



“Even society as a whole, a nation, or all existing societies put together, are not owners of the Earth. They are merely its occupants, its users; and like good caretakers, they must hand it down improved to subsequent generations.”



Cheshire and Warrington
**Sustainable and Inclusive
Growth Commission**

Cheshire and Warrington Journey to Net Zero

Dissemination Event

Friday 4 November 2022, 9am-12:30pm





Cheshire and Warrington
Sustainable and Inclusive
Growth Commission

Towards a Sustainable and Inclusive Cheshire and Warrington

Final Report
September 2022

Welcome

Robert Davis

Chairman and CEO EA Technology

Joint Chair, Sustainable and Inclusive Growth
Commission





Cheshire and Warrington
**Sustainable and Inclusive
Growth Commission**

Sustainable and Inclusive Growth Commission

Promoting a just transition to a green, fair and growing economy





Cheshire and Warrington
**Sustainable and Inclusive
 Growth Commission**

Agenda		
09:00	Arrival, registration, refreshments & network	
09:30	Welcome	Robert Davis Robert Davis, Chairman & CEO, EA Technology & Co-Chair of the Sustainable & Inclusive Growth Commission
09.35	Keynote Speech	Clr Sam Corcoran Leader, Cheshire East Council & Co-Chair of the Sustainable & Inclusive Growth Commission
9.45	Reflections from the LEP & Introduction to the Panel	Clare Hayward Chair, Cheshire & Warrington LEP
9.50	Overview of Report Themes and Priority Projects – Intro by Clare Hayward Inclusive Economy Sustainable Transport Sustainable Land Use Net Zero	Chantal Davies, University of Chester Robert Davis, EA Technology Annette McDonald, Tatton Estates & Chair of Local Nature Partnership Clr Sam Corcoran, Cheshire East Council
10.30	Q&A panel	
10.50	Next Steps for the Commission	Clare Hayward Chair, Cheshire & Warrington LEP
11.00	A greener future made possible by finance	Lauren Pamma Green Finance Institute
11.10	EA Technology Decarbonisation Journey	Mark Sprawson EA Technology
11.20	Decarbonisation of Commercial Buildings: Meet the experts – Intro by Robert Davies	Lauren Pamma, Finance Expert Mark Sprawson, Technology Expert Kas Mohammed, Schneider Electric, Supplier George Ablett, Cheshire West and Chester Council – decarbonisation challenges for local authorities.
12.00	Event Close & Operational Tour of EA Technology smart energy building	Robert Davis EA Technology
	Network & Lunch	



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Keynote

Cllr Sam Corcoran

Leader, Cheshire East Council

Joint Chair, Sustainable and Inclusive Growth
Commission





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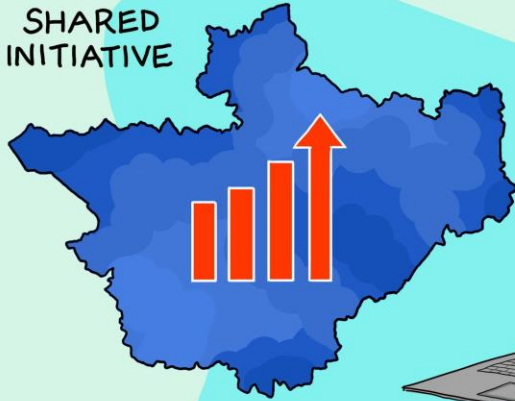
The Sustainable and Inclusive Growth Commission

- Independent Commission set up by the LEP and sub-regional Leaders Board to act as a catalyst towards sustainable & inclusive growth in Cheshire & Warrington
- The SIGC runs for 2 years in 4 phases: **collate** (Nov 20-June 21), **plan** (July-Dec 21), **engage** (Jan 22-Jul 22) and **promote** (Jul-Dec 22)
- The Commission has been working on four themes: **Inclusive Economy, Sustainable Transport, Sustainable Land Use, and Net Zero** with a supporting Finance and Funding theme
- **Final Report** based on evidence base with key priorities and recommendations

INCLUSIVE ECONOMY

POLICY SOLUTIONS CO-DESIGNED WITH THE PEOPLE AFFECTED

SHARED INITIATIVE



PUBLIC INVESTMENT TO ADDRESS DISADVANTAGE AND TARGET OPPORTUNITIES



ALL PEOPLE TO HAVE ACCESS AND THE ABILITY TO USE INFORMATION AND DIGITAL TECHNOLOGIES SUCH AS THE INTERNET

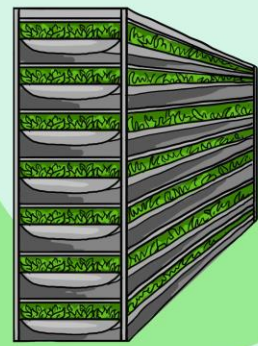


EQUAL ACCESS TO OPPORTUNITIES FOR ALL - ESPECIALLY WITH GREEN JOBS AND SKILLS

USE DATA TO IDENTIFY INEQUALITIES SO THEY CAN BE ADDRESSED



SUPPORT PRODUCERS AND LAND OWNERS TO INCREASE ENVIRONMENTALLY FRIENDLY FOOD SUPPLY



DECARBONISATION OF DAIRY THROUGH ANAEROBIC DIGESTION AND REGENERATIVE AGRICULTURE



REVERSE DECLINE OF NATURE - AND ABSORB CARBON INTO BETTER SOILS, MORE WOODLANDS AND HEDGEROWS

UNLOCK ECONOMIC POTENTIAL OF RURAL AREA

MAKE NATURE ACCESSIBLE FOR HEALTH BENEFITS

MAKE CURRENT LAND USE NET NEGATIVE



REPLACE RURAL FOSSIL FUELS WITH LOCAL WIND FARMS, SOLAR, BIOFUELS - IMPROVE INFRASTRUCTURE

INCLUSIVE ECONOMY

SUSTAINABLE LAND USE

TRANSITIONING TO A SUSTAINABLE AND INCLUSIVE CHESHIRE AND WARRINGTON ECONOMY

'FULL DECARBONISATION OF ALL TRANSPORT IN CHESHIRE AND WARRINGTON BY 2035'



