

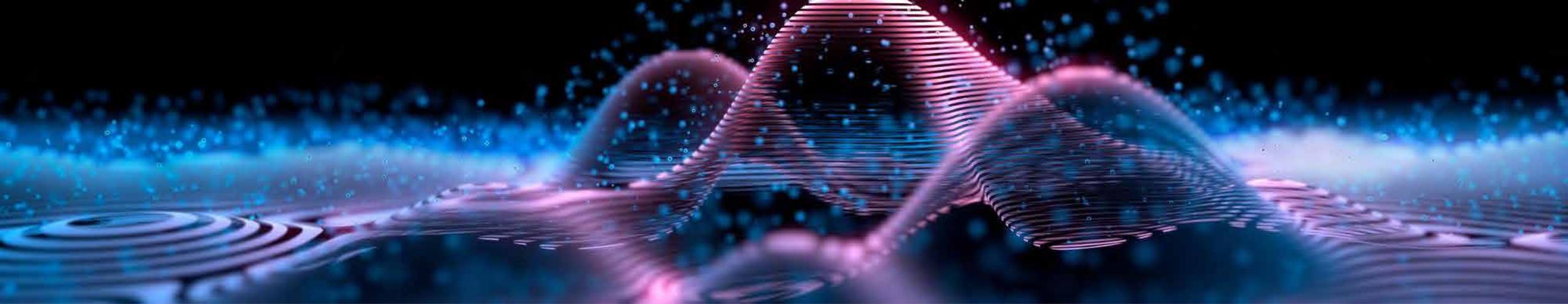
Net Zero Living: Meet The Innovator - Webinar Series

Webinar 1: AI, Data and Digital for Net Zero

Thursday 12th February 2026



Innovate
UK



Our Purpose & Vision

We are part of Innovate UK, the UK's innovation agency.

We create diverse connections to drive positive change.

To establish a network of innovators so powerful its ideas will change the world.



Innovate
UK

Business
Connect

Our Network



46,229
Unique
Organisations



72%
Small

15%
Medium

13%
Large



335,478
innovators



**Every university
in the UK**



**Innovate
UK**

**Business
Connect**

The Net Zero Living Programme

Helping local authorities and businesses work together to deliver new solutions that improve local services and open markets for economic growth.

- Places are seizing the opportunities that come with decarbonisation and creating warmer homes, cheaper local energy, new skills, and more secure work for their communities.
- But their teams are overstretched and they have limited resources and investment.
- Innovate UK's Net Zero Living Programme is providing funding, insights, and specialist assistance to nearly 300 businesses and local authorities so they can adopt social, policy, and technical innovation and help their place prosper.
- A £60m programme from 2023-2026, including large-scale demonstrator projects
- <https://iuk-business-connect.org.uk/programme/net-zero-living>





AI, Data and Digital for Net Zero



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**Simon
Tricker**
UrbanTide



**Mollie
Atherton**
**Advanced
Infrastructure**



**Alejandro
Navarro**
edenseven



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Let's make a sustainable world with AI

Simon Tricker - Co-founder, UrbanTide

February 2025

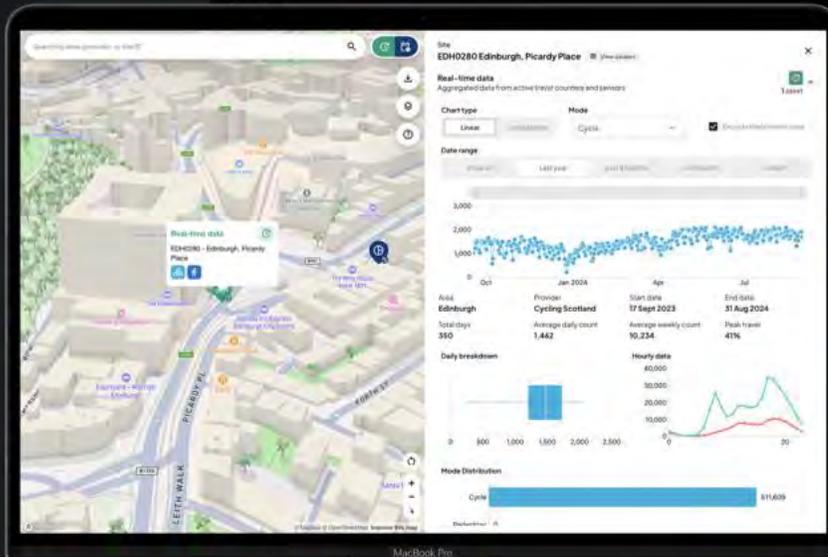
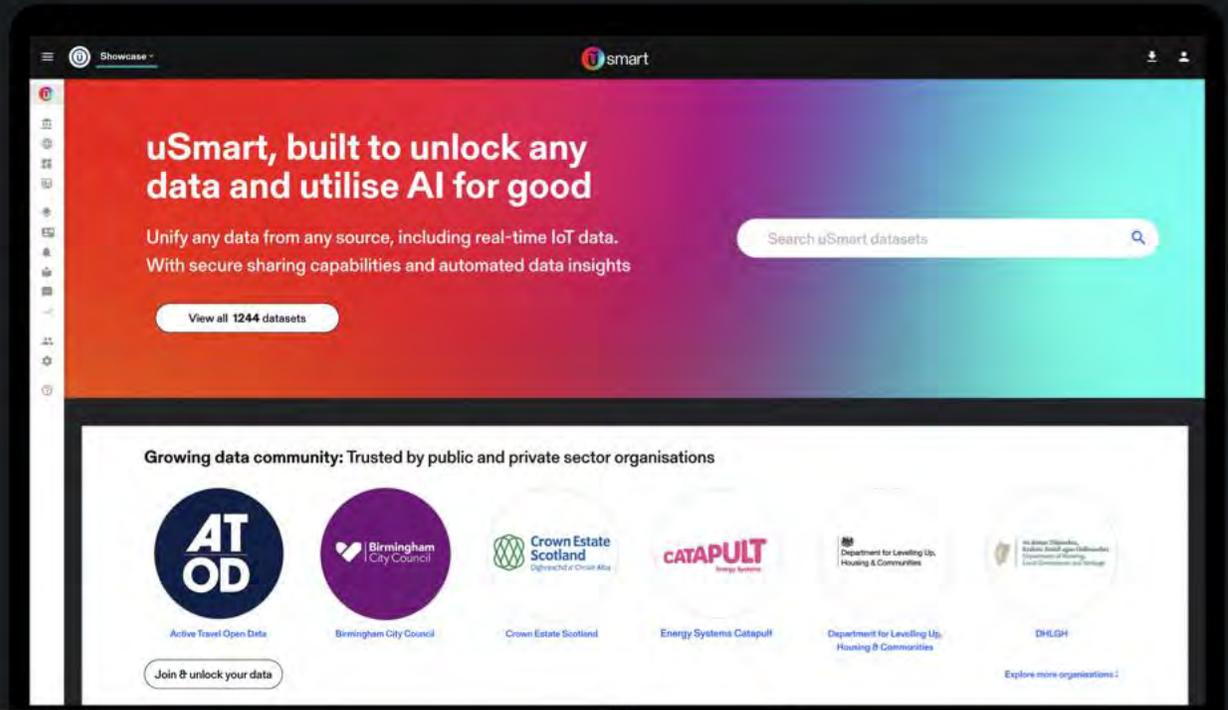
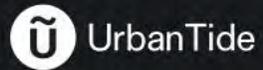
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UrbanTide.com
uSmart.ai

