INNOVATE IN
GREATER
Cambridge:
A CALL FOR
COLLABORATION
INNOVATION
PROSPECTUS

GREATER
CAMBRIDGE
PARTNERSHIP

A call for collaboration

We're inviting ambitious companies and researchers who'd like to work with us, and use our region as a testing ground for their projects or co-develop trials with us, to get in touch.

If you think your ideas could help to solve our region's transport challenges to support planned growth we want to hear from you.

This is your opportunity to help us change how we deliver transport solutions in Greater Cambridge.

Background

The Greater Cambridge city region has achieved growth and success on an international scale, with an enviable status as a global hub of technology and innovation.

With the University of Cambridge at its heart, Greater Cambridge is a world-leading centre for research, innovation and technology and this pioneering city has generated a unique ecosystem of bright minds, commerce, and investment.

The 'Cambridge Cluster' - Europe's largest technology cluster of knowledge-intensive firms in the area - brings together research excellence, deep and varied skills, flexible working space, investment and support services, all integrated through a connected ecosystem. Continuous innovation in each of these areas continues to offer new benefits, enabled by a supportive culture of open innovation and collaboration which has in turn created further jobs, opportunities and prosperity in Greater Cambridge.

The lives of millions of people around the world have been transformed through innovations originating from Cambridge, from the ARM processor and Raspberry Pi to webcams.

Greater Cambridge is one of only a handful of city regions that contribute to the UK economy. Its success brings jobs and opportunities for the whole region and beyond, and when it succeeds so does the whole of the UK.

The Greater Cambridge Partnership (GCP) is harnessing innovation and technology to address some of the significant challenges faced by the area.

The Smart Cambridge workstream has delivered the UK's first purpose-built autonomous vehicle as part of the public transport system, has trialled technologies that utilise machine learning to understand how the city is moving, and has worked with the University of Cambridge on Digital Twin technologies that can give a better understanding of how city systems work.

We now want to build on this success, harnessing new technology to deliver better quality of life and to enhance Cambridge's reputation for being at the forefront of Innovation.

If you'd like to carry out cutting-edge research and trial emerging ideas that could help tackle the challenges we face and improve the lives of people who live and work here, keep reading.

Who we are

The GCP is the local delivery body for a city deal with central Government, bringing powers and investment, worth up to £500 million over 15 years, to vital improvements in infrastructure, supporting and accelerating the creation of 44,000 new jobs, 33,500 new homes and 420 additional apprenticeships.

This partnership of councils, businesses, and academia, works together with local communities and other partners to grow and share prosperity. With a goal to improve the quality of life for the people of Greater Cambridge both now and in the future.

The five partners are:

