
- Working with government, local authority planners and mobile operators to maximise coverage

#### Next steps

- New planning legislation to support telecoms networks
- Working with mobile operators to facilitate improvements to 4G and 5G coverage

#### **Smart Places**

- Using technology and data to develop smart solutions
- Helping to tackle challenges such as transport and air quality
- Exploring next generation connectivity to support market towns growth

#### **Next steps**

- Supporting smart projects for Greater Cambridge
   Partnership
- Piloting smart solutions for market towns



## **Enabling Digital Delivery**

Facilitating delivery of better mobile and fibre connectivity



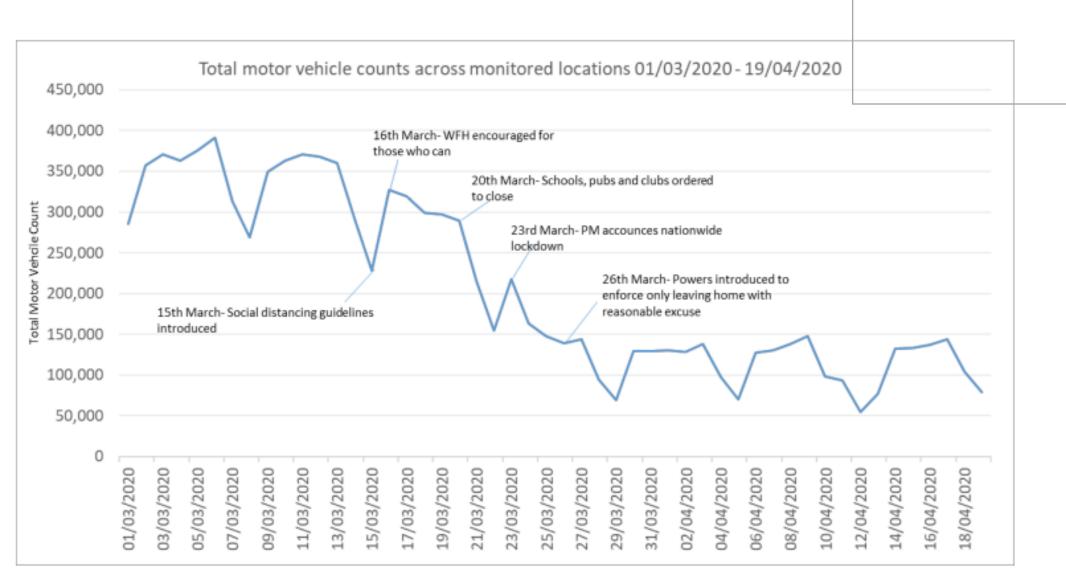
## **Keeping Everyone Connected**

Covid-19 Recovery activities supporting businesses, communities and public services

# COVID - Key Challenges

- Measuring and understanding impacts
- Ensuring connectivity is in place to support remote working, education and health care and to support business recovery
- Support businesses in digital transformation
- Helping get visitors back into our cities and market towns
- Ensure the recovery is sustainable
- Address some of the barriers to delivery
- Plan for the future

# DATA – Measuring Impacts



# DATA – Measuring Impacts

- Measured Vehicle movements, Pedestrian Flows, Car Parking (central car parks, P&R), Air Quality, Bus Ridership
- Built on previous work by the 'Smart' programme deploying new generation sensors, unlocking data and building a sharing platform
- Deployed sensors to support LTNs and fill data gaps

# **Next Step**

- Strategic sensing network (CCC, CPCA & GCP)- Procure Sept
- Joint platform for collating and sharing data Procure Sept
- Exploit data Smart Signals Currently happening



# Smart Signals Trial – 4 Junctions Purpose

- Better Prioritise more sustainable transport modes to reduce stops and delay to encourage modal shift
- Reducing congestion caused by individual traffic signals
- Coordinating the network more effectively to respond to changing traffic patterns
- Providing more comprehensive and accurate data on the use of the network for strategic decision making