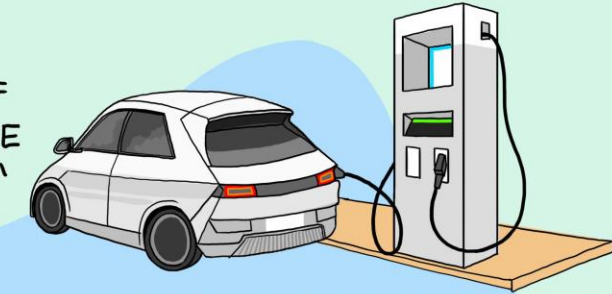
EASY
CLEAN
HEALTHY

IMPROVE ACTIVE TRAVEL

SUSTAINABLE TRANSPORT



IMPROVE PUBLIC TRANSPORT



NEW INFRASTRUCTURE/ SUPPORT FOR ELECTRIC CARS AND ZERO-EMISSION VEHICLES TO MAKE THEM COST EFFECTIVE AND ACCESSIBLE



NEW GREEN JOBS IN HOUSING INSULATION AND LOW CARBON HEATING

SUPPORT PROJECTS THAT WILL REACH NET ZERO CARBON AND GREEN JOBS

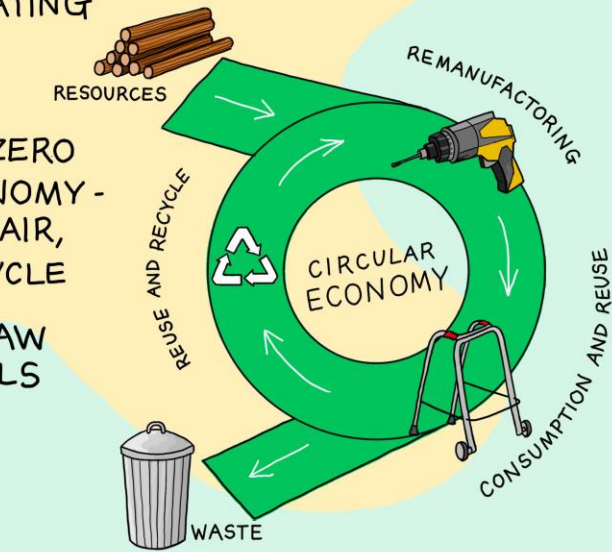
NET ZERO



BUILD UK'S FIRST NET ZERO INDUSTRIAL CLUSTER

IMPLEMENT ZERO WASTE ECONOMY - REDUCE, REPAIR, REUSE, RECYCLE

- FEWER RAW MATERIALS



CIRCULAR ECONOMY



ADDRESS HEATING AND INSULATION IN SOCIAL HOMES - REDUCE FUEL POVERTY

SUSTAINABLE LAND USE



NET ZERO



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September 2022

Final Report

Clare Hayward MBE, DL

Managing Director Accenture

Chair Cheshire and Warrington Local Enterprise
Partnership

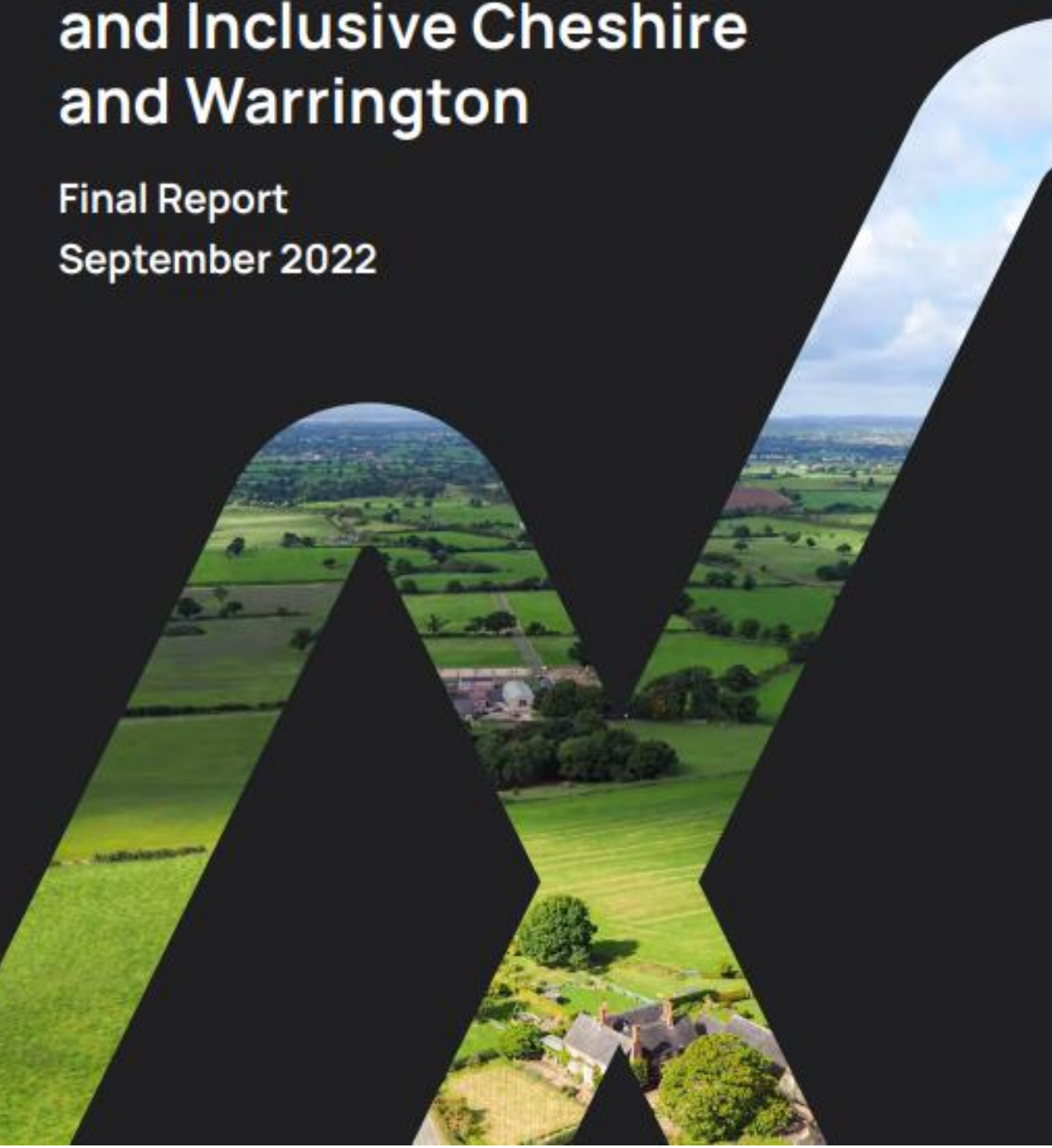




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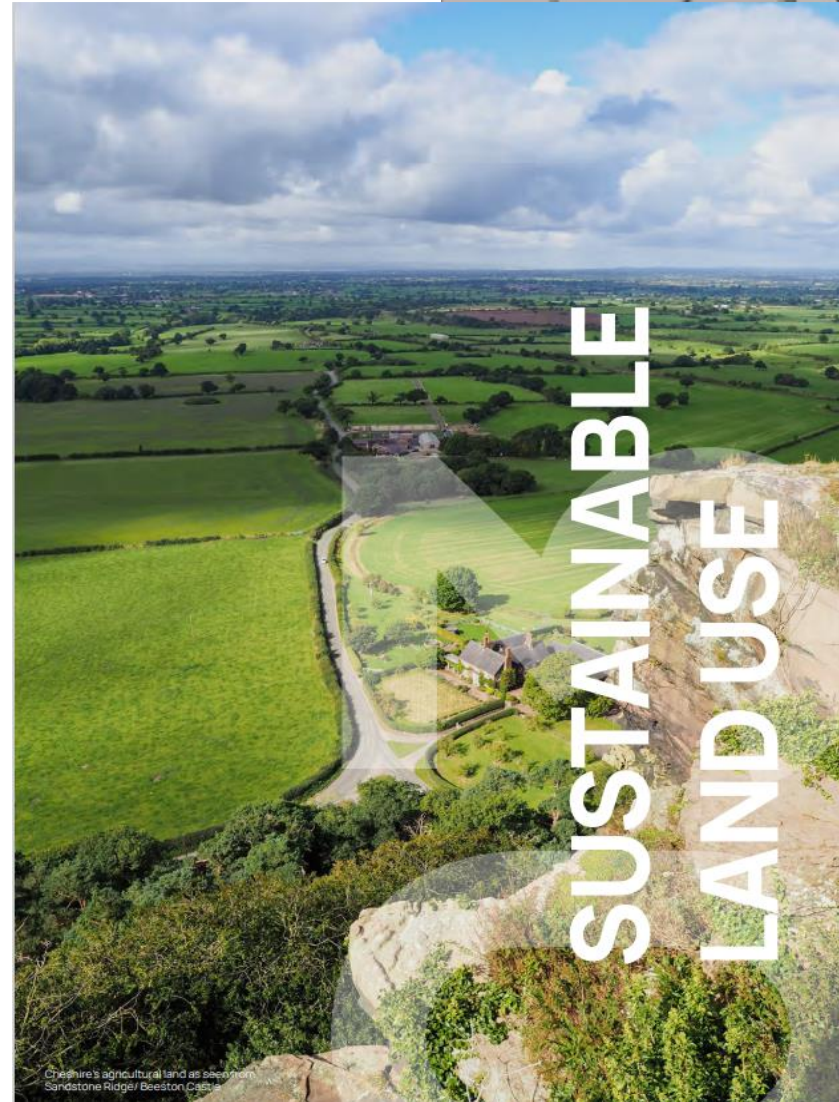
Final Report
September 2022