- **Cambridge City Council**
- **Cambridgeshire County Council**
- **South Cambridgeshire District Council**
- **Cambridgeshire & Peterborough Combined Authority Business Board**
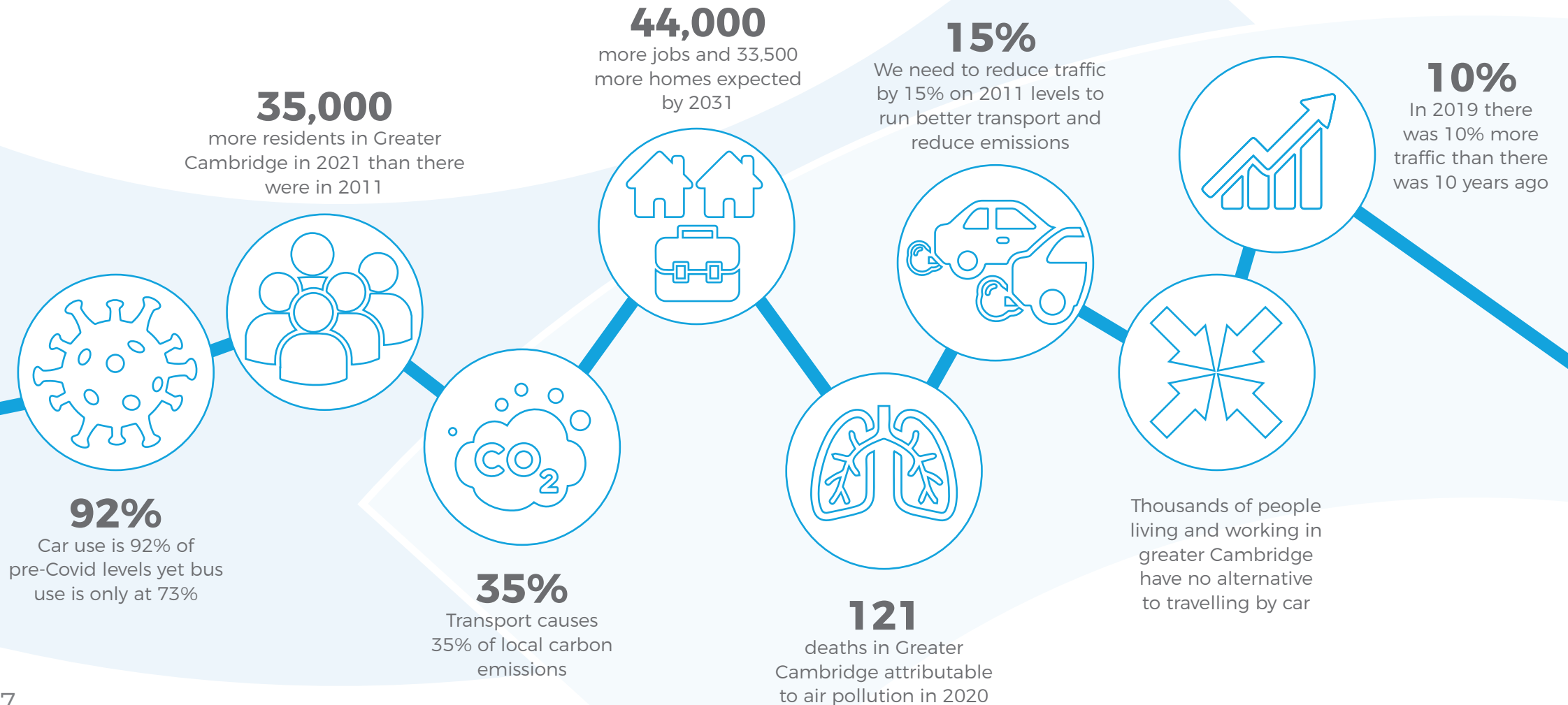- **University of Cambridge**

It is the largest of several City Deal programmes taking place in the UK and brings key partners together to work with communities, businesses, and industry leaders to support the continued growth of one of the world's leading tourism and business destinations

By working together, the partnership aims to create wider prosperity and improve quality of life both now and into the future.

To support this ambition the GCP is looking to harness innovation and new and emerging technologies to support the overall aims and objectives of the City Deal, and to progress initiatives to implementation where this is agreed.

The key challenges

35,000
more residents in Greater Cambridge in 2021 than there were in 2011

44,000
more jobs and 33,500 more homes expected by 2031

15%
We need to reduce traffic by 15% on 2011 levels to run better transport and reduce emissions

10%
In 2019 there was 10% more traffic than there was 10 years ago

92%
Car use is 92% of pre-Covid levels yet bus use is only at 73%

35%
Transport causes 35% of local carbon emissions

121
deaths in Greater Cambridge attributable to air pollution in 2020

Thousands of people living and working in greater Cambridge have no alternative to travelling by car

The transport challenge

The strain on roads and public transport is the result of decades of economic success, a rapid increase in population and the city's status as a top travel and tourism destination. The Greater Cambridge area of Cambridge and South Cambridgeshire is set to grow by up to 30% between the years 2011 and 2031 – with the population rising by 65,000 to 338,000 (from 273,000 in 2011. Population growth means trips on the transport network will increase by 25,000 during that period (from 101,000 in 2011 to 126,000).