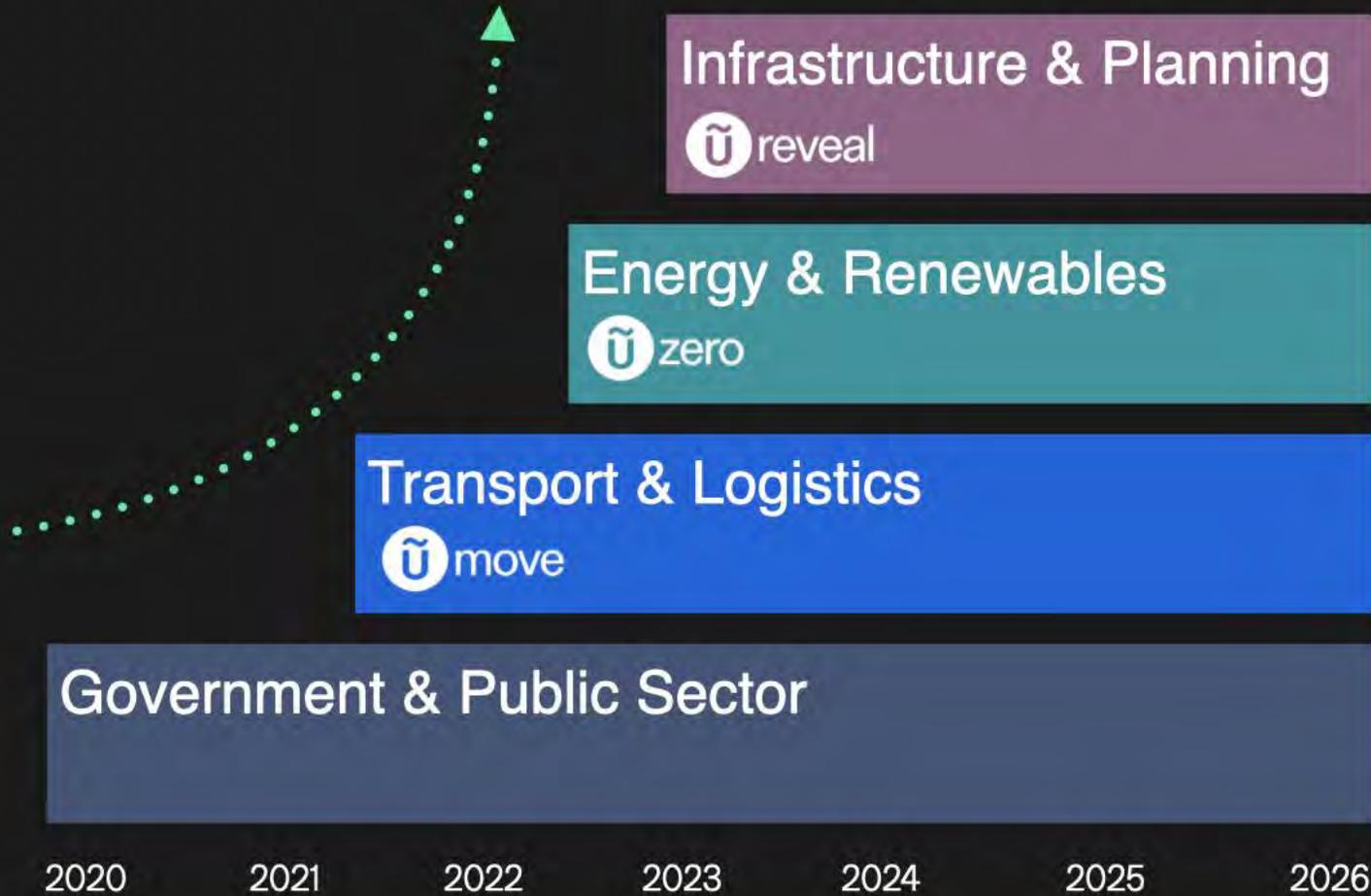




Unlocking local data to target action



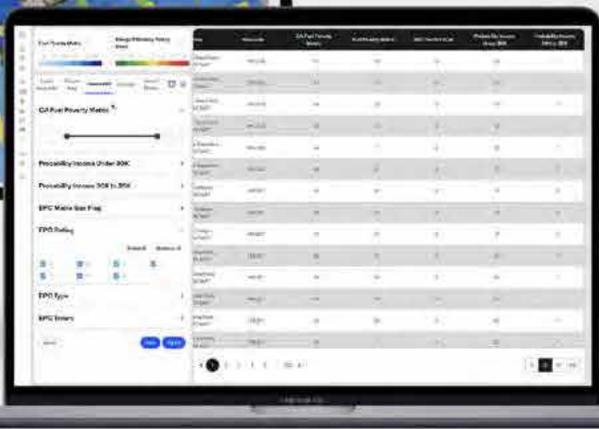
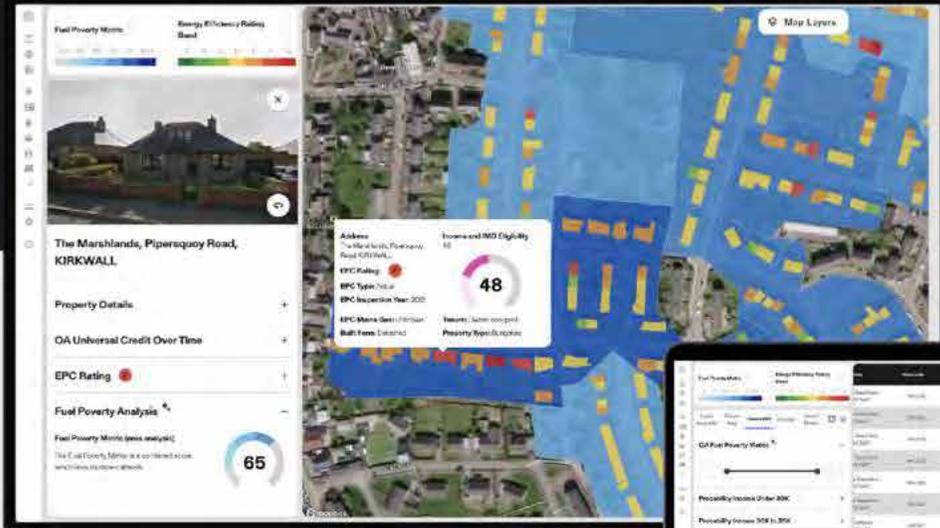
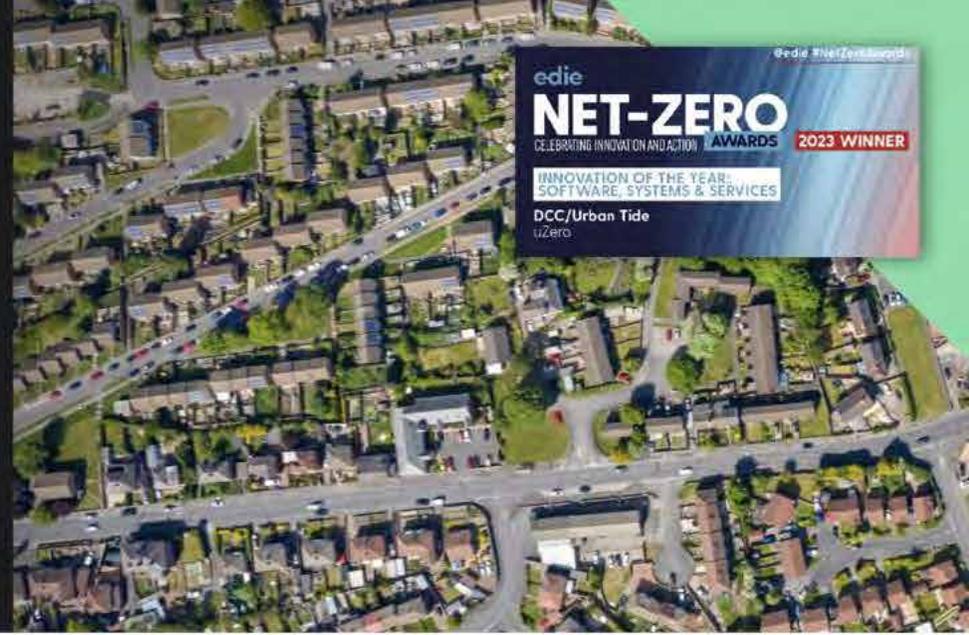
ũ smart - Built to unite cross-sector data to deliver unique value





AI targeting for energy efficiency and support for our communities

Combines Smart Meter System data to help identify fuel poverty and deliver targeted support.



£84m

GSENZH invested over £84 million to retrofit homes across the South East.

34x

uZero delivered a 34x increase in response rates compared to the previous campaigns.

£2m

Saved on inefficient referral data & lead generation, with more money going to those in need



Transform your support delivery with AI-powered intelligence



Identification

AI-powered precision targeting combines large cross-sector data including smart system meter data



Intervention

Increase warm home & support schemes to massively increase referral rates
(34x more effective)



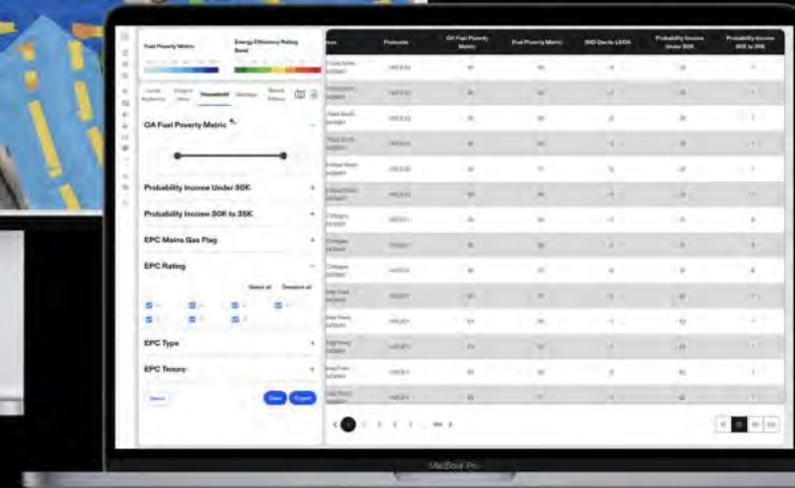
Impact

Tracking the impact of the interventions, combining data to fill in the gaps for future planning & delivery



Tackling the growing fuel poverty crisis

- ▶ Monthly fuel poverty metric using anonymised **smart meter data**
- ▶ Combining **cross-sector** data at the household level
- ▶ Enhanced EPCs with **new virtual EPCs** to fill in the gaps
- ▶ **Saved filters** for different grants and **easy data exporting** (Excel, API)
- ▶ **Area-based pricing** tailored to your region and scheme requirements
- ▶ **Materials out** and **best Intervention** across properties & regions (in dev)





www.urbantide.com/uzero



www.urbantide.com/nohomeleftcold



Scale of the challenge

Transport data is distributed across multiple sources and rarely used beyond its original purpose

Evidence of modal shift and behaviour change is challenging, which limits planning and investment

Sharing and access to data is limited - restricting the value of that data and investment





COLLECT

Millions of mobile data points to understand travel behaviour



ANALYSE

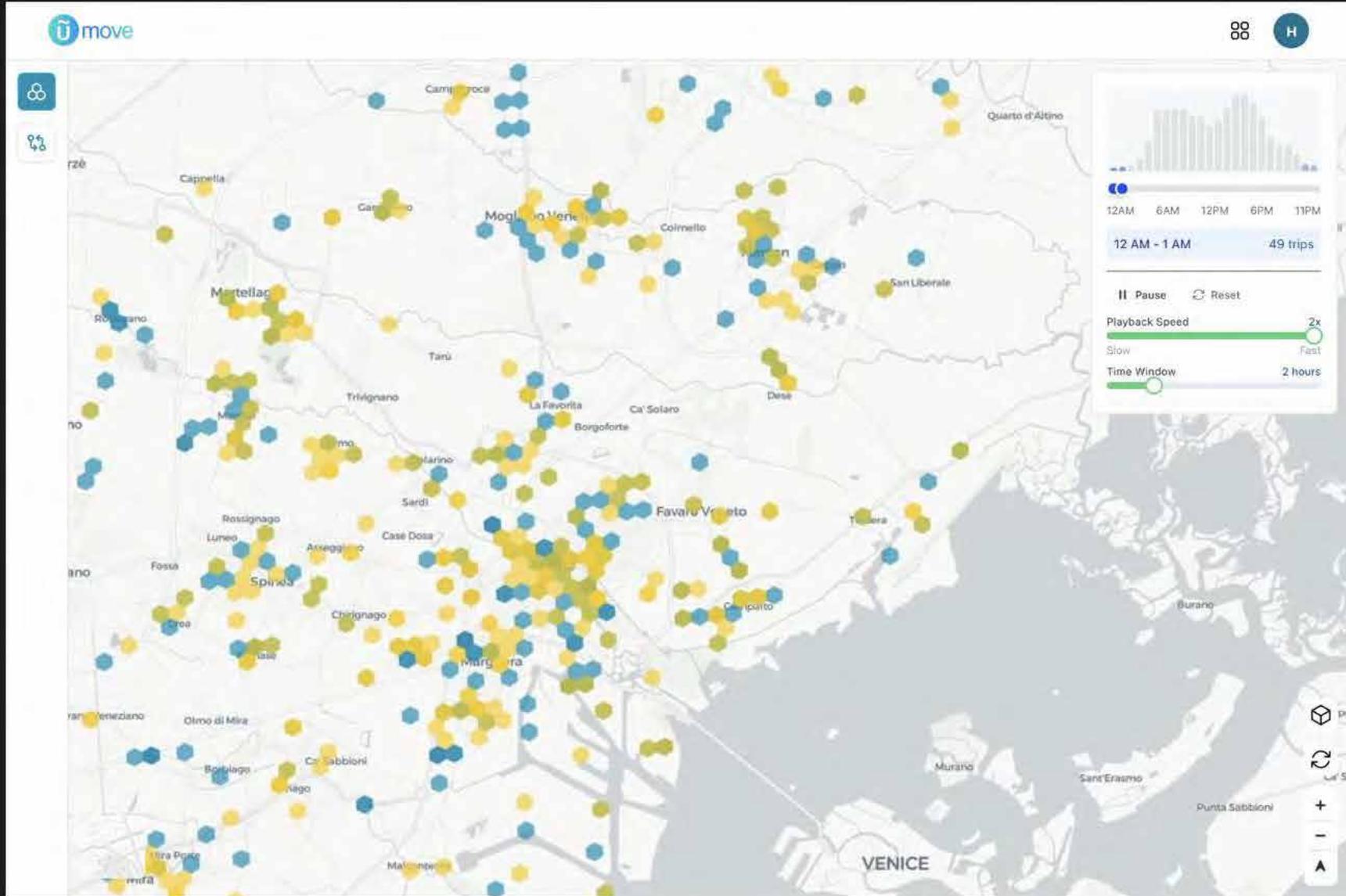
Track mode usage, modal shift, and behaviour change



ACT

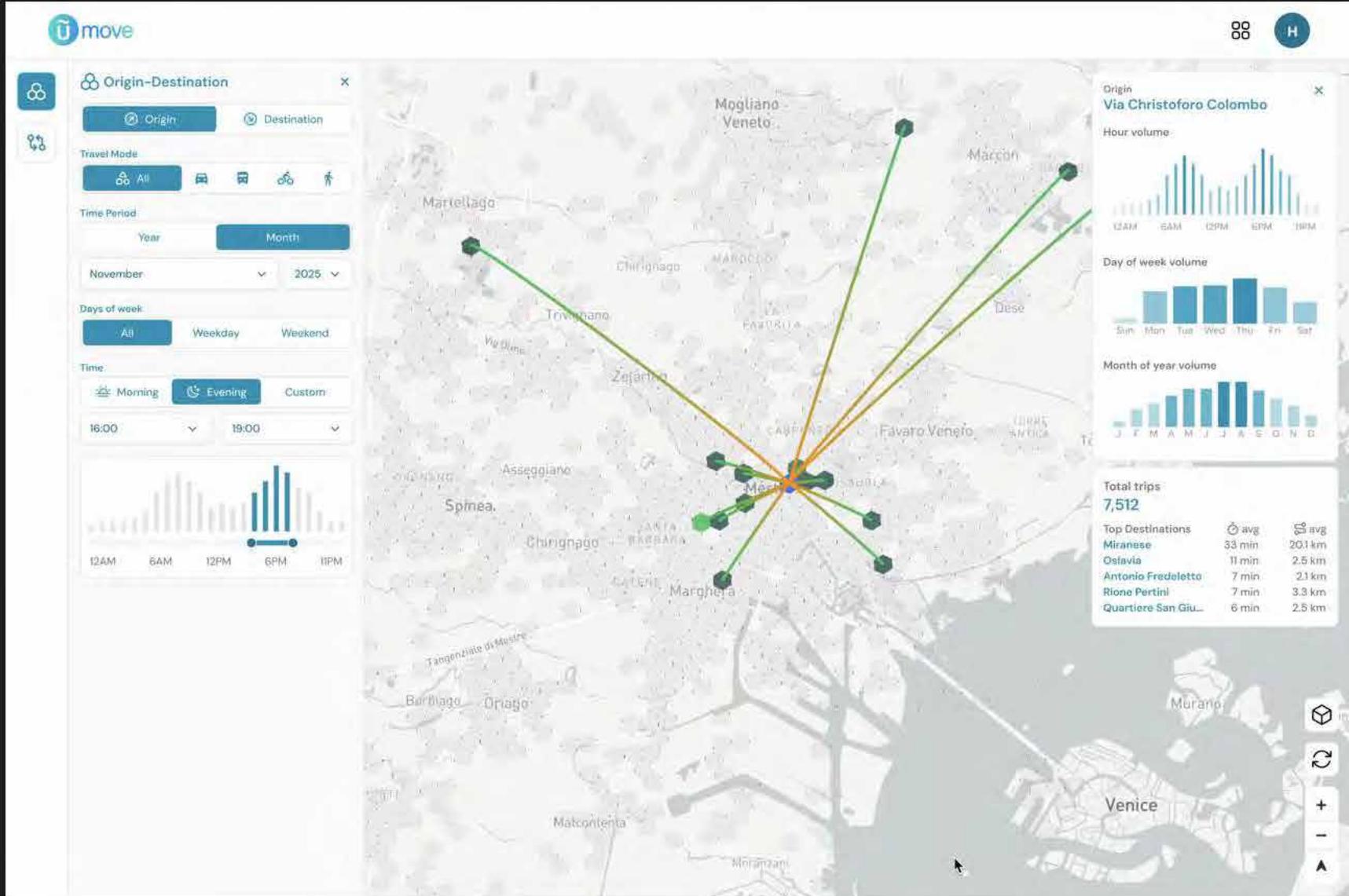
Identify groups or destinations that could shift transport modes