INCLUSIVE
ECONOMY

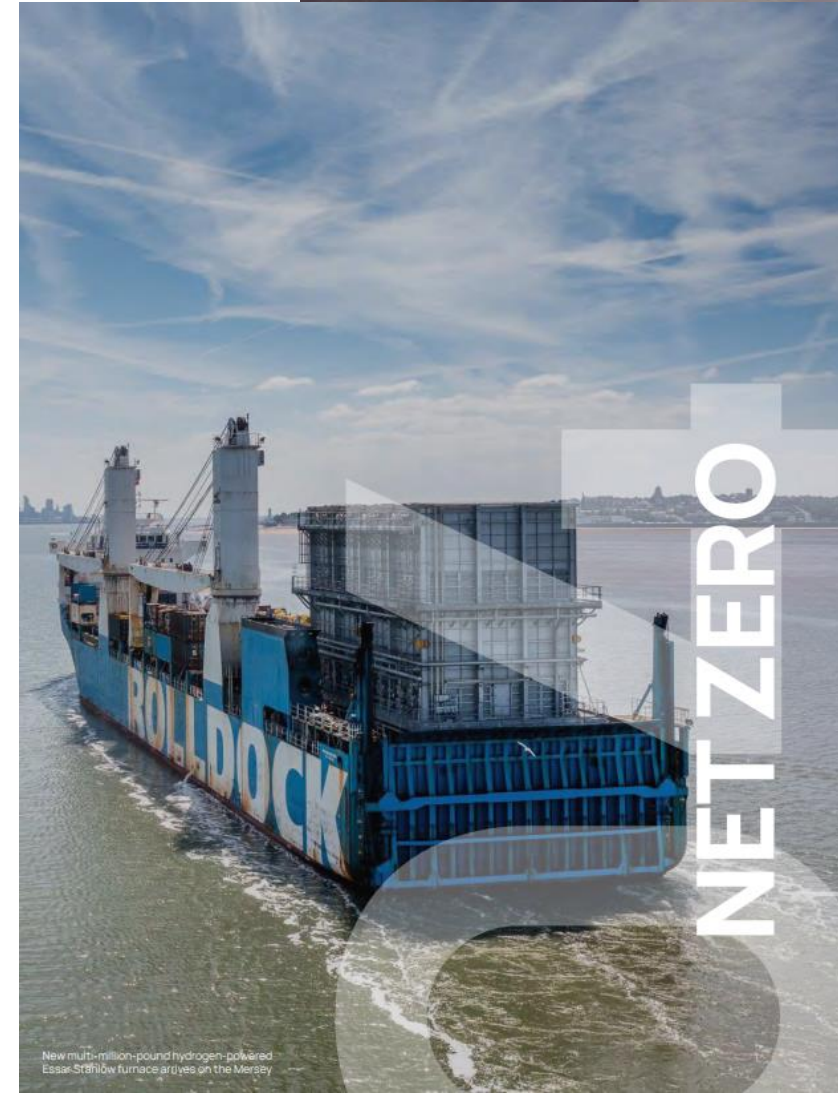


SUSTAINABLE
TRANSPORT



SUSTAINABLE
LAND USE

Cheshire's agricultural land as seen from Sandstone Ridge/ Beeston Castle



NET ZERO

New multi-million-pound hydrogen-powered Essar S7800w furnace arrives on the Mersey



Inclusive Economy

Professor Chantal Davies

Professor of Law, Equality and Diversity, University of Chester





Inclusive Economy Vision

In response to the evidence we reviewed, and to the consultation feedback, our overall ambition is to encourage sustainable economic growth that combines increased prosperity with greater equality, creates opportunities for all, and distributes the benefits of increased prosperity fairly across the subregion. We propose this will be delivered via the following priority activities:

- By ensuring that all projects promoted by the Commission mainstream inclusion into policy, investment, procurement and hiring, using best practice tools for inclusivity assessment.
- By implementing a joined up approach to inclusion in the subregion through shared initiatives such as social value (Fair Employment Charter, Anchor Networks), inclusive skills and employment, digital inclusion, and positive action
- By creating new and collecting existing data more efficiently to identify inequalities and inform policy making, and piloting recent and new approaches such as embedding lived experience in policy.



Inclusive Economy Recommendations

1. Adopting inclusivity assessment for projects promoted by the Commission as an integral part of decision making and delivery – starting with the Shared Prosperity Fund
 - In addition, to engage with the community and voluntary sector on adoption of new policy with inclusivity implications
 - The subregion should ensure there is good quality and available information, advice and guidance (IAG) to all who need it (including households, businesses, schools and their pupils etc) on decarbonisation opportunities and challenges, and how these can be addressed.
2. Delivering social value, through a new fair employment charter for Cheshire and Warrington
3. Ensuring digital inclusion is a core part of all digital / infrastructure strategies and delivery in Cheshire and Warrington
4. Ensuring that information, advice and guidance on skills is targeted to where it is needed for levelling up (to individuals with protected characteristics and to those with socio-economic deprivation such as the long-term unemployed, those in areas of deprivation, those on free school meals)



Sustainable Transport

Robert Davis

Chairman and CEO EA Technology

Joint Chair, Sustainable and Inclusive Growth
Commission





Sustainable Transport Vision

In response to the evidence we reviewed, and the consultation feedback, the Commission considers that the subregion should set itself an objective of full decarbonisation of all transport in Cheshire and Warrington by 2035, to be delivered in an inclusive way through three priority activities:

- By creating a public transport system which is affordable, zero carbon, accessible and integrated across the subregion making bus use and other forms of transport sharing a first choice for residents, shoppers, commuters and visitors by 2030. Whilst recognised that this will be challenging, the Commission's view is that the target timescale will be vital;
- Creating an ecosystem which makes the adoption of electric or zero emission (rather than petrol or diesel) cars and other vehicles the most cost effective and accessible means of private and business transport by 2030 where public transport is not appropriate or available;
- By making active travel, on bikes and walking, an easy, clean, safe, and healthy option for all our residents, employees and visitors, fully integrating it with other forms of travel.



Sustainable Transport Recommendations

1. The public sector role in supporting EV rollout, notably through the facilitation of rolling out public charging stations.
 2. Establishment of multimodal transport at major interchanges in the subregion that connect all forms of public transport with accessible active travel routes.
 3. Decarbonisation of public transport, including fully decarbonised buses as well as a series of other possible options.
- Taking on board consultee feedback, each of these key priority projects should be assessed under the following factors, engaging with key stakeholders, where relevant:
 - Inclusivity (extending the use of the inclusivity toolkit)
 - Behavioural change needed
 - How to ensure community engagement
 - Measurability and metrics