Transport trips   2011   2031
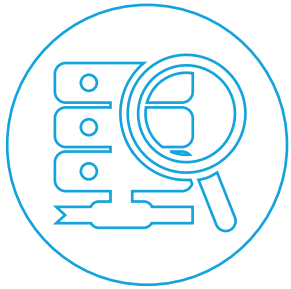
Population   2011   2031

We now need to reduce traffic by 20%-25% on 2019 levels. To achieve this some of our key challenges are:

- How can we prioritise greener and active travel to ease congestion, making it easier for people to travel by bus, rail, cycle or on foot to improve average journey time by:
  - Reallocating limited road space in the city centre and invest in public transport (including Park & Ride) to make bus travel quicker and more reliable
  - Improving access for sustainable transport to the city centre and key employment sites
  - Implementing improved/increased park & ride/travel hub facilities as a key tool in encouraging the uptake of sustainable transport options
  - Better management of the transport network to minimise congestion

- How can we support local partners' net zero carbon ambitions and the Government's net zero by 2050 target?
- How do we implement and enforce parking controls to make streets more user-friendly for sustainable transport and prevent illegal parking?
- How can we create a more people-focused, city-centre environment?
- How do we address the high levels of goods vehicles making deliveries in and around the city centre and the detrimental impact this has on air quality and the environment for walking and cycling?

How can you help us with these challenges?

Data collection and Analysis

Logistics

Behaviour Change

New forms of mobility

Network Management

Mobility as a service

We are looking to support innovators to deploy technologies in Cambridge that can help address these challenges. Where we are working on a specific challenge, we may put a call out on the Smart page of the Greater Cambridge Partnership webpage which will set out the problem we are trying to solve, what support we may provide and how you can help.

How we engage with innovators and technology companies

Unfunded Trials and Deployments

If you would like help or support to trial or deploy a service or product in the Greater Cambridge area, we will assess your proposal against several criteria to ensure it supports the GCP in meeting our strategic objectives. If the proposal falls outside of the GCP's remit, we will forward your proposal to the appropriate body.