See the whole picture



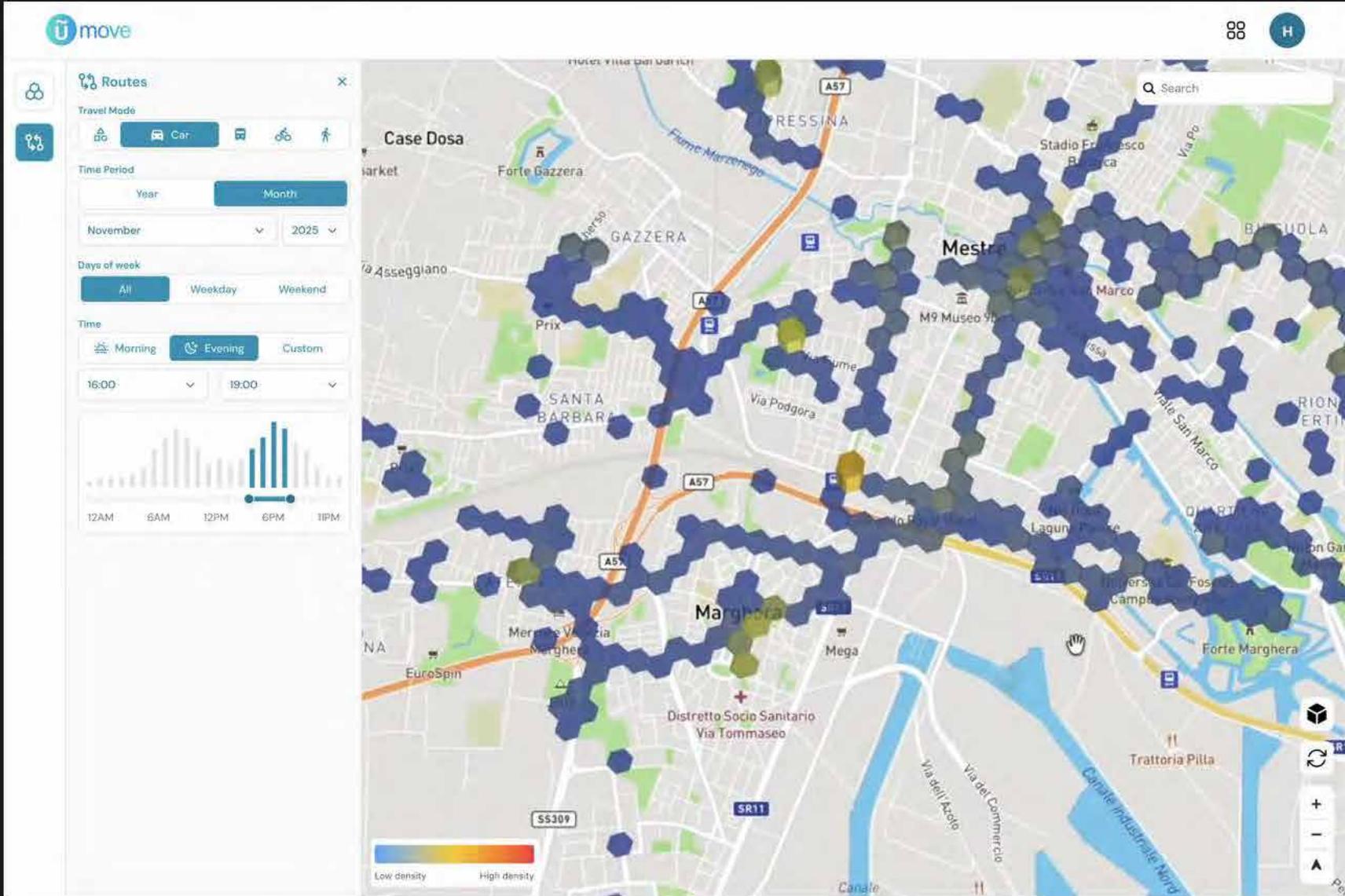
- ▶ **Millions of anonymised mobile data points**
- ▶ **Every journey, every mode, across the whole region**
- ▶ **Identifying routes with potential for active travel**

Understand travel choices



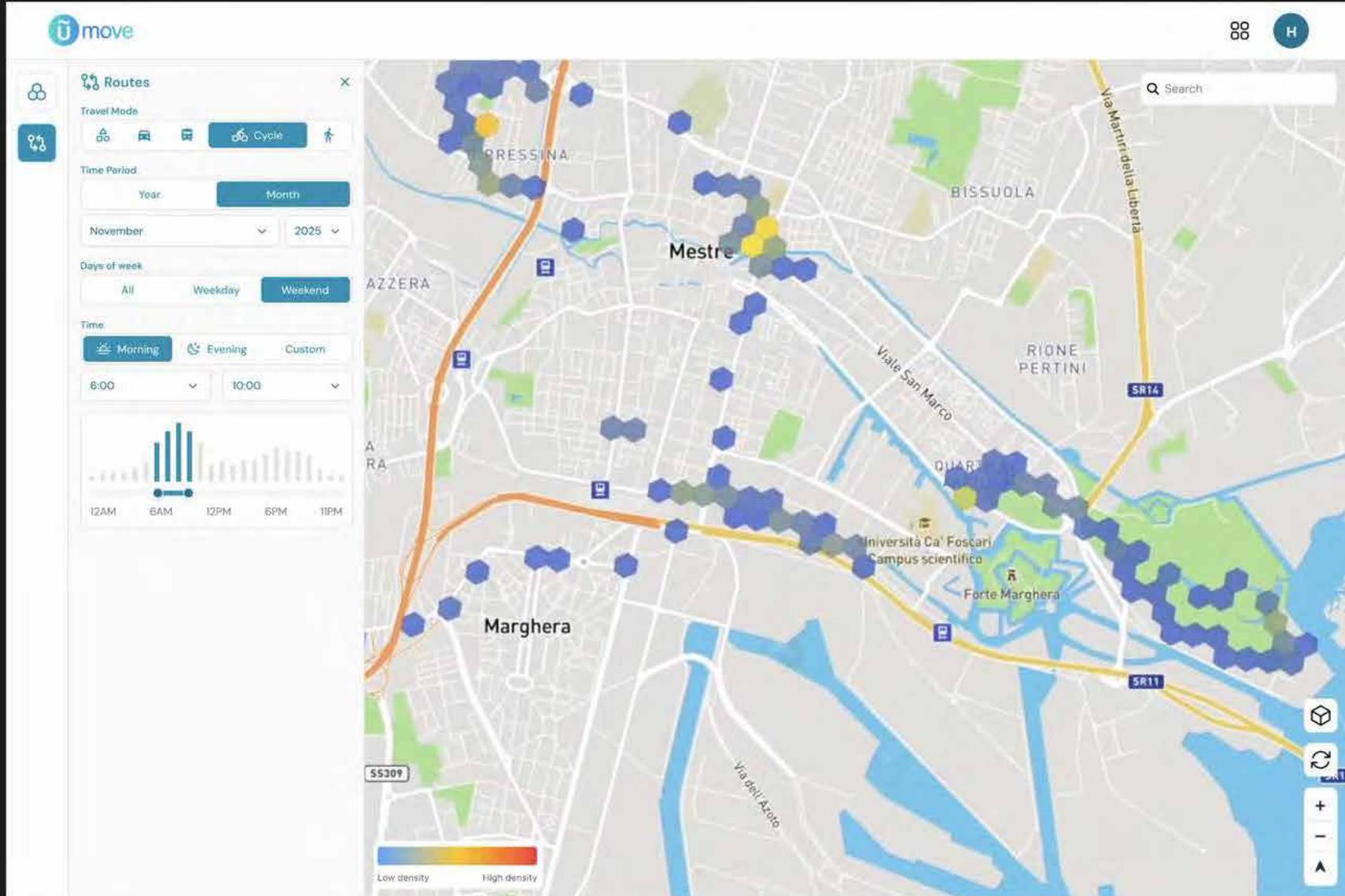
- ▶ **Understand current travel modes and patterns**
- ▶ **Focus on key destinations: workplaces, campuses, retail centres**
- ▶ **Assess potential for behaviour change**

Target the right journeys



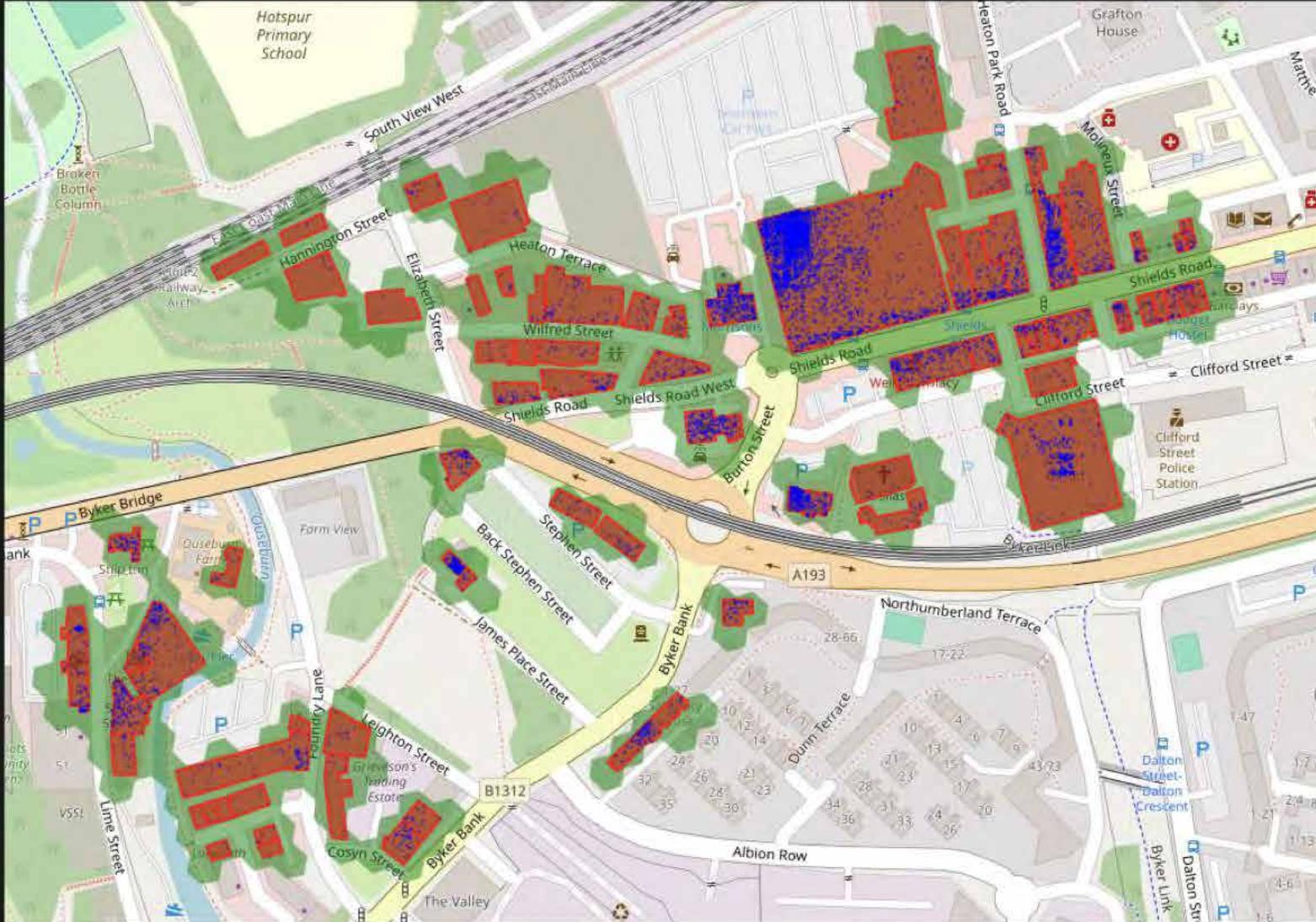
- ▶ Pinpoint short car journeys – prime candidates for change
- ▶ Example: car trips under 5km to major employers
- ▶ Target interventions where impact is greatest

Prove what works



- ▶ Track travel behaviour change over time
- ▶ Combine with app engagement data and mobility analytics
- ▶ Scalable, evidence-based, results-driven

Destination Insights (Newcastle)



- ▶ Destination can show building use
- ▶ Image shows non-domestic, in-use, buildings only

Destination Insights (Edinburgh)