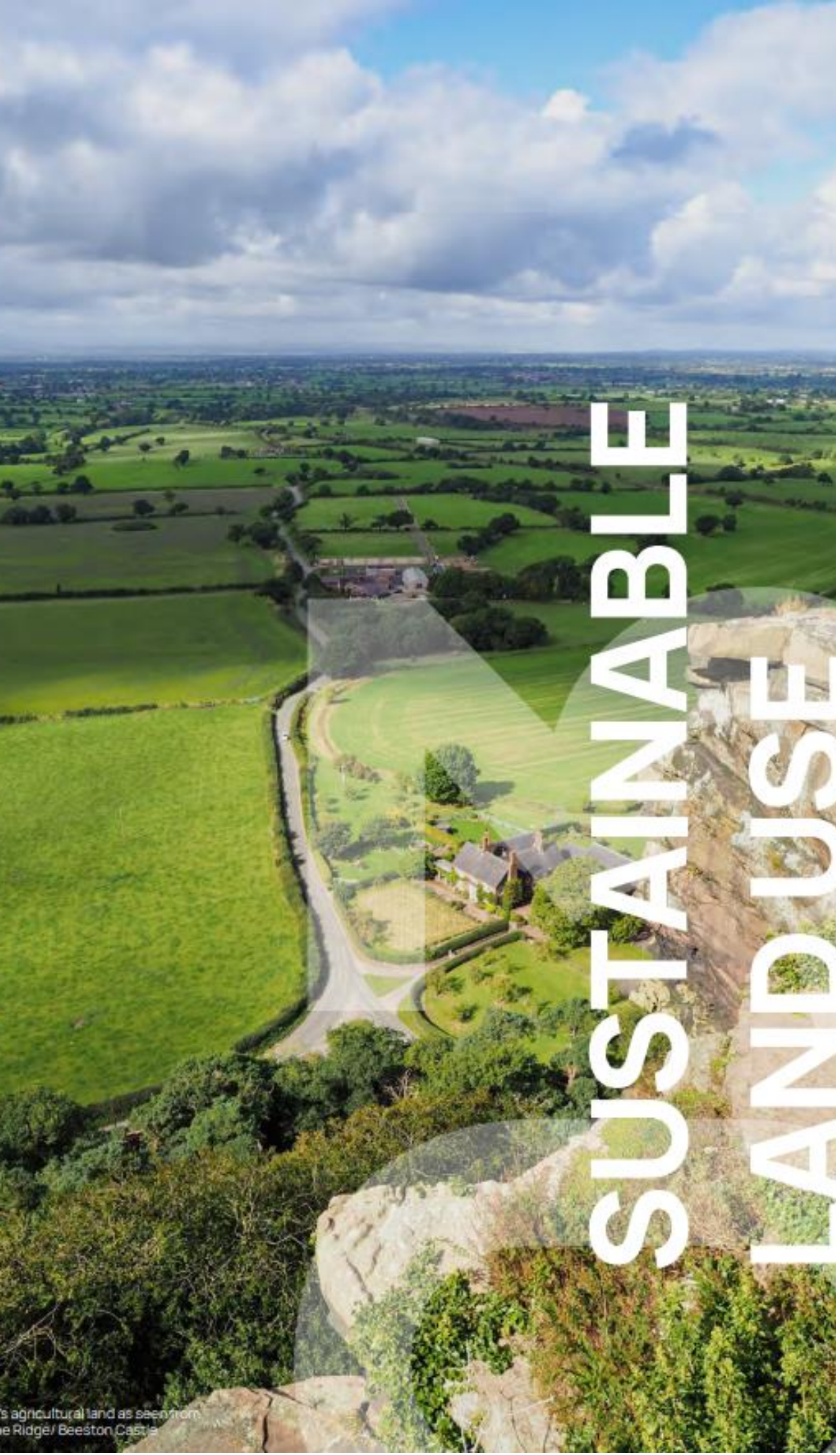


Sustainable Land Use

Annette McDonald

Managing Director Tatton Food Farming & Environment





Sustainable Land Use Vision

In response to the evidence we reviewed, and the consultation feedback, our overall ambition is to make current land use net zero carbon in the subregion and unlock the sustainable economic potential of the rural area. We propose this will be delivered through three priority activities:

- By realising the potential of the rural and land use sectors to generate sustainable economic growth and accelerate the move to regenerative agriculture; and to deliver our carbon zero ambition in an inclusive way.
- By reversing the decline of Cheshire’s natural environment and biodiversity and enhance climate resilience, connecting people and nature as part of our natural health service, improving access for all.
- By supporting producers, landowners and local authorities to increase the amount of accessible, fresh, low carbon, locally produced food available to people within the subregion including addressing food poverty.



Sustainable Land Use Recommendations

1. Ensure Cheshire and Warrington's food supply chain continues moving towards carbon zero. To achieve this the Commission is supporting the shift towards anaerobic digestion and regenerative agriculture, including establishing a network of demonstration farms and likeminded farmers to share best practice (including encouraging Council owned farms and rural colleges to join initially).
2. Encourage the subregion to increase its self-sufficiency and climate resilient food production through vertical farming. This could be taken forward on brownfield sites and link in with the industrial sector and innovation in agri-tech, and should engage with all relevant organisations e.g. growers, landowners, supermarkets etc.
3. Addressing the nature crisis (covering species, biodiversity, carbon sequestration and people's access to nature) by using a 'biodiversity net gain plus' approach on top of the Local Nature Recovery Strategy to be delivered at a subregional level through a refreshed Local Nature Partnership strategy. To adopt the ambition to go over and above statutory requirements.
4. Encourage local authorities to run a pilot looking at diet, health and behavioural change. This priority can be pegged to the National Food Strategy and Sustainable Local Food Place Award.
 - In addition, the Commission agree that it is important to prioritise work looking at the green skills that overlap all four of the above key priority projects. Communication, marketing, and the narrative needed for public buy-in will also be an important aspect for achieving the key priorities.



Net Zero

Cllr Sam Corcoran

Leader, Cheshire East Council

Joint Chair, Sustainable and Inclusive Growth
Commission





Net Zero Vision

In response to the evidence we reviewed, and the consultation feedback, our overall ambition is to support and develop carbon reduction projects across Cheshire and Warrington while creating employment in a way that generates opportunities for all. We propose this will be delivered through three priority activities:

Housing (and building) decarbonisation and retrofit – new and existing

Industrial decarbonisation – net zero industrial cluster

Circular economy – resource management, disposal, recycling, energy, waste



Net Zero Recommendations

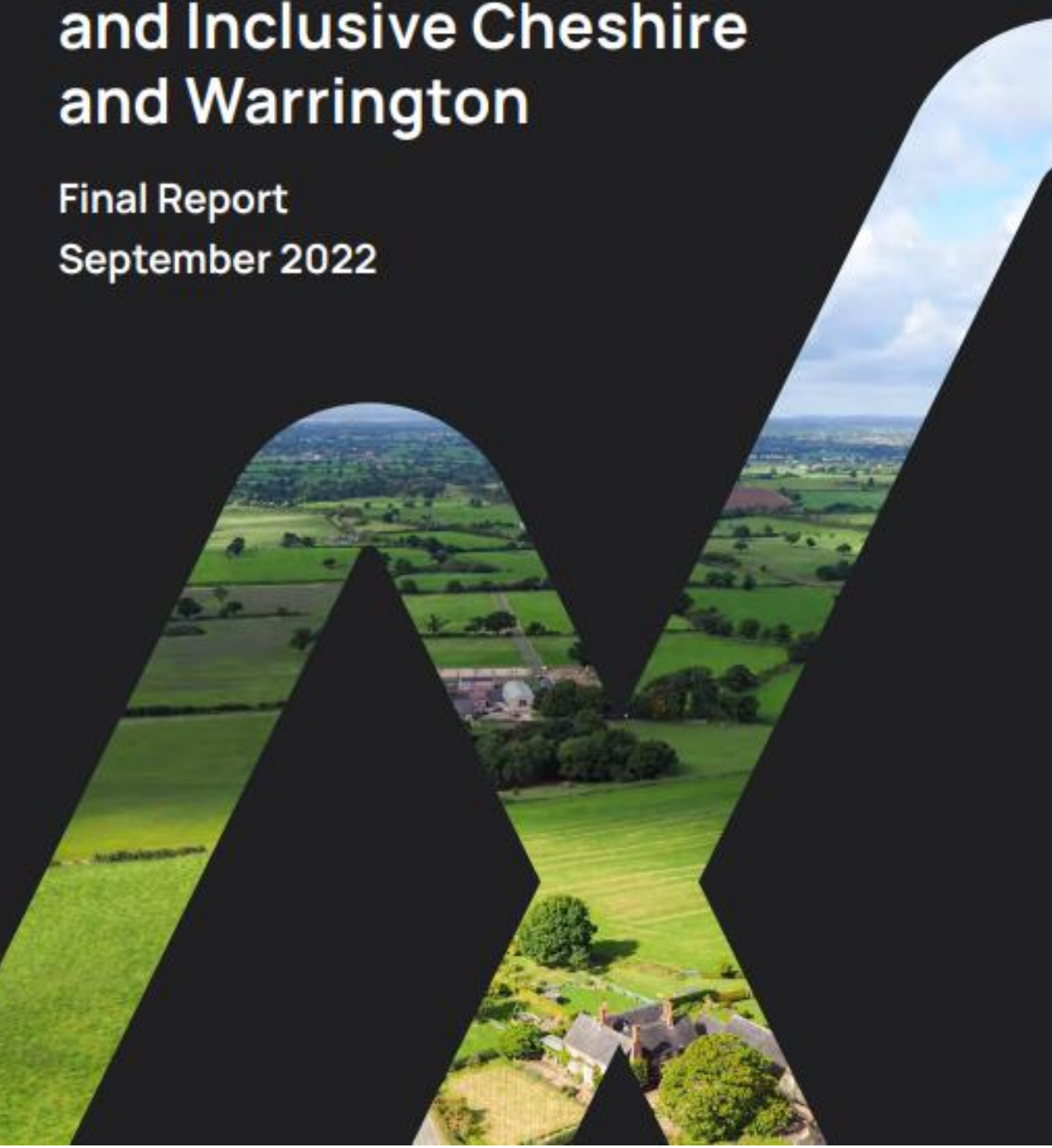
- Retrofitting insulation and clean energy to housing, particularly for disadvantaged households. Lobby government for consistent longer-term funding for housing retrofit schemes; complete a piece of work to understand the barriers to housing retrofit and produce a roadmap to increase delivery
- On green skills:
 - Work with industry and education providers to ensure that there are appropriate education and training programmes in place to support an industrial decarbonisation workforce
 - Work with the LEP to develop the skills needed for building retrofit and decarbonization across the social housing, private housing rental and commercial sectors
 - Include easy entry and progression routes to ensure people from all backgrounds can benefit.
- Building the UK's first net zero industrial cluster around the area's large hydrogen and net zero projects (e.g. HyNet and Cadent's Hydrogen Village), supporting industry to be successful by identifying/removing barriers and influencing government on support.
- Work with business, public sector and agriculture to speed up the transition to a circular economy (including the use of farm waste and slurry in anaerobic digestion).



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Q&A Panel



Professor Chantal Davies
Inclusive Economy



Robert Davis
Sustainable Transport



Annette McDonald
Sustainable Land Use



Cllr Sam Corcoran
Net Zero



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Final Report
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A Greener Future Made Possible by Finance

Lauren Pamma

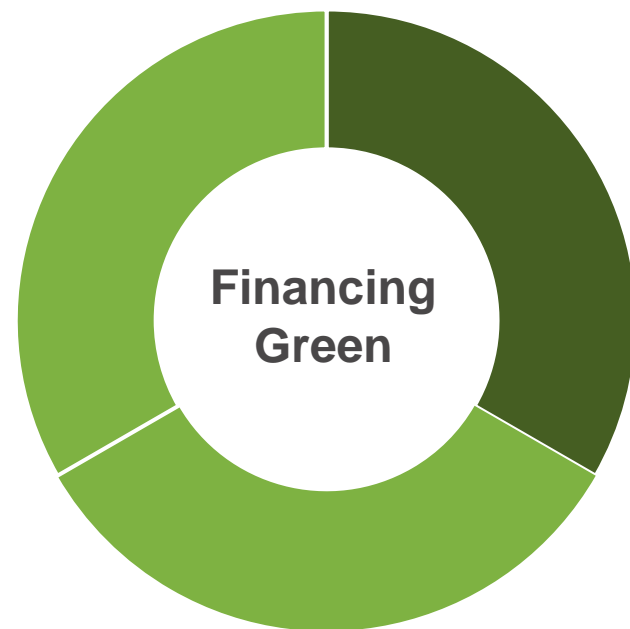
Programme Director, Green Finance Institute



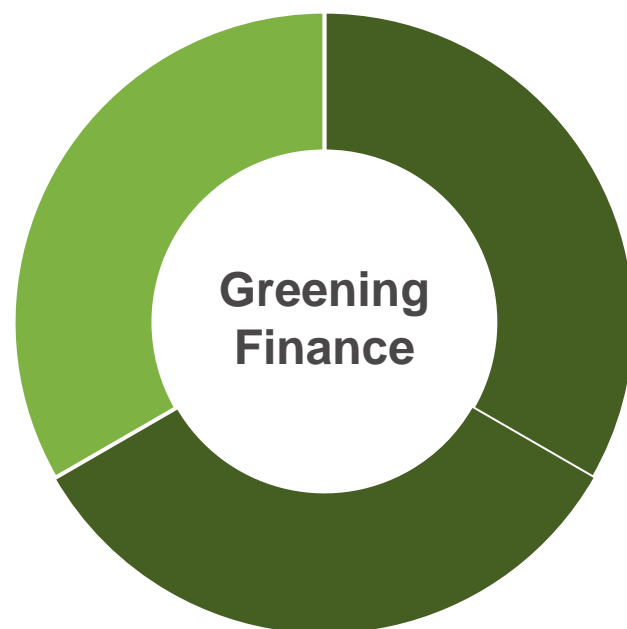
A Greener Future Made Possible by Finance

4 November 2022

Founded in 2019 to accelerate the deployment of finance towards a net zero and resilient economy, the Green Finance Institute is an independent, commercially focused organisation, seed funded by the UK Government and the City of London Corporation.



Mobilising public and private finance for clean and resilient growth



Supporting the greening of the financial system



Building green finance skills and capabilities

Our **vision**

A greener future made possible by finance.

Our **mission**

To accelerate the transition to a clean, resilient and environmentally sustainable economy by channelling capital at pace and scale towards real-economy outcomes that will create jobs and increase prosperity for all.

Coalition for the Decarbonisation of Road Transport (CDRT)

- CDRT convenes global experts to identify and unlock the barriers to investment into the low-carbon transport sector.

Coalition for the Energy Efficiency of Buildings (CEEB)

- CEEB, the Institute's flagship coalition develops the market for financing net-zero carbon and climate-resilient buildings.

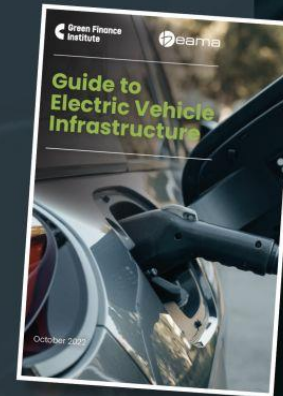
Nature

- To increase private investment in nature restoration, nature-based solutions and nature-positive outcomes in and for the UK.

As well as...