The help and support available will not include funding but will include: help in deploying infrastructure; advice on strategic fit; and convening meetings and introductions to other organisations that may be critical to the deployment's success.
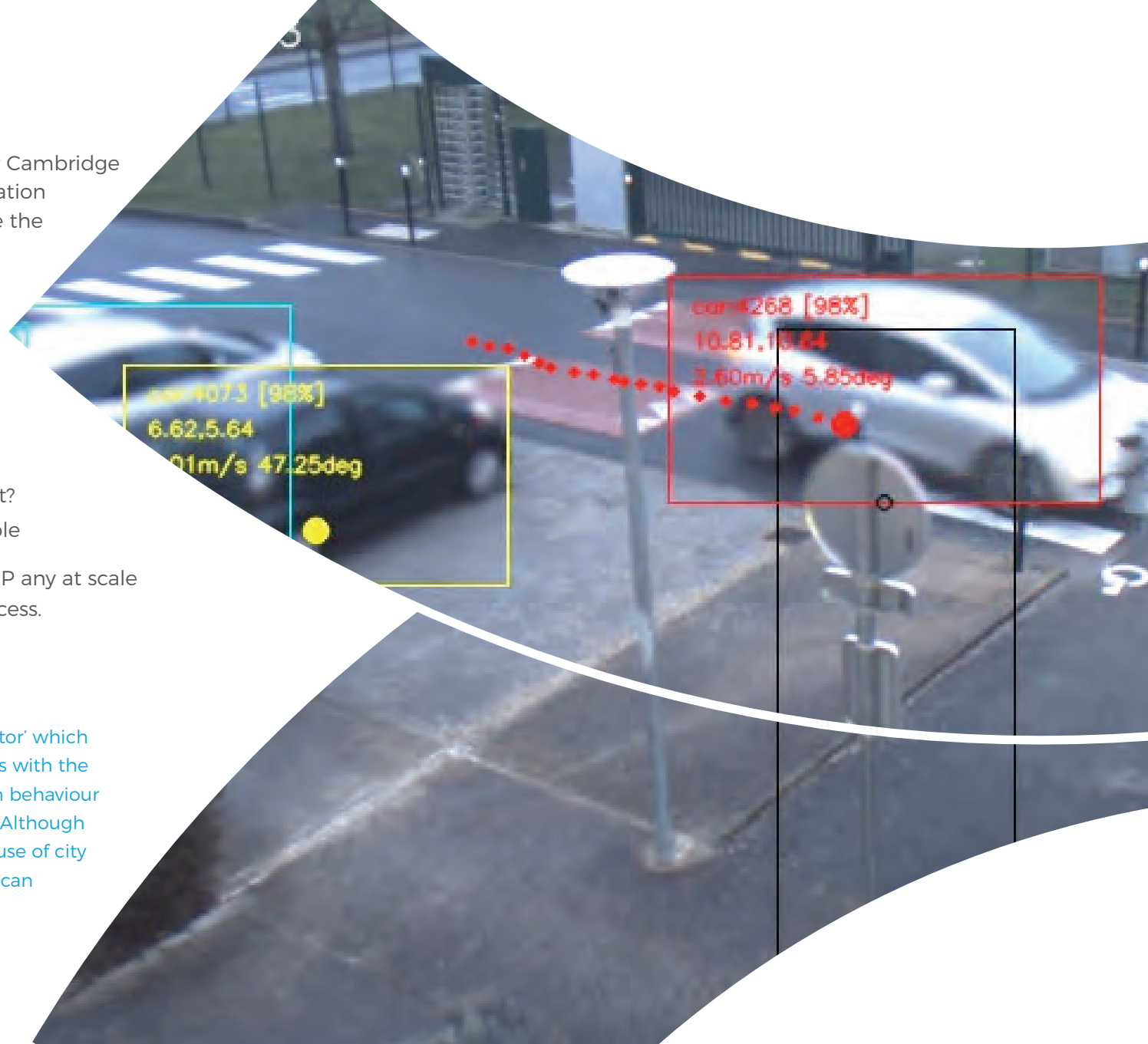
The criteria we use for unfunded trials and deployments are:

- Does the proposal align with the objectives of the Greater Cambridge Partnership – if the proposal aligns with a partner organisation we will forward on the proposal to them, this may include the Cambridgeshire and Peterborough Combined Authority, University of Cambridge County Council or District Councils, NHS, or emergency services.
- Would the deployment impact on other planned activity by GCP?
- Are there any procurement issues with proceeding – this may include clashes with any current or planned procurements
- Is there a plan for assessing the impact of the deployment?
- The level of GCP resource needed against resource available

Please note: That if successful and benefit is proven to the GCP any at scale deployment would need to be subject to a procurement process.

EXAMPLE

The GCP has supported Starling Technologies to trial 'Starling Detector' which is an intelligent kerbside pedestrian detection system that integrates with the existing road traffic signal controllers to provide real-time pedestrian behaviour analysis such as volumetric assessment and pedestrian delay times. Although the GCP haven't funded the trial we have supported Starling in the use of city infrastructure and will work with them to understand how the data can support the delivery of an improved pedestrian experience.

Partnering on funding bids

The GCP has successfully partnered with several commercial and academic organisations on funding bids into bodies such as Innovate UK. We welcome approaches to partner on bids and will decide on whether to partner based on the following criteria:

- Does the proposal align with the objectives of the Greater Cambridge Partnership – if the proposal aligns with a partner organisation we will forward on the proposal to them, this may include the Cambridgeshire and Peterborough Combined Authority, University of Cambridge County Council or District Councils, NHS, or emergency services.
- Would the deployment impact on other planned activity by GCP.
- Resource needed to complete the bid and relative likelihood of success.
- Understanding of the role of GCP (lead, partner, unfunded support).
- Responsibilities of the GCP if successful and likely resource implications of a successful bid.