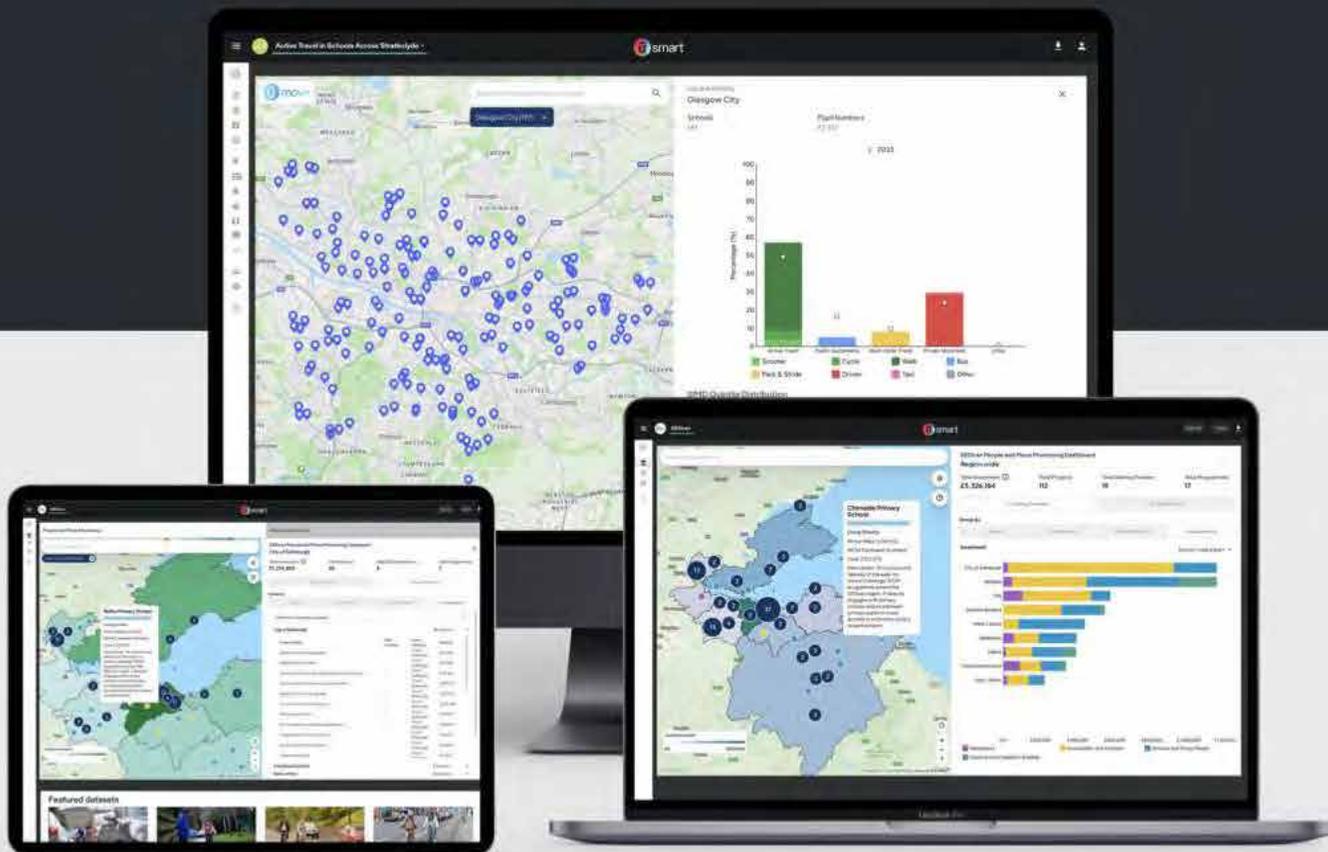
- ▶ Destination can show building use
- ▶ Image shows busy shopping area and congregation and bus stops in Edinburgh

uMove - Mobility Insights: Features

- ▶ **Visitor Flow Management:** Movement pattern analysis reduces overcrowding at popular sites and promotes underutilised attractions.
- ▶ **Multimodal Journey Planning:** Mode-specific data integration enables seamless travel experiences through combined tickets and coordinated timetables.
- ▶ **Economic Impact Measurement:** Spatial and temporal visitor distribution data quantify the economic impact, helping to justify investments and policies.

uSmart Evidence-Based Investment Management

SEStran used uSmart to monitor £5 million in active travel projects, creating a single source of truth to track delivery and measure behavioural change across the region.



£5m

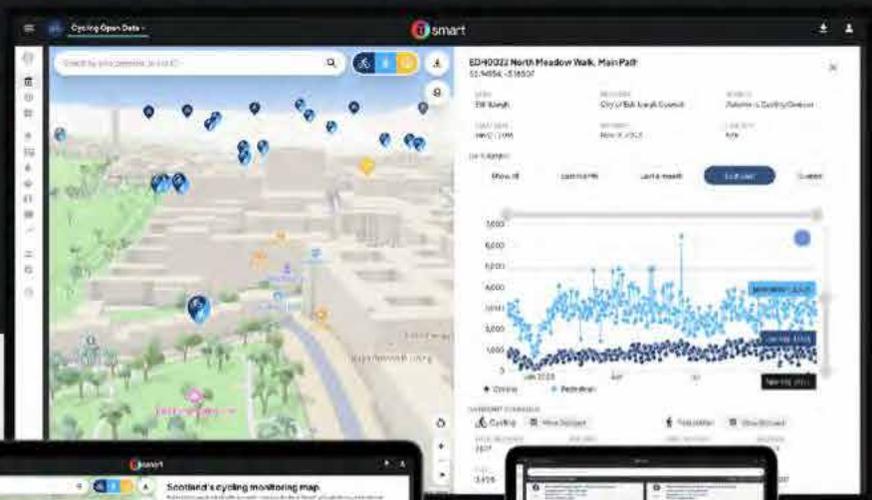
Deployed a comprehensive monitoring dashboard to track the delivery and impact of over £5 million in active travel investments across their network.

112

Impact monitoring across 112 projects and 19 delivery partners to track behavioural change interventions promoting active travel over private vehicles.

smart Real-Time multi-modal transport intelligence

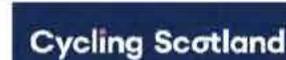
Integrating nationwide multi-modal data to deliver actionable insights for sustainable transport planning, benchmarking, and tracking transport spend & improvements



Jacobs



AECOM



1000+

Network Scale: 1000+ transport sensors collecting 100,000+ hourly records across Scotland with real-time verification and analysis

654%

Impact Evidence: 654% increase in cycling with data-informed infrastructure. From 1.69% to 12.75% on City Way routes in Glasgow

£5.50 per £1

£2bn investment would deliver approximately **£11bn in public benefit.** (550% ROI)

<https://www.ippr.org/articles/stride-and-ride>



Decarbonising communities & supporting growth

The Islands Centre for Net Zero is addressing the need for fundamental change in how we approach the energy transition across Orkney, Shetland and the Outer Hebrides.

- Acceleration of a just decarbonisation & green job creation
- Cross-Sector Data - The key to national decarbonisation
- Support Islands Deal projects' achievement of decarbonisation goals



ORKNEY ISLANDS COUNCIL



ORKNEY ISLANDS COUNCIL



SHETLAND ISLANDS COUNCIL



HERIOT WATT UNIVERSITY



EMECC THE EUROPEAN MARINE ENERGY CENTRE LTD



Community Energy Scotland Empowering Communities



AQUATERA environmental services and products

Cross-sector data

A single-source platform where the ICNZ can collect vast amounts of complex datasets from across the islands

[ICNZ - Creating a low carbon future](#)

£16.5m

UK Government is investing £16 million and the Scottish Government is investing £500,000 in ICNZ through the Islands Growth Deal.

Unlocking local data and turning ambition into targeted action



Core Data & AI Platform

Any data from any source, built for sharing & AI ready



AI Applications

Increases energy efficiency and target support services



Optimises transport benchmarking & planning

Let's make a sustainable
world with AI

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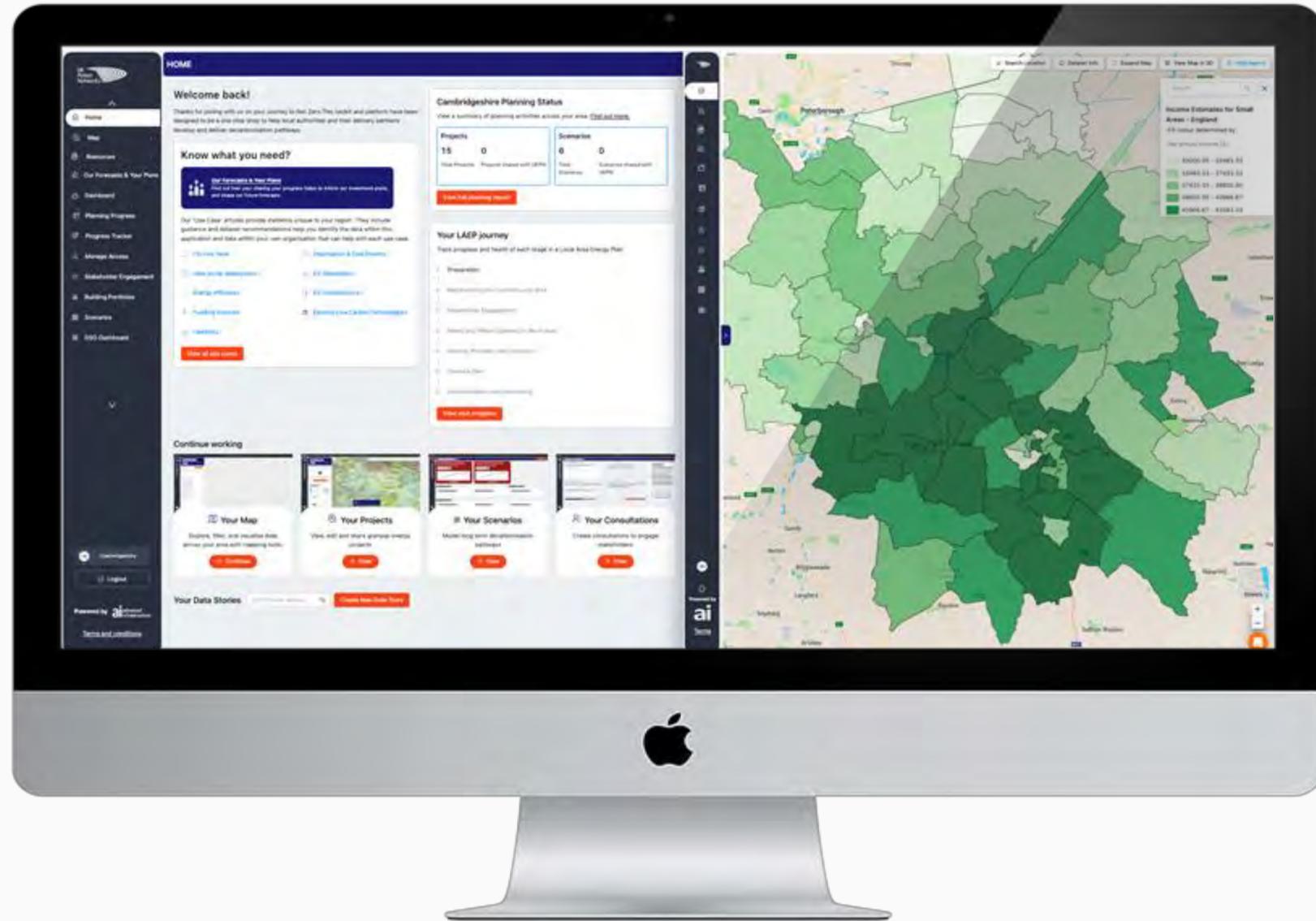


Advanced Infrastructure

LAEP+

LAEP+

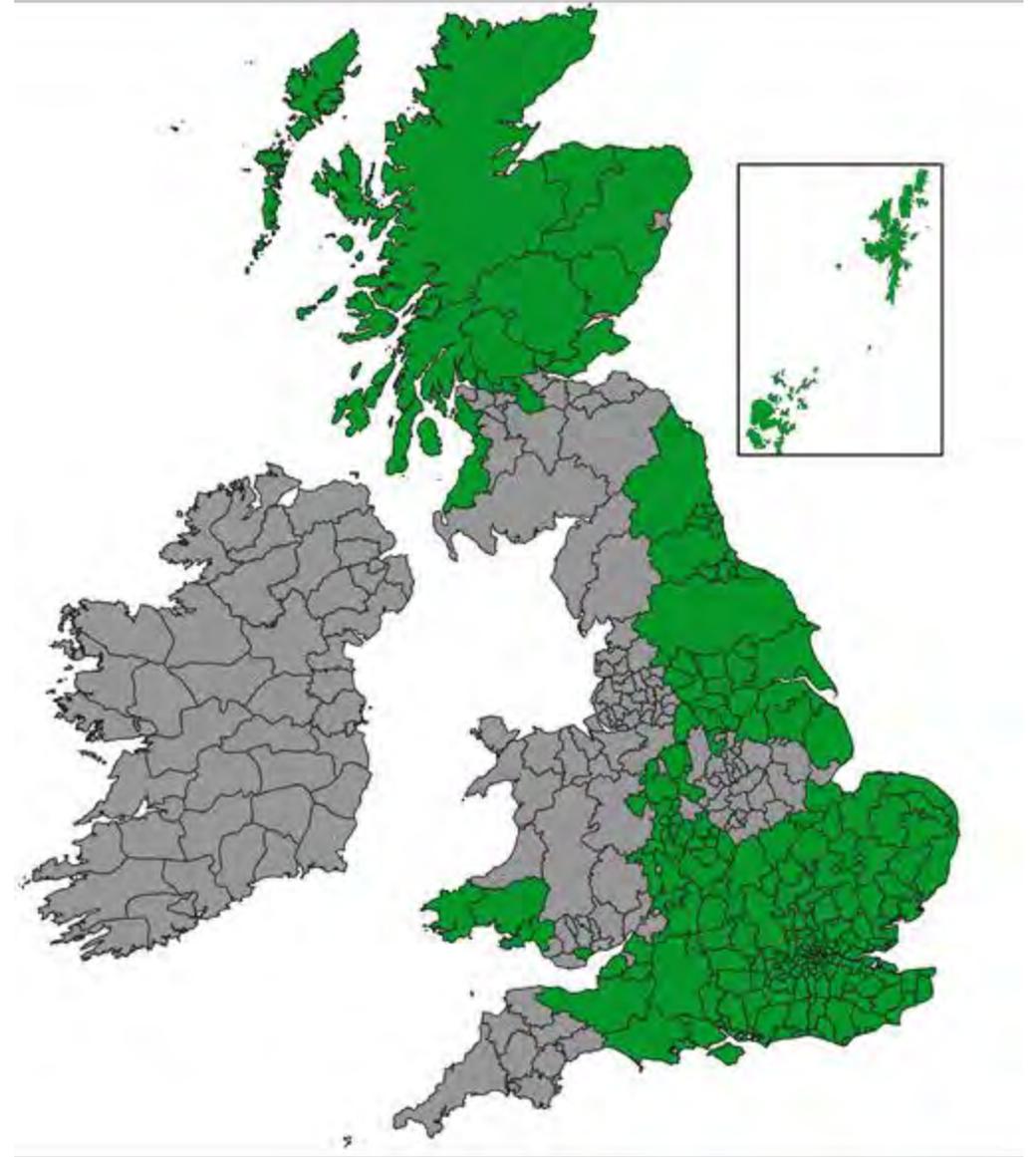
The LAEP+ Planning Tool is an award winning web-based net zero and decarbonisation planning tool, developed with local authorities and network operators.