- UK Green Taxonomy Advisory Group (GTAG)
- Taskforce for Nature Related Financial Disclosures (TNFD)
- CEEB Europe
- Integrity Council for Voluntary Carbon Markets (ICVCM)
- Global Battery Alliance

Guide to Electric Vehicle Infrastructure



 charging
equipment

 EV chargepoints
and charging
stations

 finance
considerations

 market development
and innovations

 smart
charging

 product
standards

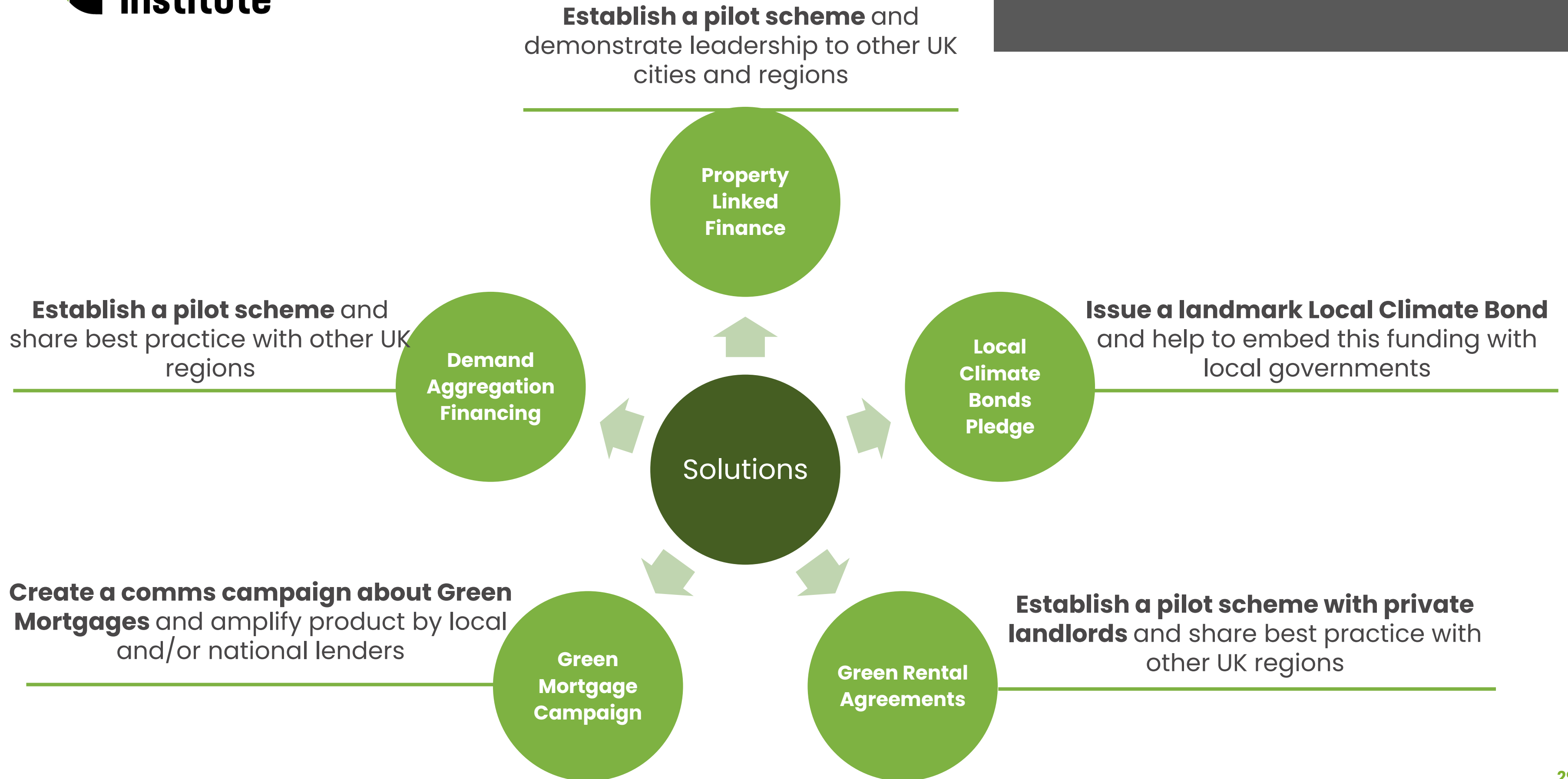
Focus on developing and piloting a small portfolio of solutions, designed to accelerate the roll out of EV Charging Infrastructure and uptake of EVs

EV Infrastructure Charging Guide

Utilisation-linked Loans

Local Climate Bonds

Public/Private Investment Facility





SIMPLE

Form of **Community Municipal Investment** where LA raises funds through **crowdfunding platform** directly from the public, investing **as little as £5**



LOWER COST

Designed to **price below respective PWLB¹** rate at time of issuance, and investors can decide to donate all or part of their **interest payments back to the Council**



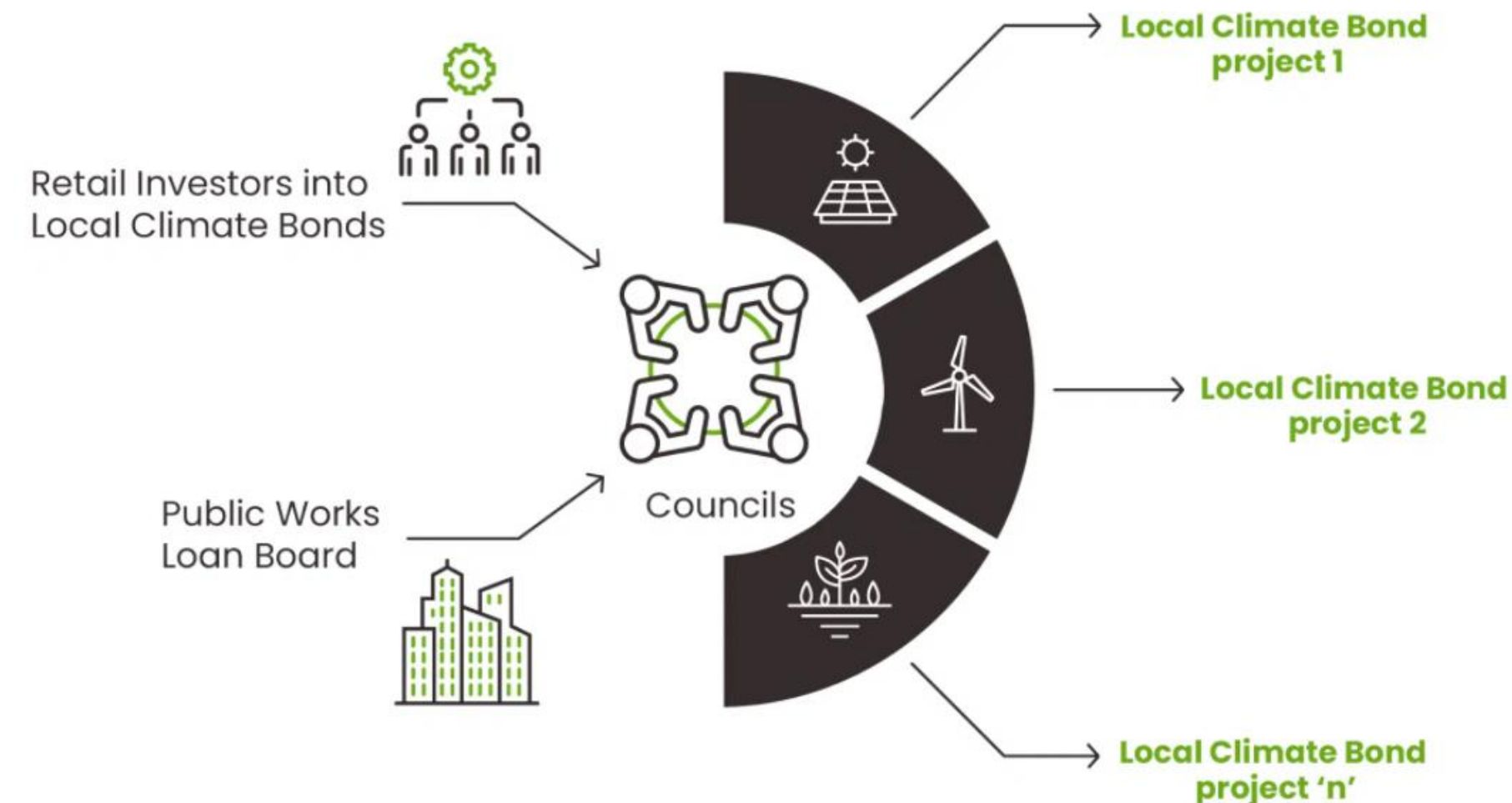
ATTRACTIVE

LAs can create **engagement with their local community** while diversifying their sources of funding, and investors are offered a **very low risk** (and tax effective²) investment



PROVEN

Six issuances so far in West Berkshire, **Warrington**, Islington, Camden, Cotswold and Telford & Wrekin and **more expected**; investments in solar, EV infra, tree planting, wildlife and more.