Please note that at the end of a successful funded project if the GCP wanted to move to a commercial deployment we would need to go through a procurement process.

EXAMPLE

The GCP partnered with Aurrigo on a funding bid into the Centre for Connected and Autonomous Vehicles. The £3.2million project delivered a trial service of three autonomous shuttles running on the University of Cambridge's West Cambridge site.

Commercial deployments – unfunded but with enhanced support

- In areas where the GCP would like to encourage the market to deploy pilots and trials or commercial deployments, we will advertise opportunities to work with us and partners on a deployment. The process will ensure a level playing field for the market but allow us to select a provider(s) to work with. This would be a formal partnership and we would look to put in place an agreement. The procurement would set out the objectives that we are looking to achieve and our selection criteria.

- All contract opportunities will be advertised on the Contracts Finder website.

EXAMPLE

TIn 2018 the Smart team launched a mobile travel app and smart wayfinding screens to help residents, commuters and visitors plan their journeys in and around Cambridge. The innovative journey planning tools used 'real-time' data and were developed to encourage people to travel more sustainably with user feedback taken to improve them. The app and the screens used real-time travel and other information, collated through the 'Intelligent City Platform' developed with the University of Cambridge, together with other data sources such as Google Transit, Twitter and weather reports.Cambridge's West Cambridge site.
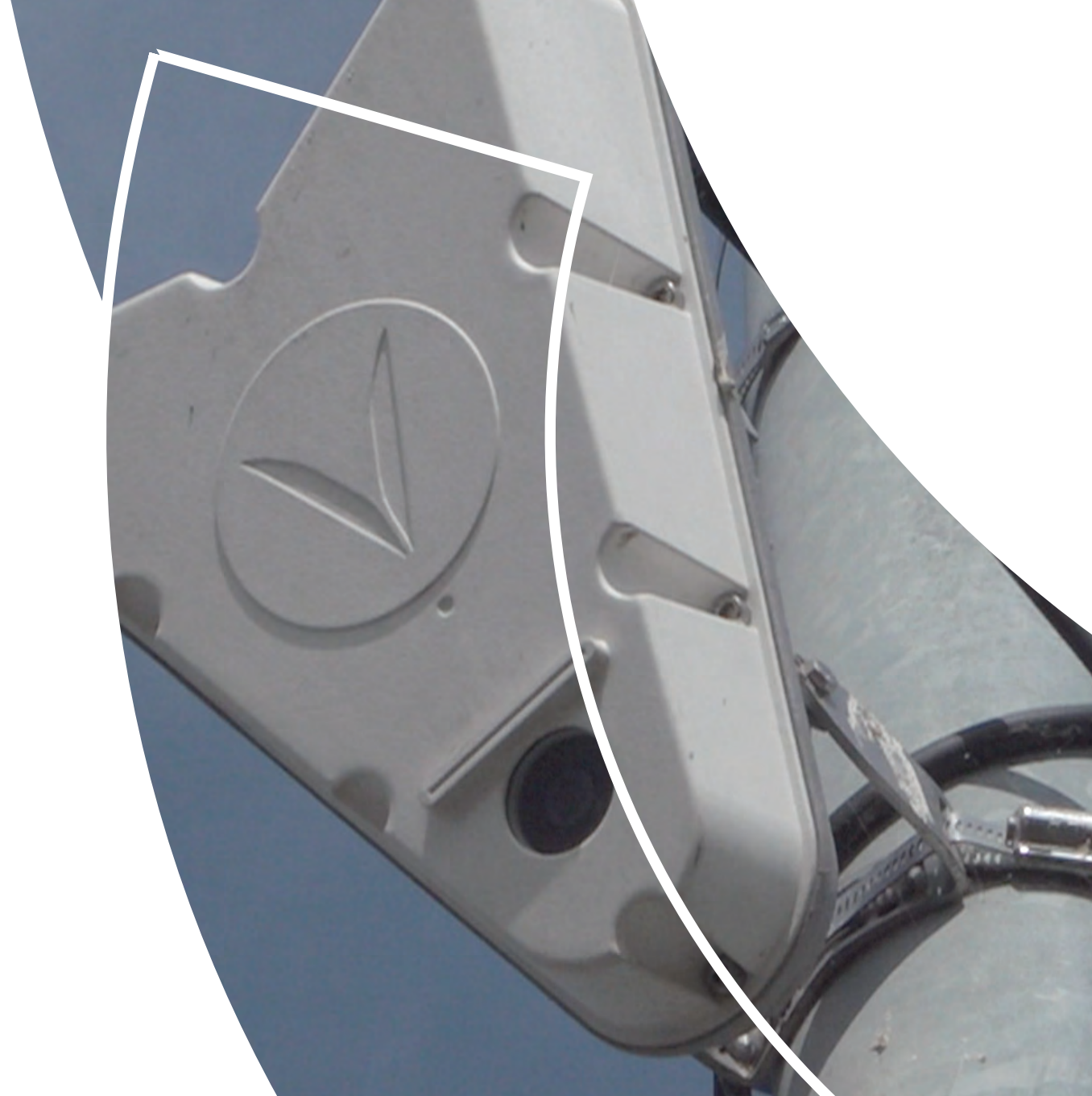
Procured innovation – funded