LAEP+ UK coverage

LAEP+ UK coverage is largely in areas where DNOs have licensed the tool to support local authorities in their areas share data on strategic energy planning.

- 1 SSEN - full coverage
- 2 UK Power Networks - full coverage
- 3 Northern Powergrid - full coverage
- 4 National Grid - partial coverage



How does LAEP+ help LAs?

It brings benefits across local authority teams:

1. **Reduce cost** of data acquisition for Local Area Energy Plans and feasibility studies
2. **Rapidly identify opportunities** for energy and retrofit projects
3. Evidence **grant-ready business cases**
4. **Improve visibility** with collaboration across teams and stakeholders



Planning and Strategy



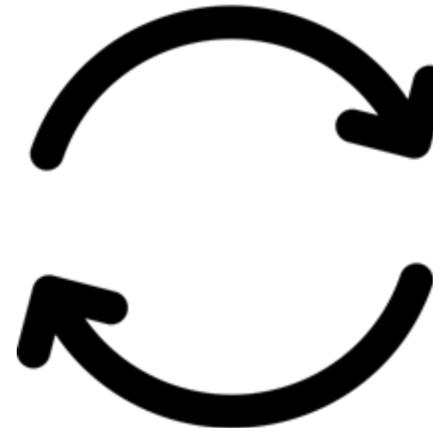
Climate and LAEP Teams



GIS & Data



Housing & Council Assets



Transport



Collaborators like consultants, contractors, Net Zero Hubs and more.

What can you do with LAEP+ ?

Plus 9:00-17:00 Live Chat support on demand



Visualise, analyse and baseline your area's opportunities

Utilise geospatial data to help you make decisions with the best supporting evidence, including building level renewable potential and LAEP baseline datasets at no cost.

You can even upload your own data to use alongside the provided data sets.



Develop projects, plans and pathways to achieve goals

Easily model and assess low carbon technology deployments, then compare costs & benefits. Select specific buildings and locations, or by your chosen criteria to deploy at scale.

You can even explore longer term pathways to decarbonisation to understand what is achievable based on your targets.



Collaborate with stakeholders and colleagues in one workspace

Invite colleagues and authorised partners to use LAEP+. Guide stakeholders through potential plans and scenarios, to both inform and gather valuable insights and feedback.

You can carry out consultations within your own organisation, as well as with public stakeholders such as local residents or businesses.

LAEP+ in action

1

PRIDE project - West Midlands

Strategic Innovation Fund project to explore LAEP+ and governance structure to support regional energy strategic planning.

2

Mission Net Zero - Bristol

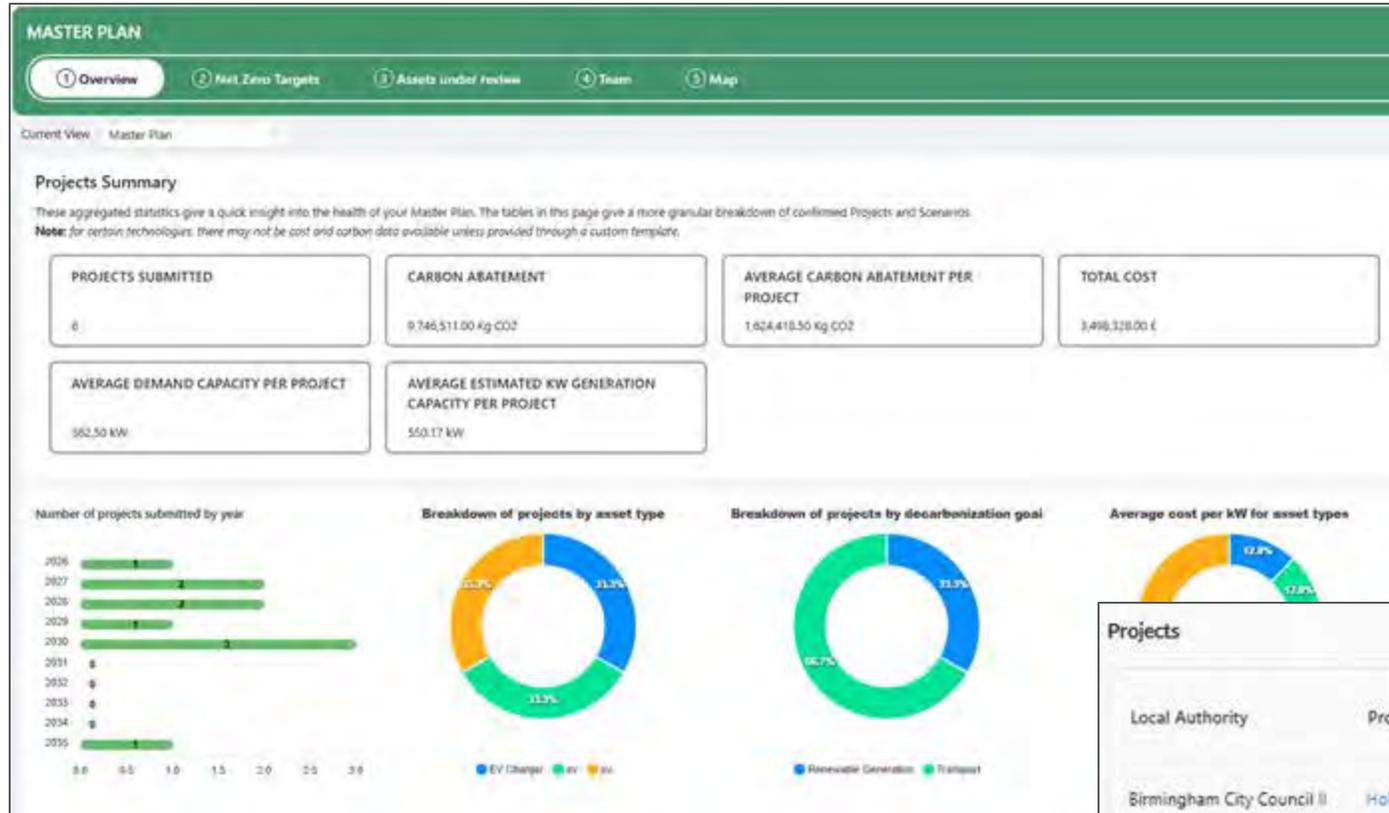
Net Zero Living project, part of which is taking a portfolio approach to exploring investment opportunities for solar PV and storage on public-owned commercial buildings

3

Winchester LAEP and CLEP

Funded by SSEN and exploring the use of LAEP+ to produce a Local Area Energy Plan (LAEP) and Community Led Energy Plan (CLEP).

PRIDE



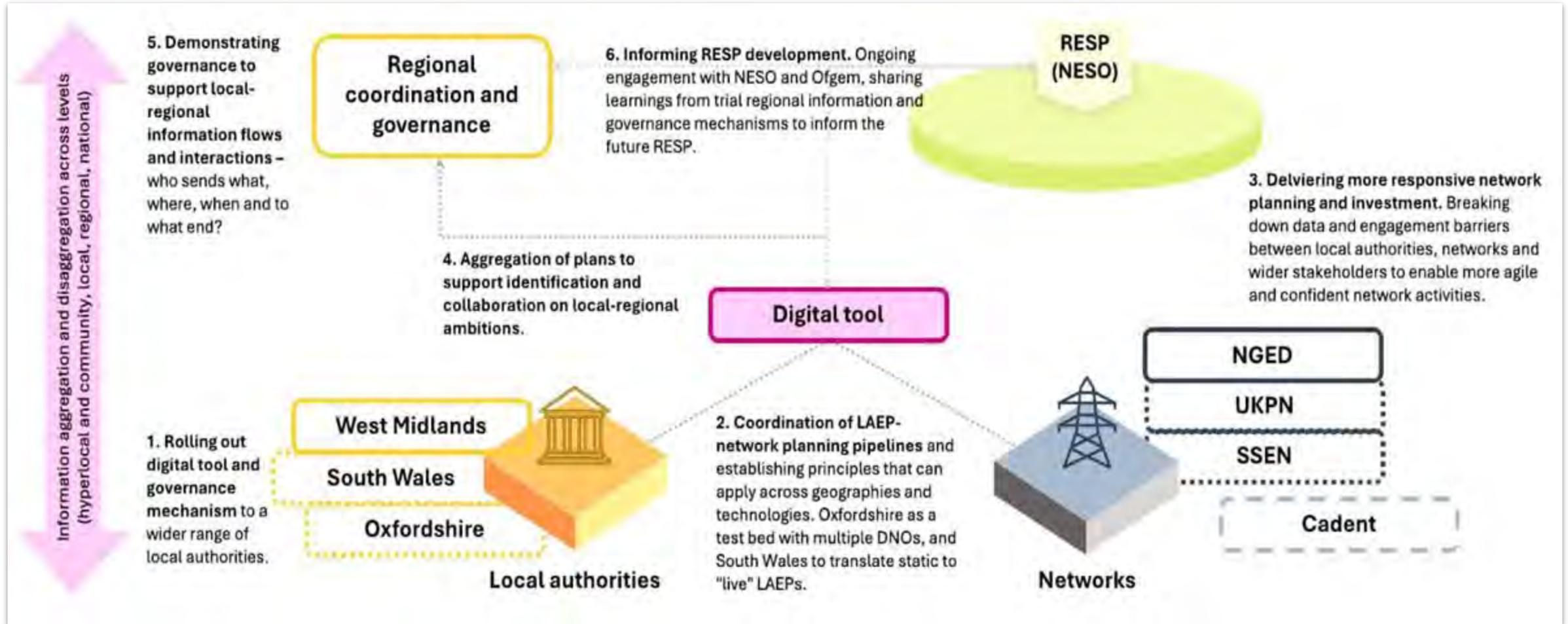
PRIDE key focuses:

- Facilitating data sharing between LAs and networks
- ‘Bottom-up’ style approach to energy planning - aggregating projects/plans/scenarios to create ‘patchwork quilt’ regional energy plan