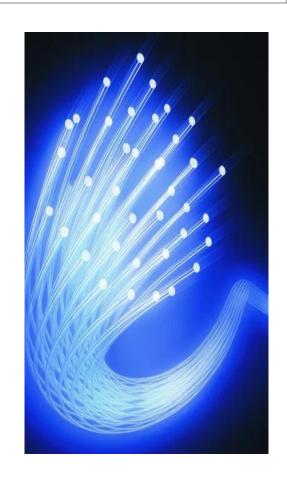
# Connectivity

# **Fibre**

- Ensuring communities have connectivity support remote working, education and health care.
- aim to achieve the Government target of >85% gigabit capable coverage by 2025

## **Public Access WiFi**

- already available at over 200 libraries, village halls and other community and public buildings countywide, and is being expanded to town centres
- 36 village halls across the county have also been connected to the network



# Connectivity

## Mobile

- Removing barriers to delivery EDD ensuring ducting in new schemes, lighting PFI
- Supporting 5G/4G small cells
- Planning Resource support mobile delivery
- consultancy work will set out mobile network operators' plans to deploy 5G in market towns and rural areas and consider how this deployment can be accelerated



# Market Town IoT

- Deploying LoRa in a number of Market Towns
- Working on Sensor deployments to support recovery
- Movement data
  - Air Quality Data
  - Bin sensing
- Developing use cases/business cases
- Easy end to end integration



Sensor Network Data Tool



# connecting FUTURE SMART STREETS



Street lighting

Current position 2020

**Transition** 2021-2035

**Future Vision** post 2035



Micro energy generation



Small Cell Mobile Coverage – 5G



Wifi access points



Sensors for monitoring & data- air quality, temperature, noise, traffic movements etc



Electric Vehicle (EV) charging

## Single purpose Street Lighting Columns

- Primary purpose = Street lighting
- Some Xmas lights/hanging baskets
- Limited opportunities to mount sensors, Wifi etc
- 53,500 street lights in Cambridgeshire under CCC PFI contract with Connect Roads - delivery by Balfour Beatty runs to 2035
- 5,331 District and Parish maintained street lights
- 24,000 street lights maintained by Peterborough City Council

## Opportunity to model new approach

- New road infrastructure and housing developments
- New contract for multi-use utility poles
- Model specifications power, height, strength etc
- Develop new funding and business models
- Trial accessible, affordable services
- 37,000 new houses by 2035 requiring approx. 9000 street lights
- New infrastructure including roads, Park & Ride sites, Green Cycleways, bridges etc requiring many more street lights

## Multi-use Utility Poles

## Hosting a range of functions including:

- Street lighting
- Small cell mobile coverage - 5G
- Wifi access points
- Electric Vehicle (EV) charging
- Sensors for monitoring & data
- Adaptive energy saving
- Micro energy generation

### **EMERGING REQUIREMENTS TO SUPPORT:**

- Advances in digital infrastructure
- Increasing reliance on mobile connectivity
- Net zero climate change challenge ■
- Adaptation targets and strategy

- Small cells for mobile coverage and Wifi access points
- Electric Vehicle Charging points
- Environmental monitoring air quality, temperature, noise, traffic etc
- Adaptive energy monitoring and small scale energy generation apparatus

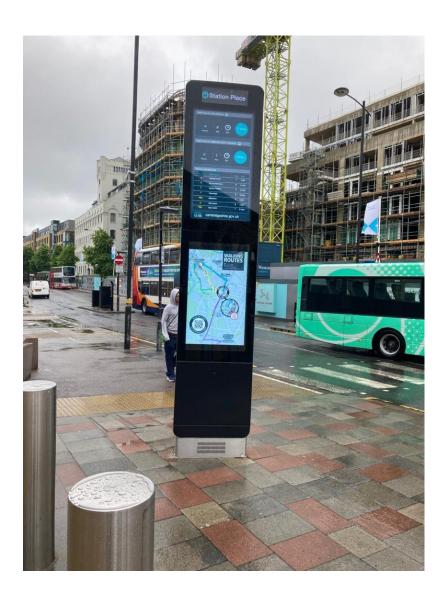


# Sustainable recovery

# Get travellers back on Sustainable Transport



# Visitor information







# Thank You – happy to answer any questions

## Contact us

Find out more at www.connectingcambridgeshire.co.uk

If you have a query for the Connecting Cambridgeshire team, please email <a href="mailto:connectingcambridgeshire.co.uk">contact@connectingcambridgeshire.co.uk</a>











