

Local Authority Transport Decarbonisation Accelerator Programme Scope



1. Introduction

Background

It's widely agreed that a 'place-based' approach will help make our villages, towns and cities cleaner, greener, healthier and more prosperous places to live, work and enjoy. For transport, local and regional level organisations are at the forefront of engaging communities and businesses on transport decarbonisation, and supporting people to make their travel in the way that works best for them - including providing more sustainable travel choices.

Supporting the development of innovative technologies is a vital part of ensuring the UK is well placed to meet its net zero commitments. However, innovators face challenges in accessing appropriate funding and opportunities to test innovative technologies and solutions in real world situations. The **Local Authority (LA) Transport Decarbonisation Accelerator** will support both SMEs and local areas to meet the opportunities and challenges of place-based net zero commitments.

The Local Authority Transport Decarbonisation Accelerator programme is being delivered by Connected Places Catapult (The Catapult) between October 2024 to March 2025.

This accelerator programme will foster innovation by inviting SMEs to propose innovative solutions which have the potential to support local authorities in achieving their own net zero goals.

About the Programme

Two Local Authorities (LAs) and one Subnational Transport Body (STB) have been selected and have each developed a specific place-based challenge. Supported by The Catapult, up to 2 SMEs will be selected to work collaboratively with each partner, refining their solutions to address the proposed challenges while receiving a bespoke programme of commercial support. SMEs will be selected based on the strength of challenge alignment, not necessarily their geographic proximity to the partner LA/STB.

As part of this programme, the SMEs will be guided through a bespoke programme tailored to their requirements. This may include:

- insight of local challenges and how their technology could solve them (gateway to engagement with LAs)
- market analysis and validation
- refinement/development of specific use cases
- support to create and refine business models
- commercial strategies and communications adapted to public procurement
- development of 'Go-To Market' strategies

- introductions to potential LA and transport authority customers and/or investors

These activities will be co-designed with each SME to support them in growing their businesses and adapting their propositions to each of the LA/STB requirements.

Important note: This programme aims to support the integration of innovation into their local regions and therefore we are specifically looking for technology and solutions at [Technology Readiness Level 7](#) or above. This means that a prototype of the technology or solution should have been tested in an operational environment and/or qualified through successful mission operations.

This Programme Scope document details the challenges that the accelerator will address.

2. The Challenges

In your accelerator application, you must demonstrate how your solution will help to solve one or more of the challenges outlined below. Applicants should also demonstrate consideration of a place-based approach and how their solution best meets the needs and attributes of the selected area.

Challenge 1: Adur & Worthing Councils – affordable decarbonisation of Refuse Collection Vehicles

Adur and Worthing Councils' aim is to be carbon neutral for the emissions they have control over by 2030. Fleet emissions (from their fleet of 150+ vehicles) account for 40% of the total scope 1 and 2 emissions under their control, and the Councils currently own 5 electric vans with delivery of a further 5 vans in the Spring/Summer 2024.

The greatest carbon emitter is their fleet of refuse collection vehicles (RCVs) and, with a predicted end of life of 2026/2027, a solution to replace the vehicles is required. By targeting the greatest emitters of the active fleet for this challenge, the Councils aim to make significant strides towards their decarbonisation targets.

The Councils currently collect refuse from over 80,000 dwellings, using 30 RCVs. In anticipation of electrification, the Councils have completed a data collection exercise, which demonstrated that an electric RCV (eRCV) could run each of the current rounds on a single charge. The Councils have also ascertained that connection of the current RCV depot to the grid is viable.

However, the cost of purchasing a new fleet of eRCVs is prohibitively high, and it is challenging for the Councils to understand the true long-term running costs and/or lifespan costs of any alternative solutions. Therefore, the Councils are interested in innovative ways to modify or

upgrade the fleet to concurrently increase the lifespan of the existing vehicles and reduce their emissions.

The Councils have reviewed alternative fuels for their existing vehicles and their priority is to find a solution that is long-term, rather than an interim solution which might help them achieve their 2030 target but potentially requires future upgrade / modification. For this reason, switching to the use of Hydrotreated Vegetable Oil (HVO) is not within the scope of this challenge.

In support of Challenge 2, the Councils are interested in hearing from innovators with solutions that could:

- **Provide long term solutions to decarbonise refuse collection vehicles.**
- **Help the Councils to electrify their existing internal combustion engine (ICE) refuse collection fleet.**
- **Help the Councils to understand the lifespan costs of re-powered solutions.**

This is not an exhaustive list, and the Councils would be interested in hearing about any solutions that will help to solve their challenge.

Challenge 2: Cardiff Council – decarbonisation of taxi fleet

OnePlanet Cardiff's Strategy has clear actions that the Council is taking to deliver on their ambition to achieve Carbon Neutrality by 2030. However, most of the City's current fleet of hackney carriages/taxis are powered by internal combustion engines and are ageing, and the transition to more sustainable vehicles (specifically EV) is needed to reach the Council's goals.