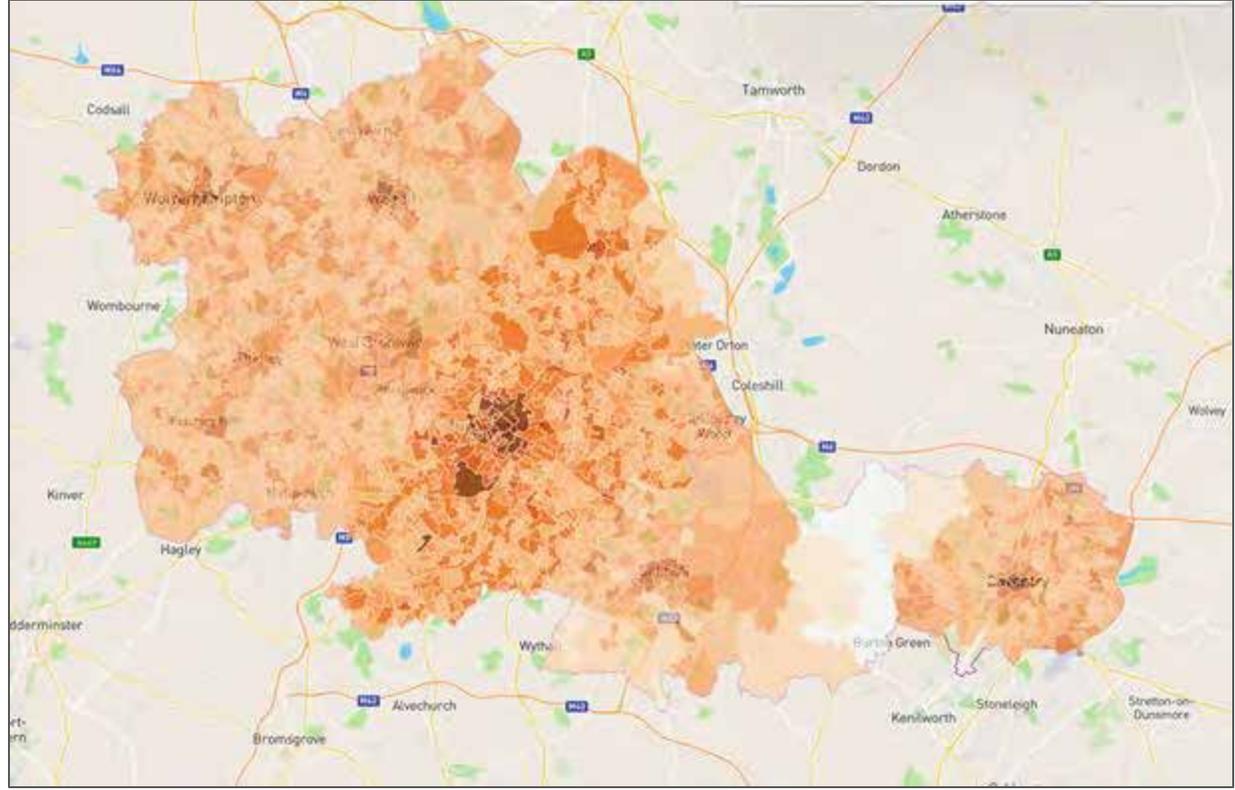
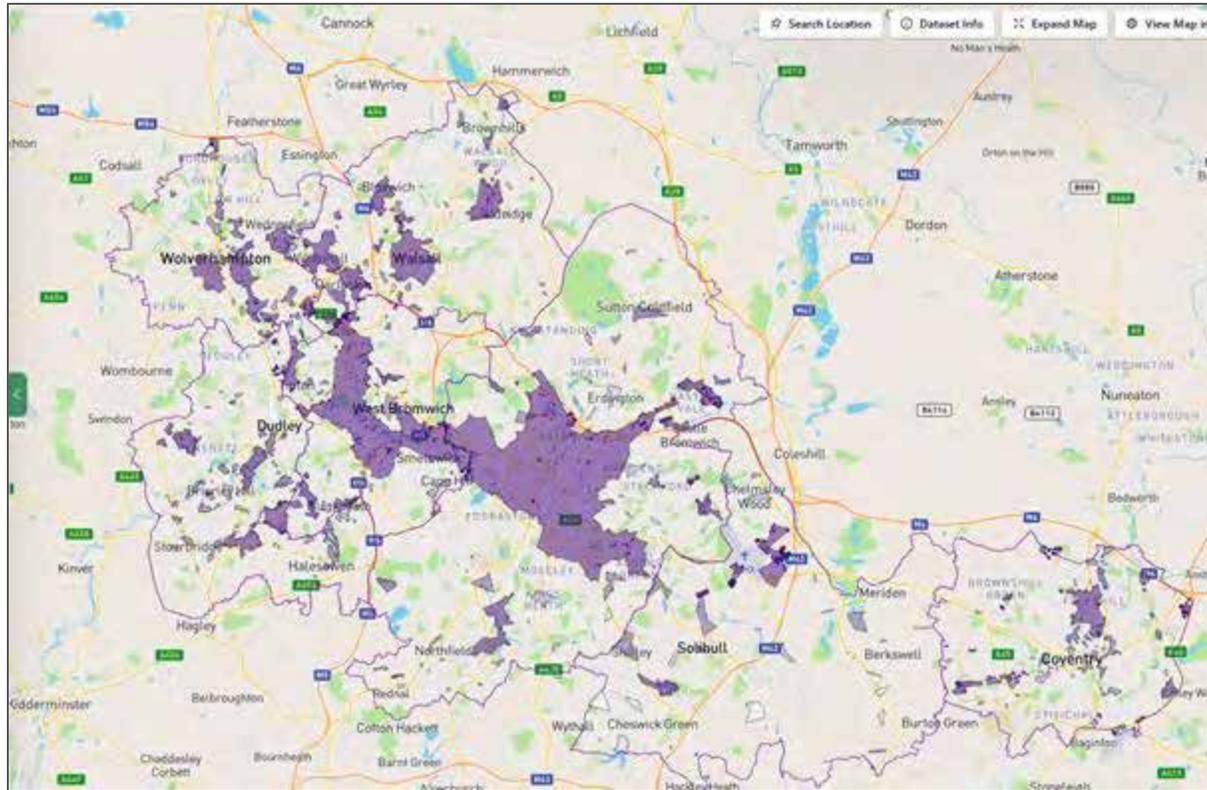
Projects Export

Local Authority	Project Name	Export	ESA Mapping	Comments	Proposed Year(s)
Birmingham City Council II	Holford Industrial Estate & Birmingham Wholesale Market	Export file	ESA Mapping	Add View	2027
Walsall	Community Solar PV project	Export file	ESA Mapping	Add View	2027
Wolverhampton	Wolverhampton Future Masterplan Energy resilience	Export file	ESA Mapping	Add View	2032, 2026, 2027, ;
Wolverhampton	Powering Pennfields (Griseley NZN)	Export file	ESA Mapping	Add View	2027
Birmingham City Council II	Queslett Landfill PV	Export file	ESA Mapping	Add View	2028

PRIDE



PRIDE



PRIDE data layers to support local energy planning:

- Mapping industrial buildings and clusters
- NESTA heat network suitability by LSOA

Mission Net Zero

Mission Net Zero baseline studies: Used LAEP+ to create hyperlocal baseline studies for wards across Bristol. Studies used to engage communities about energy and net zero options in local neighbourhoods

Easton and Lawrence Hill
A series of maps to understand Easton and Lawrence Hill in the context of net zero.

Local History and Community

Easton and Lawrence Hill are neighbourhoods shaped by rich histories and strong community action. Originally part of the Royal Forest of Kingswood, Easton became industrialised in the 19th century with coal, clay, and sand extraction, followed by extensive housing development—still visible in the northeast of the area. In the late 20th century, Easton faced challenges linked to poverty and crime, prompting a series of government-led regeneration efforts. By significant rise in property prices and recognition of neighbourhoods.

Lawrence Hill has equally deep roots, named after designated a Bristol EU Objective 2 area in 2001 Communities programme. The built environment of post-1980 buildings (shown in blue), alongside the Bristol and Bath Railway Path, a well-used walkway.

Eastside Community Trust serves the Easton and Lawrence Hill areas through various services and initiatives. The Centre and the Felix Road Adventure Playground of activities, affordable meeting and office spaces and wellbeing services. It creates an inclusive and share experiences, and access personal development. Playground provides a safe space for children and young people.

These assets underpin wider community action. The Action Plan [8] was prepared as part of the Communities Housing, Eastside Community Trust, coordinated by Bristol Climate & Nature Partnership and Bristol City Council. It has evolved over time.

Easton and Lawrence Hill
A series of maps to understand Easton and Lawrence Hill in the context of net zero.

Land Use, Planning and Regulation

The map to the right indicates areas of potential development in the local area. The coloured areas are identified for development within the Bristol Local Plan, either as areas of strategic development, or as development allocations for development based on the Bristol Local Plan. Click each for more details. Listed buildings are indicated by brown points and conservation areas are shown in red.

Policies in Bristol's Core Strategy (and soon in Bristol's updated Local Plan) [6] will need to be taken into account when interventions, such as renewables, heat pumps and retrofit policy is generally supportive of these technologies, but also such as conservation areas and flood risk areas. There are designated conservation areas (indicated in red) where areas are in place to protect the historic elements of the area.

The Environment Agency has published flood risk zones in the area. This Level 3 flood risk shown on the map in purple, is flooding each year from nearby rivers. Large areas of south classed as Level 2 flood risk. Areas of northern Lawrence Hill flood risk. This risk will increase as the effects of climate change and mitigation and resilience are considered in developing the plan.

The Keep Bristol Cool mapping tool [7] shows that Lawrence Hill is more vulnerable in Bristol. This is due to a combination of factors, lack of green space, and age and vulnerability of the buildings.

The draft Bristol Local Plan Policy D56 identifies Lawrence Hill suitable for redevelopment to deliver a mix of homes, work and leisure. The plan estimates 1,500 new homes could be built in Lawrence Hill.

Author: Arup and AITL
Last Updated: 12th June 2025

Easton and Lawrence Hill
A series of maps to understand Easton and Lawrence Hill in the context of net zero.

People and the Economy

The interactive map shows indices of deprivation across each Lower Super Output Area (LSOA) in Bristol. The indices of multiple deprivation check for indications of deprivation across seven categories: income, employment, education, health, crime, barriers to housing and services, and living environment. Red shading represents the LSOAs which are ranked as more deprived. Easton and Lawrence Hill stand out as more deprived than any of the surrounding areas and are in the 30% most deprived areas in the UK. This is in contrast to the areas to the west and south of the neighbourhood which are shown in green, these have fewer indicators of deprivation.

The graphs below depict data collected at the 2021 census [2] for deprivation, ethnic group and general health. According to the 2021 census, the area within the TET neighbourhood has around 34,100 residents across 13,800 households. The 2021 census looks at four dimensions of deprivation: education, employment, health and housing. The data for Easton and Lawrence Hill shows a higher-than-national-average percentage of households experiencing deprivation across one (33.6%), two (17.6%), three (6.2%), and four (0.5%) dimensions. This indicates that the area faces significant socio-economic challenges, with a notable portion of the population affected by multiple aspects of deprivation.

Household deprivation: dimensions of deprivation per household

Dimensions	England	Lawrence Hill & Easton
None	42.1%	31.4%
One	33.5%	33.6%
Two	14.2%	17.6%
Three	6.2%	6.2%
Four	0.5%	0.5%

Ethnic group

Ethnic group	England	Lawrence Hill & Easton
Asian, Asian British or Asian Welsh	9.6%	12.2%
Black, Black British, Black Welsh, Caribbean or African	4.2%	23.7%
Mixed or Multiple ethnic groups	3.0%	5.1%

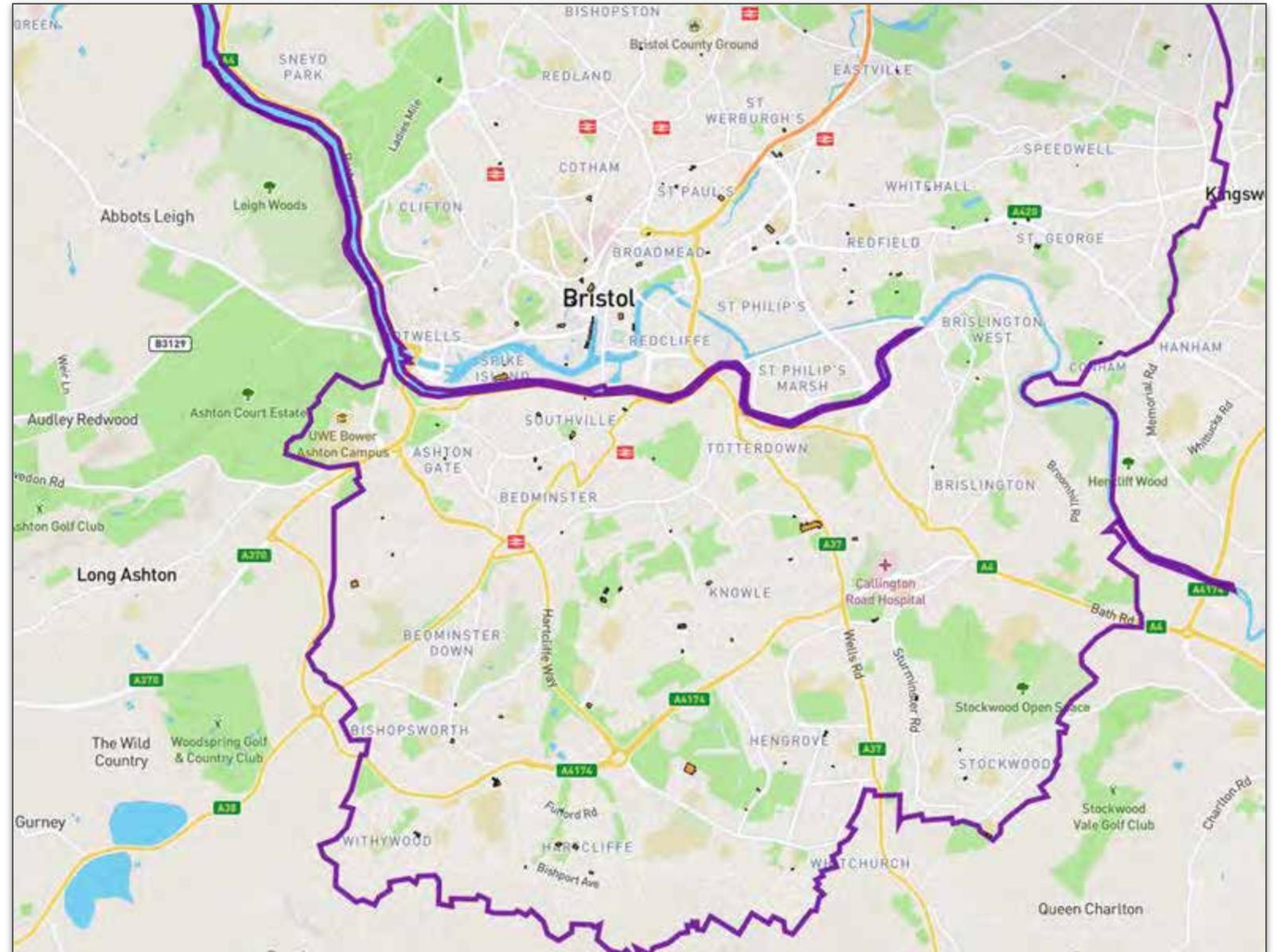
Author: Arup and AITL
Last Updated: 12th June 2025

MISSION NET ZERO

Mission Net Zero

Mission Net Zero portfolio approach to planning:

Used LAEP+ and council-owned data to explore opportunities for solar PV and storage on council-owned commercial buildings. Goal is to package as portfolio of investment opportunities rather than building-by-building approach.