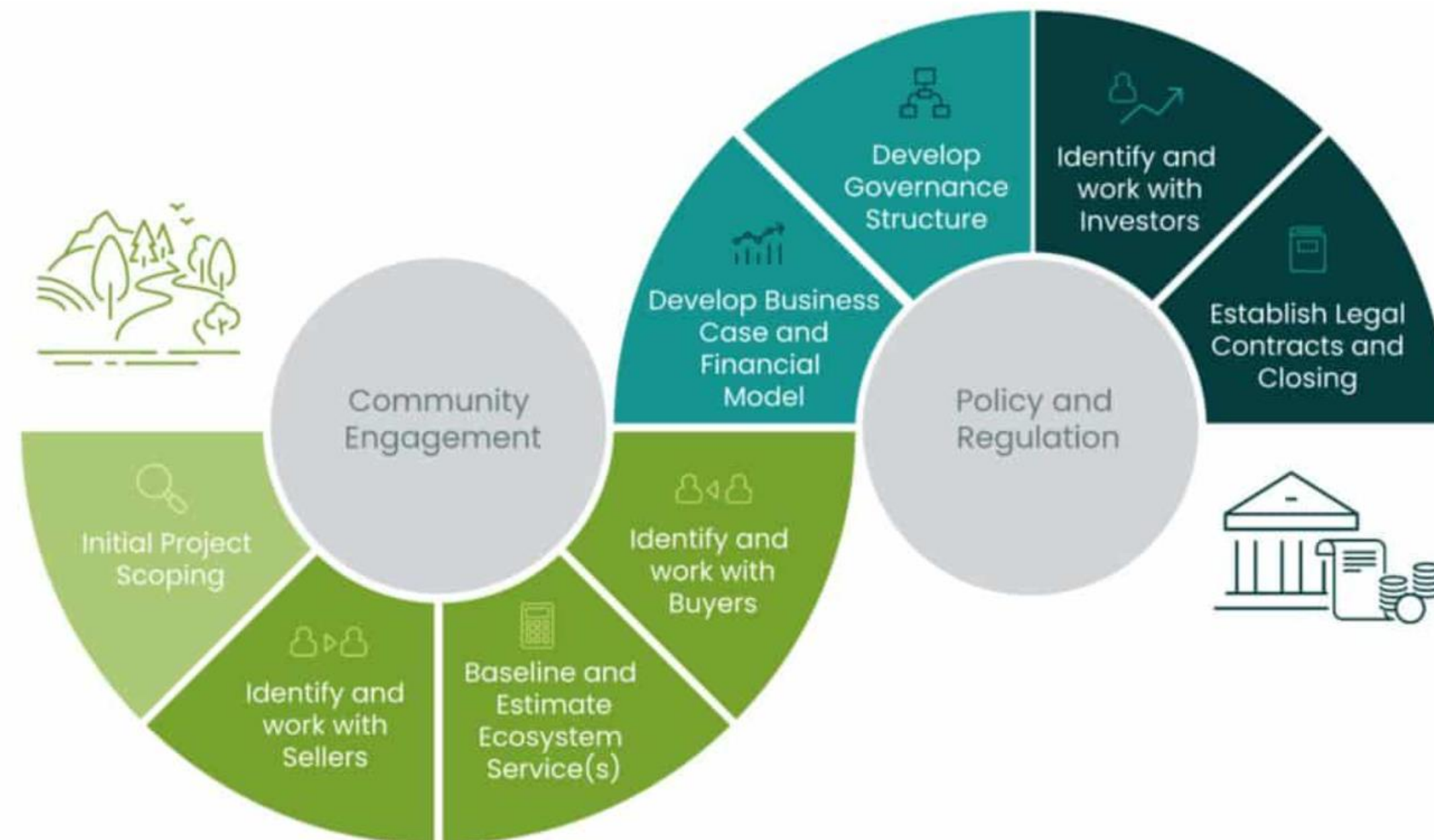


(1) Public Works Loan Board

(2) When the investment is eligible for Innovative Financial ISA (IFISA)³⁰

The Green Finance Institute is developing an Investment Readiness Project Toolkit based on the following **Steps to Investment Readiness** that will be piloted in November for launch in December 2022.

[GFI Hive](#) is a knowledge hub on private investment in nature to increase shared learning, best practices and investment appetite.





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How to Decarbonise Business

Mark Sprawson
Director, EA Technology



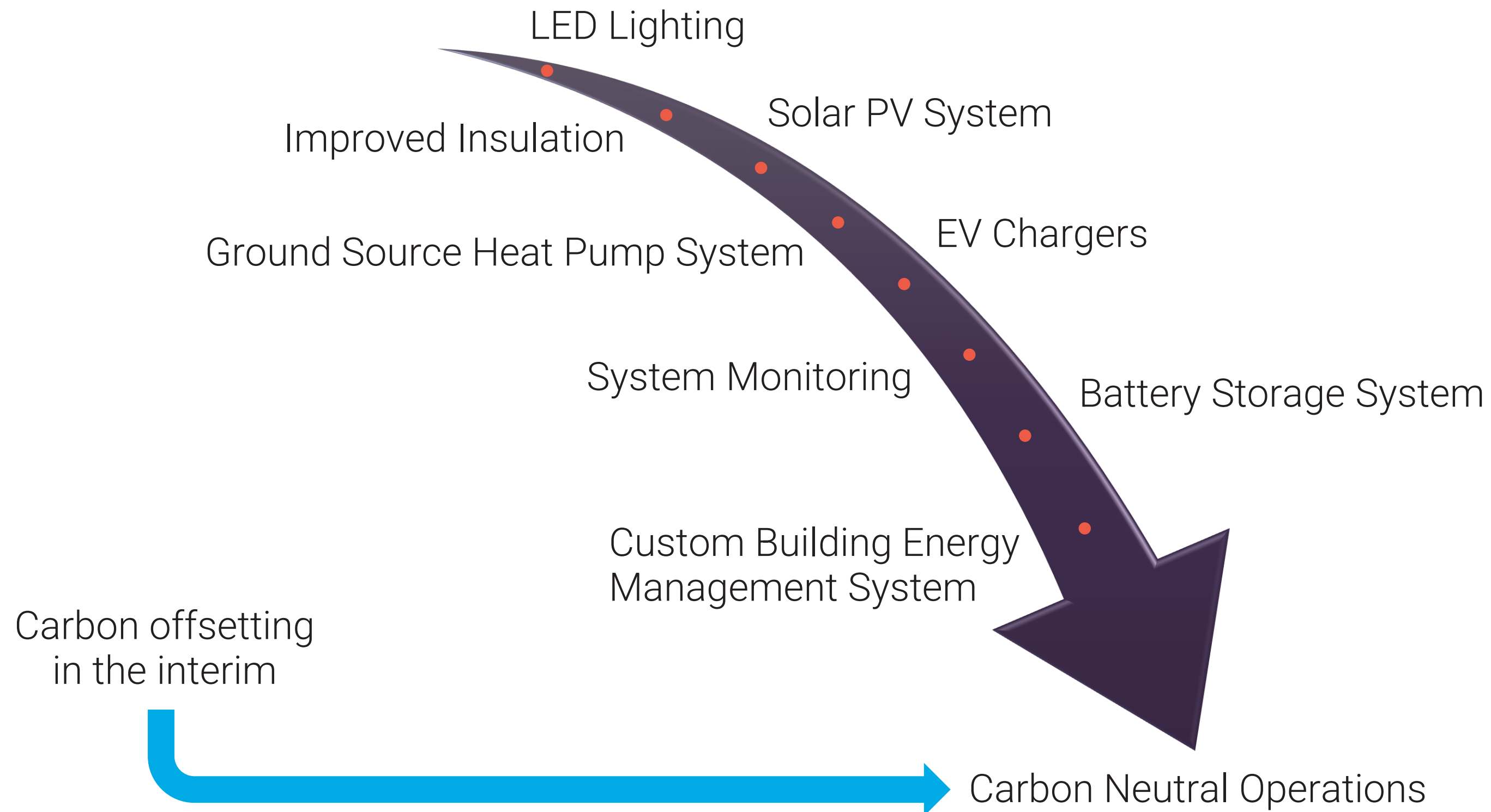
Decarbonisation of EA Technology's Global HQ