There are approximately 720 hackney carriage vehicles across Cardiff in a range of ownerships from individuals to small groups and larger companies. The taxi's licensed by Cardiff Council are black with a white bonnet or a London style black cab and around 50% are wheelchair accessible vehicles (WAVs). The Council is responsible for setting the conditions and issuing licences to ensure that vehicles used are safe and comfortable.

A benchmarking exercise was completed by the Council in October 2023 to identify the fleet composition, typical mileage, fuel consumption and emissions by vehicle type. This report also included recommendations for achieving value for money when incentivising transitioning to newer technology vehicles.

The licensed taxi drivers in Cardiff are an established and networked cohort and comprise around 2300 drivers. Perceived barriers preventing taxi drivers licenced by Cardiff Council to

transition to EVs are affordability, suitability of available EVs (including range anxiety) and vehicle accessibility.

A previous scheme to encourage transition to EVs, comprising of a traditional leaseback structure was not successful, predominantly due to the perception that EVs do not provide adequate range for taxis operating within the Cardiff area, who might be asked to travel to and from Cardiff airport. The driver cohort therefore require a strong incentive for change and a convincing personal economic case will need to be made to encourage a transition to EVs. Due to the nature of the driver network, it is thought that a successful trial would encourage key drivers to create advocacy for a flagship scheme amongst peers.

Therefore, Cardiff is looking for innovative solutions to incentivise the adoption of EVs and/or provide a greater range of options to aid the transition.

In support of Challenge 3, the Council are interested in hearing from innovators with solutions that could include:

- **Leaseback schemes (run by the council or from the market)**
- **Innovative investment structures**
- **Car sharing solutions**
- **Market advantage for EVs (e.g. increased income from EV service)**
- **EV range extension options/services**
- **Lease or insurance schemes to de-risk premature battery failure**

This is not an exhaustive list, and Cardiff Council would be interested in hearing about any solutions that will help to solve their challenge.

Challenge 3: England's Economic Heartland – understanding the impact of implemented transport related policies

Transport-related emissions are a particular challenge for England's Economic Heartland's (EEH's) region. In 2020, transport emissions equated to 44.5% of the Heartland's total carbon dioxide emissions, compared with 37.5% nationally and transport emissions are increasing at a faster rate than elsewhere in the UK.

In 2019 approximately 28% of the private vehicle emissions on the EEH Highways Network arose from trips that did not start or end in the region. Whilst 31% of emissions arose from internal trips – resulting in a 3.8MtCo₂e being emitted. Around 34% of emissions result from trips with a total length of less than 10 miles. Understanding and monitoring these trips at a regional level would provide our EHH's partners with new opportunities to deploy services and infrastructure to reduce climate impacts.

EEHs' aim is to provide an enhanced regional data store and dashboard to provide EEH and its partners with a robust feedback loop between policy implementation and impact. The dashboard would present real-time or near real-time complex data and metrics in a clear and understandable way. This might include assessing the impact of a new bus gate or active travel network against a range of relevant metrics.

Currently EEH provides a static data platform to its partners using various data sources (such as BT mobile data, [more than 100 disaggregated national data sets](#), the DfT datasets, such as floating vehicle data and road speed data). However, the data is collated retrospectively and is sometimes only made available several years after the intervention or policy has been implemented.

Therefore, EHH's challenge is to understand the impact of implemented transport decarbonisation policies in a timelier way on:

- resident transport choices (journey patterns, transport mode and behaviours),
- resident sentiments about transport decarbonisation interventions or implemented policies, and
- environmental factors (such as air quality and noise pollution) that result from the changed transport choices made by residents.

This is challenging for the following reasons:

- Whilst monitoring and evaluation (M&E) of individual interventions is recognised as best practice and encouraged by the DfT, funding these can be a challenge. The “feedback loop” between intervention and impact is therefore limited and data is either not available, or often only available at a county or unitary level.
- The data is often being collated retrospectively and made available several years after the intervention has been implemented.
- Methodologies for M&E are often not comparable or replicable. This leads to Local Transport Authorities using national datasets that are then disaggregated based on population in a locality. This does not always give a reliable reflection of the place.

In support of Challenge 1, the STB is interested in hearing from innovators with solutions that could:

- **streamline the feedback loop between policy implementation and policy impact on the listed measures above,**
- **use data to communicate their story in a compelling way to influence policy makers and/or,**
- **identify and integrate novel and rich data sources in a cost-effective way.**

This is not an exhaustive list, and England's Economic Heartland would be interested in hearing about any solutions that will help to solve their challenge.

3. Further Information

If you are unsure about whether your company and solution would fit the programme scope, please contact Kirsty Murphy, the Accelerator Programme Manager, at kirsty.murphy@cp.catapult.org.uk.

Please join our Application Support Webinar on Wednesday 21st August at 14:00 - 15:00 You can apply to attend this event [here](#).