Winchester LAEP and CLEP

Winchester LAEP baseline

LAEP+ used to create full baseline study for Winchester ahead of LAEP scenarios development. Stages 1-3 LAEP process.

Winchester LAEP Baseline
An overview of the energy system and characteristics of the Winchester Council area.
Author: Winchester City Council, Advanced Infrastructure, and Scottish & Southern Electricity Networks
Last Updated: 5th February 2025

2 Buildings

Observe the interactive map on the right, displaying domestic fuel types at building level.

2.1 Existing Domestic Buildings (continued)

Beyond EPC ratings, it is important to understand the primary fuel types used in domestic properties shown in the chart below. **78%** of homes currently rely on gas as their main fuel source, followed by electricity and oil. Establishing a baseline for fuel types is essential for scenario modeling, as it provides a clear reference point to assess shifts in energy use across the district's domestic buildings. This approach allows for a more structured analysis of transitions and trends, enabling better alignment with long-term decarbonisation goals.

Fuel Type	Percentage
Gas	78%
Electricity	12%
Oil	10%

Winchester LAEP Baseline
An overview of the energy system and characteristics of the Winchester Council area.
Author: Winchester City Council, Advanced Infrastructure, and Scottish & Southern Electricity Networks
Last Updated: 5th February 2025

These highlighted (LSGA and MGLA) regions with the highest electricity demand are situated primary substation supply areas flagged with a **Red RAG rating** (as shown on the map adjacent), indicating that the electricity infrastructure within this supply area is overloaded by more than 5%. This highlights key areas that may need to be targeted for intervention through infrastructure planning and demand management. The importance of considering primary substation capacity when developing a LAEP is explored further in section 4.4.

Category	Non-Domestic (MWh)	Domestic (MWh)
Gas Demand	~1,000,000	~2,800,000
Electricity Demand	~200,000	~100,000

Figure 7. Domestic and non-domestic gas and electricity demand (MWh).

3.1.3 Heat Consumption

Heat demand provides insight into the area's current heating infrastructure, and how this can be supported through efficiency upgrades, electrification, and heat network development.

Winchester LAEP Baseline
An overview of the energy system and characteristics of the Winchester Council area.
Author: Winchester City Council, Advanced Infrastructure, and Scottish & Southern Electricity Networks
Last Updated: 5th February 2025

4 Existing Energy Infrastructure

Observe the interactive map on the right, displaying distribution of existing PV in kW, with the below mentioned primary substation supply areas outlined and RAG-rated by capacity.

4.2 Existing Rooftop PV

Photovoltaic assets play a crucial role in Winchester's transition to Net Zero: the current rooftop capacity reflects adoption of renewable technologies in the area and potential for further expansion. Existing PV can help decrease dependence on grid-supplied electricity, reducing demand for alternative fuel sources. Analysing the extent and distribution of PV deployment enables more effective future energy infrastructure planning and provides valuable insight into energy demand within the Local Authority.

Winchester has **6,425** recorded rooftop PV installations, with a collective estimated capacity of **34,785.31 kW** annually across the region. The highest concentration of existing rooftop PV is within the Bishops Waltham Primary Substation Supply Area, followed by Harestock and St Cross. Bishops Waltham and Harestock both have a Green RAG rating, indicating more than 5% headroom capacity for new connections. However, St Cross has a Red RAG rating, meaning it is already over 95% loaded, which could present challenges for further PV integration. While solar PV helps ease grid pressure, new deployments in Red RAG-rated areas require careful planning to ensure effective integration. In such cases, battery storage or other energy management solutions may be necessary to maximise solar benefits without overloading the local grid.

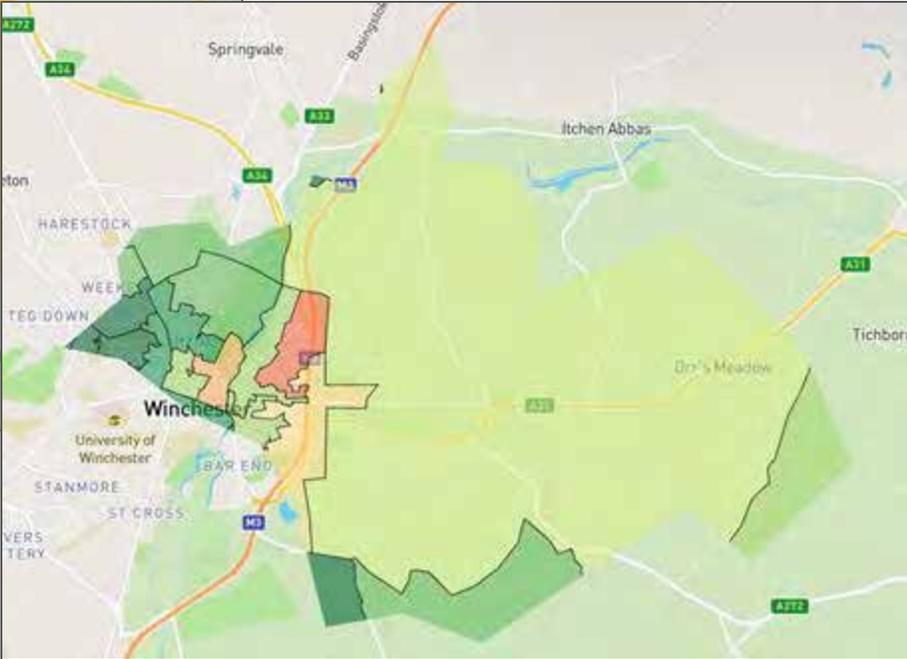
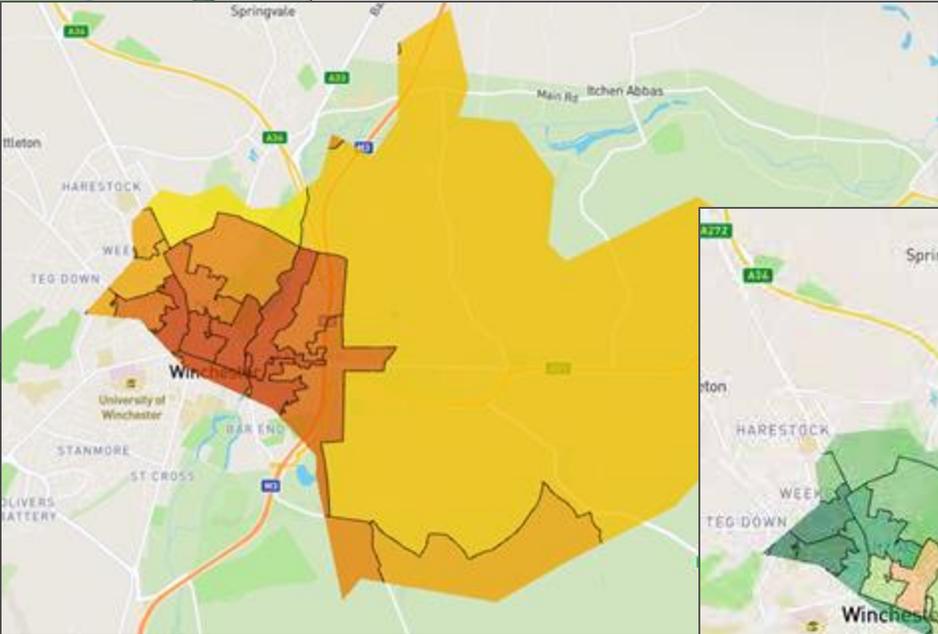
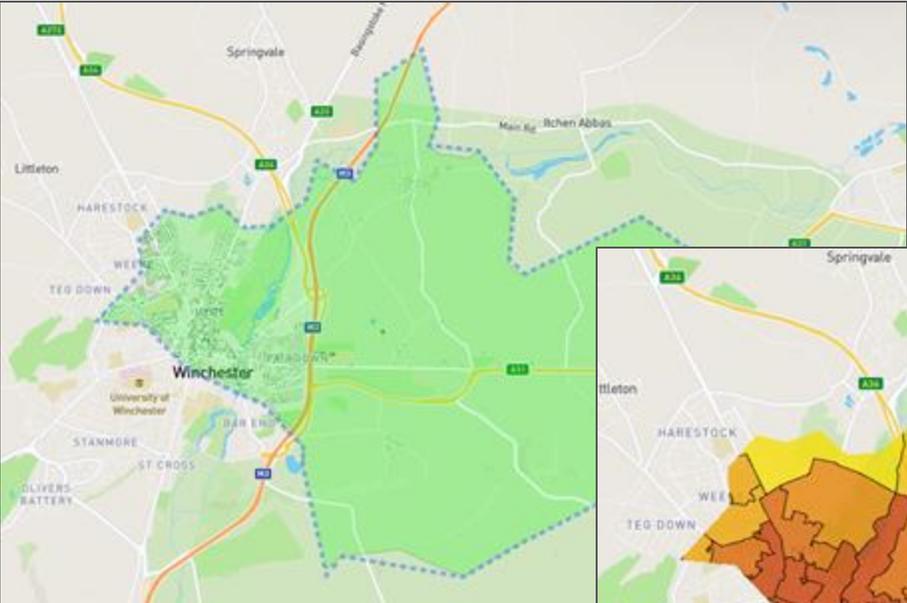
4.3 Existing Utility-Scale Solar PV

Utility-scale solar refers to large-scale solar photovoltaic (PV) systems that are generally ground-mounted installations exceeding 1 megawatt (MW) in capacity. The latest data available indicates that there are no operational solar farms within the Winchester district (see Table below). According to the DESNZ Renewable Energy Planning Database, there is a further pipeline of 155MW solar farms.

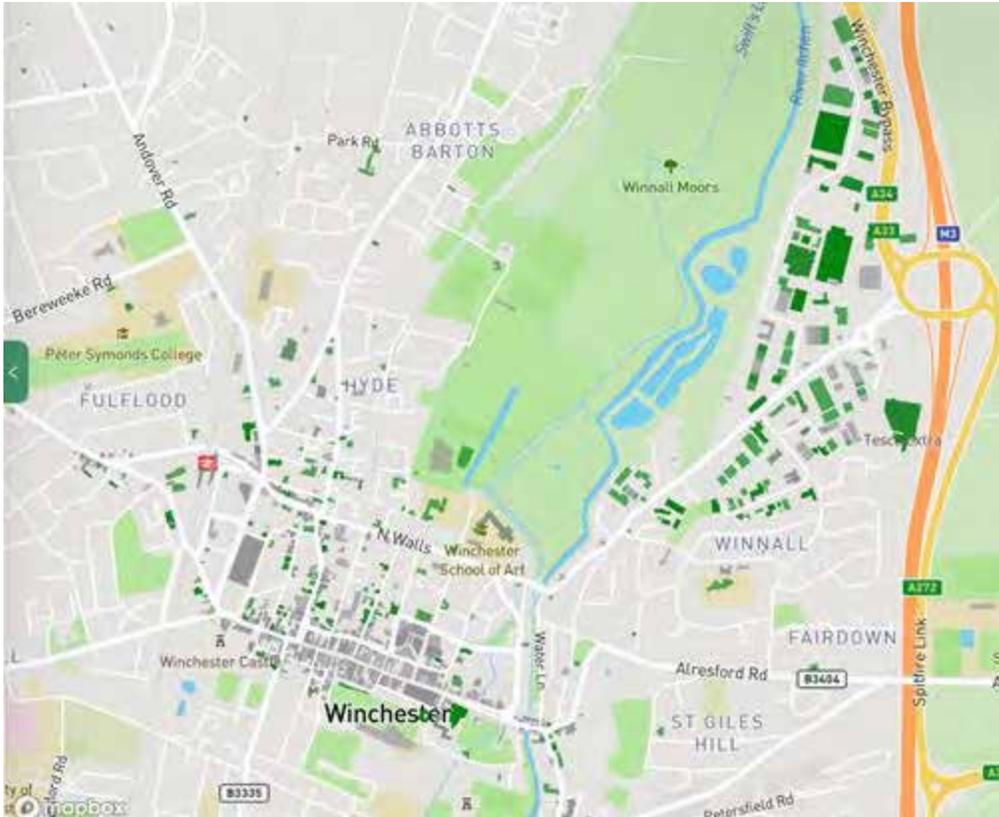
Winchester LAEP and CLEP

Winchester CLEP

LAEP+ supporting the development of Community Led Energy Planning - creating a baseline and plan for energy development within a single substation area



Winchester LAEP and CLEP



Winchester CLEP

Exploring building-level net zero opportunities within the same primary substation area





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www.advanced-infrastructure.co.uk



edenseven

cero.earth

**Climate Programme Management System
for Local Authorities**

Alejandro Navarro – Director of Technology

AI, Data and Digital for Net Zero



ENABLING SUSTAINABLE GROWTH

BUILDINGS | ELECTRICITY | SUPPLY CHAIN | TRANSPORT

Supporting **public and private** sector organisations transition to a low-carbon economy.