- To procure technologies that already exist we will advertise opportunities and follow Cambridgeshire County Council's procurement rules for providing goods and services to the council.

- To procure technologies or innovations that don't yet exist we may use the 'innovation partnership procedure' which was introduced on 26 February 2015 under the Public Contracts Regulations 2015. It allows a contracting authority to procure a provider(s) to work with it to research, develop and then exploit a service or supply that does not currently exist.

EXAMPLE

Mobility Monitoring Network – The GCP recently ran a procurement exercise to deploy a network of sensors which collect data on movement at a more granular level than we have had access to before. This includes being able to identify multiple categories of vehicles, pedestrians and cyclists with more categories being added such as electric scooters. The procurement was informed by trials we had carried out to help us understand how robust this new technology was and how the data could support the GCP's work.

What Next?

If you are interested in collaborating with the GCP please send your proposal to the Smart team via Smart.Cambridge@cambridgeshire.gov.uk.

In determining how we can support you, we will go through an assessment process which will include checking the following:

Meeting the challenges

- Does the proposal help to solve a GCP challenge and meet our objectives?
- Are there any other similar pilots or trials or in the GCP area or similar proposals?
- Does the proposed pilot meet the current regulatory frameworks?

Cybersecurity and data

- Does the proposal adhere to the Centre for Cybersecurity's Smart Places Principles?
- Do you require any data held by the GCP? If so the GCP will share data and where appropriate put in place data sharing agreements.
- Does the proposal adhere to GDPR and can you explain how data is collected, stored, and flows through the system - especially if it is to be shared with 3rd parties etc?

Use of infrastructure

- Does the proposal require the use of infrastructure?

The GCP will support companies in the use of infrastructure but please note that this may not always be possible for operational or contractual reasons e.g. streetlighting columns fall under a PFI, so there is an attachments procedure, and the decision will be made by Balfour Beatty.

Risks and resources

- What are the risks and how will these be managed throughout the trial process?
- Can you demonstrate that your company/ organisation has the resources to finance, run and deliver the trial to completion?

Consultation and Evaluation

- How will companies carrying out trials engage with the local community and communicate what they are doing?
- What are your success criteria and how will you report progress to the GCP?
- How will you set out to evaluate your deployment and how will these learnings be shared with the GCP?

We want to hear from you

To be truly innovative, we want to understand how you would like to work with us and how we can help you. If you have any questions or suggestions about the innovation process or the prospectus, please get in touch: Smart.Cambridge@cambridgeshire.gov.uk.

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