Combining subject matter expertise with data analytics and digital solutions

IUK **Net Zero Living** Demonstrator



Iceland



greateranglia





ABOUT the demonstrator

A set of practical tools to empower Local Authorities to identify, coordinate and facilitate the delivery of net zero projects at pace and scale.

Climate Management System



Project Identification Tool



Project Delivery Tool



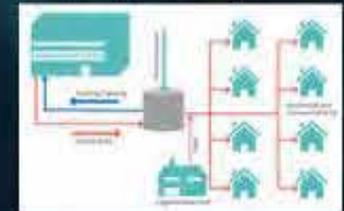
Engagement & go-to-market



Funding Mechanisms



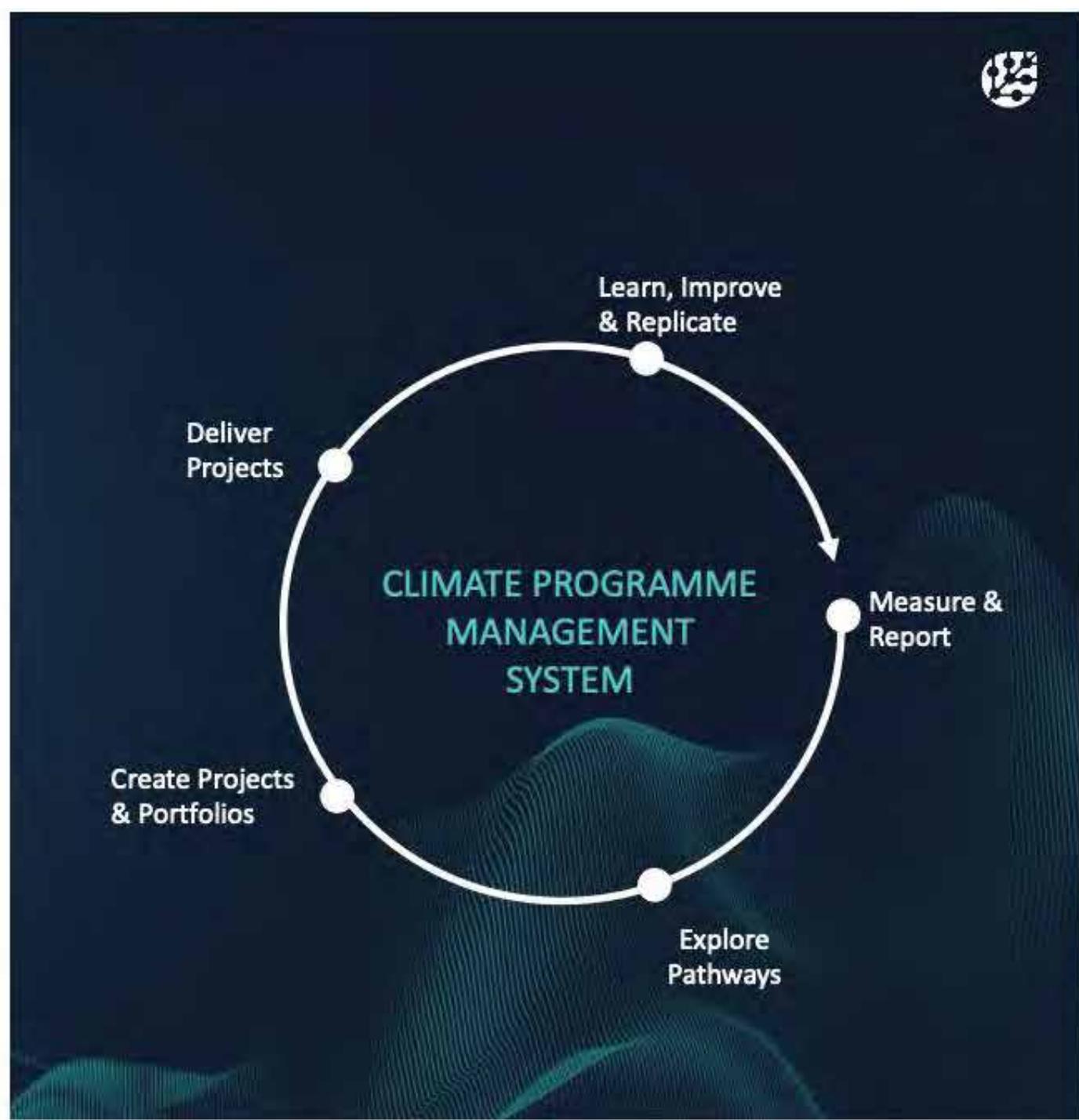
Test Cases: Heat Network Heat Pumps



The Challenge of Managing Climate Programms

In early meetings, Climate Officers consistently highlighted four issues around data and management:

- Fragmented, manual climate data mgmt.
- Insufficient capacity and capabilities
- Alignment of actions and plans
- Tracking impact and communicating progress





OVERVIEW OF CERO.EARTH FEATURES

Accounting



Consistent, and auditable emissions data.

Actioning



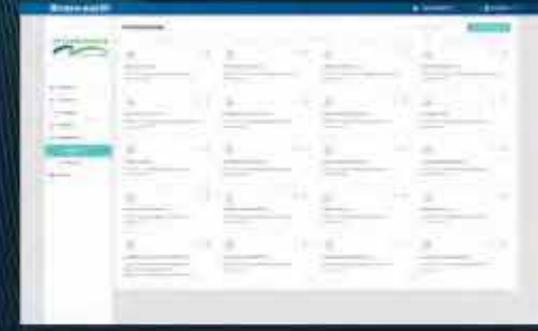
Unified and consistent management of projects.

Strategising



Actionable insights for better decision making.

Communicating



Automation of reports and disclosure information.

Tested with Peterborough City Council and 6 other Local Authorities



THE INNOVATION: A CLIMATE PROGRAMME MANAGEMENT TOOL ENABLED BY DATA AND AI

Programme approach - from measurement to planning and delivering



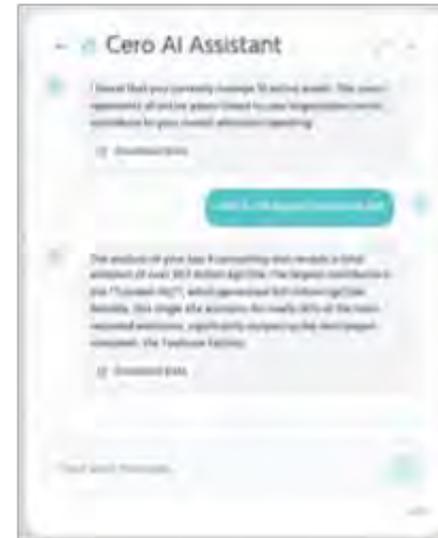
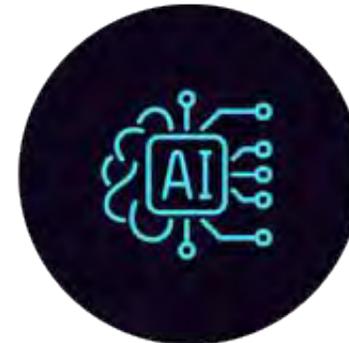
Council Controlled Emissions & Area-wide Emissions



Use of scalable infrastructure and flexible data model



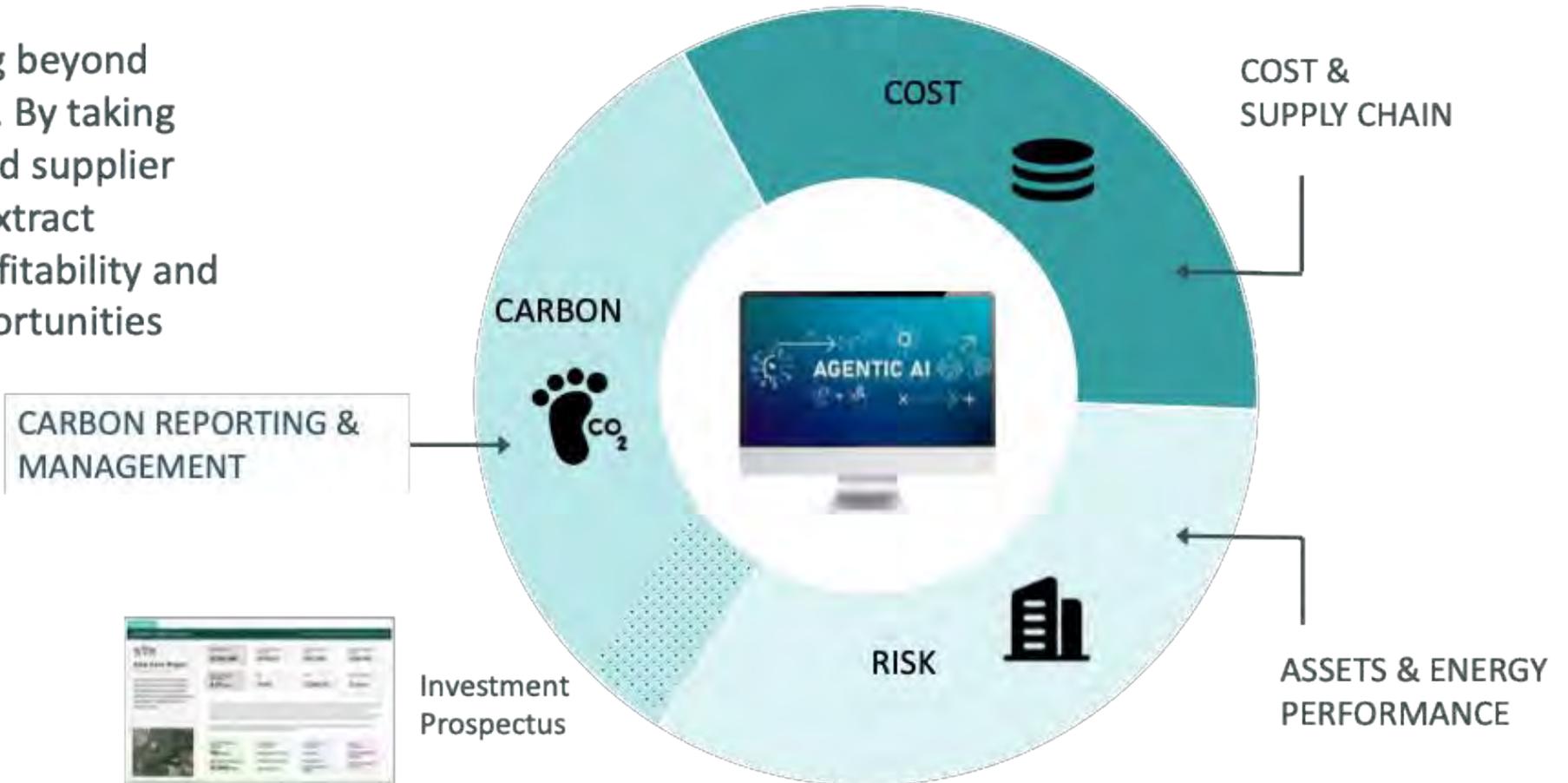
Use of AI for classification, data matching and natural language queries





BEYOND CARBON MANAGEMENT: HARNESSING DATA AND AI TO DRIVE DOWN CARBON, COST AND RISK

The platform is moving beyond traditional boundaries. By taking detailed site, spend and supplier data, companies can extract **INSIGHT** into asset profitability and potential cost out opportunities



cero.earth is fully operational and available

To learn more about how the tool could support your climate plans, or to share feedback, please reach out to:

- Alejandro Navarro - anavarro@edenseven.co.uk
- info@edenseven.co.uk

THANK YOU !!!



Q&A

www.iuk.ktn-uk.org



Innovate
UK

Business
Connect

Upcoming Events

Meet the Innovator Webinar Series:

- Heat Pumps – 2nd March 10-11 AM
- Carbon capture, usage and storage– 16th March 2-3 PM

Net Zero Living Programme Showcase:

- Manchester, 5th March, 9:30-16:30.



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