Mark Sprawson

4th November 2022



The plan



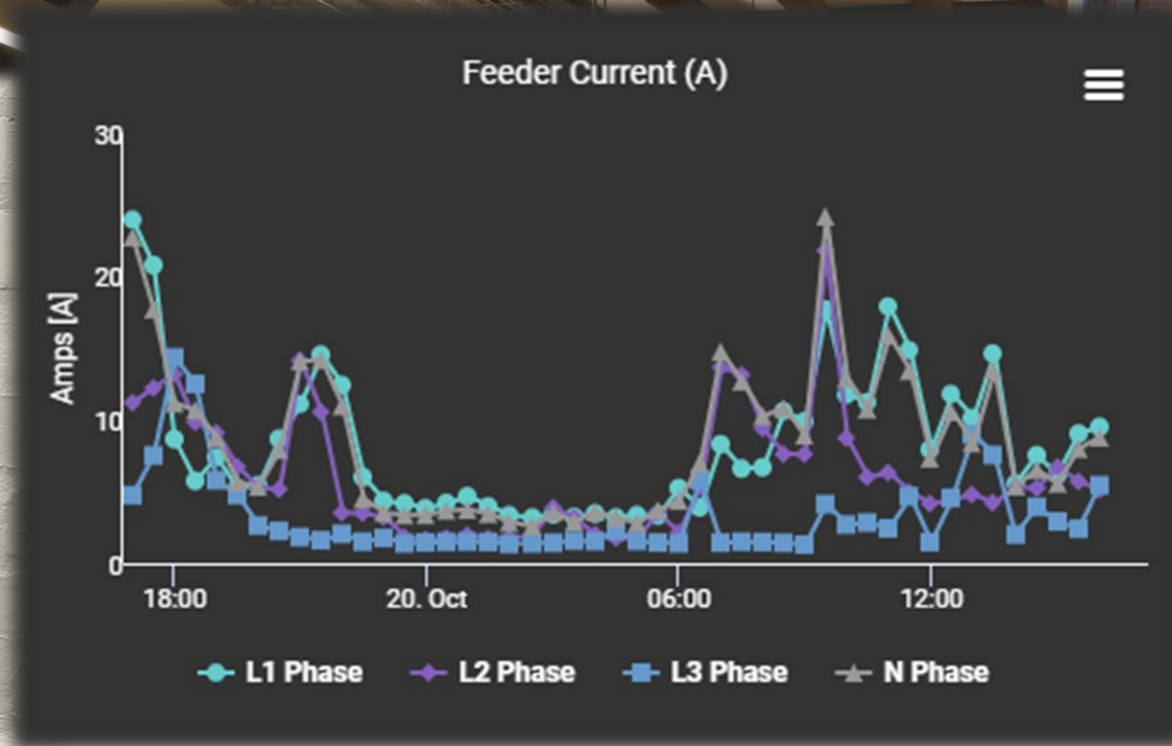
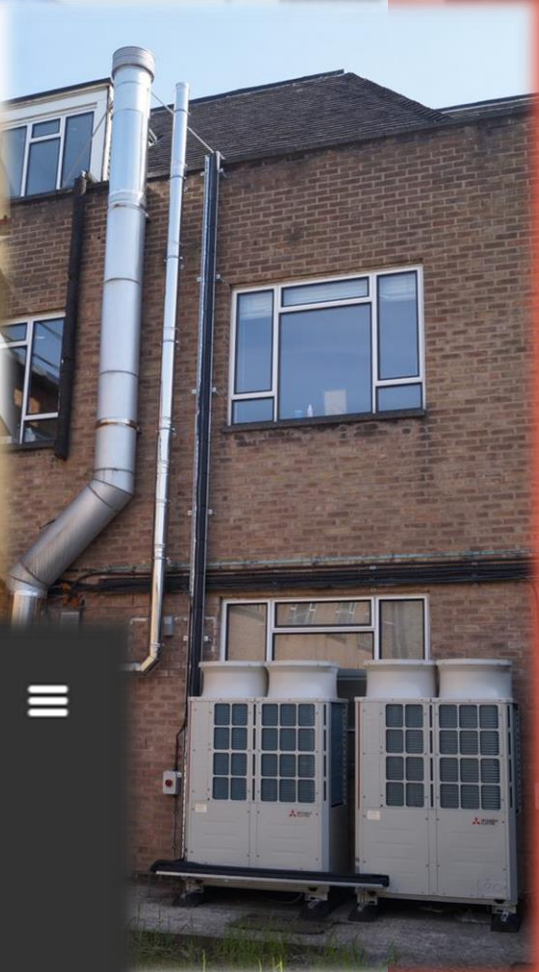
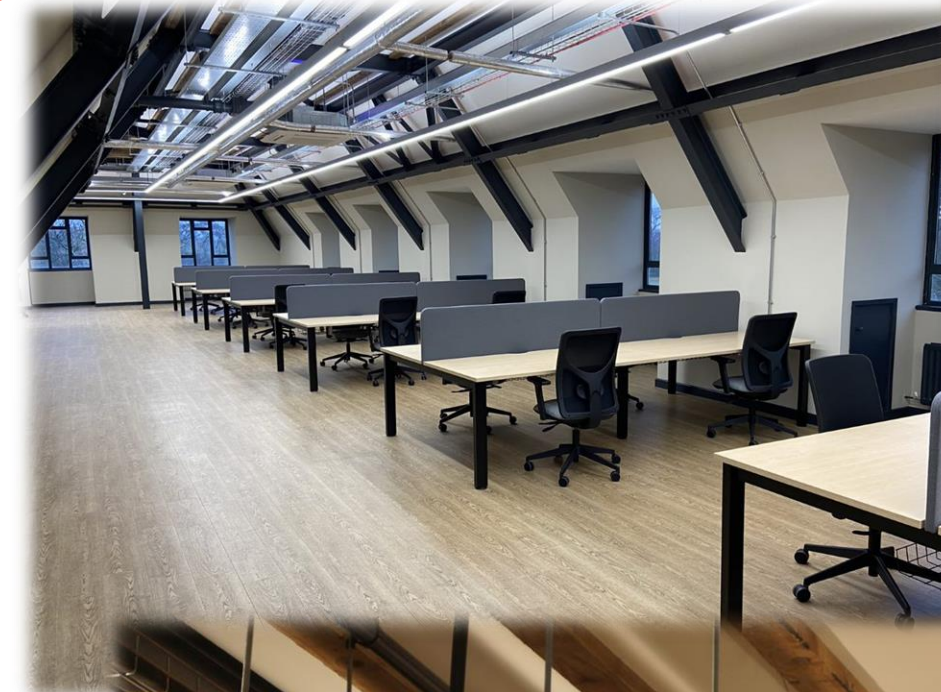
What we implemented...outdoors



- Solar PV System
 - 50 kW System
- EV Chargers
 - 10x 22kW Chargers
- Battery Storage System
 - 100kW
 - 372 kWh

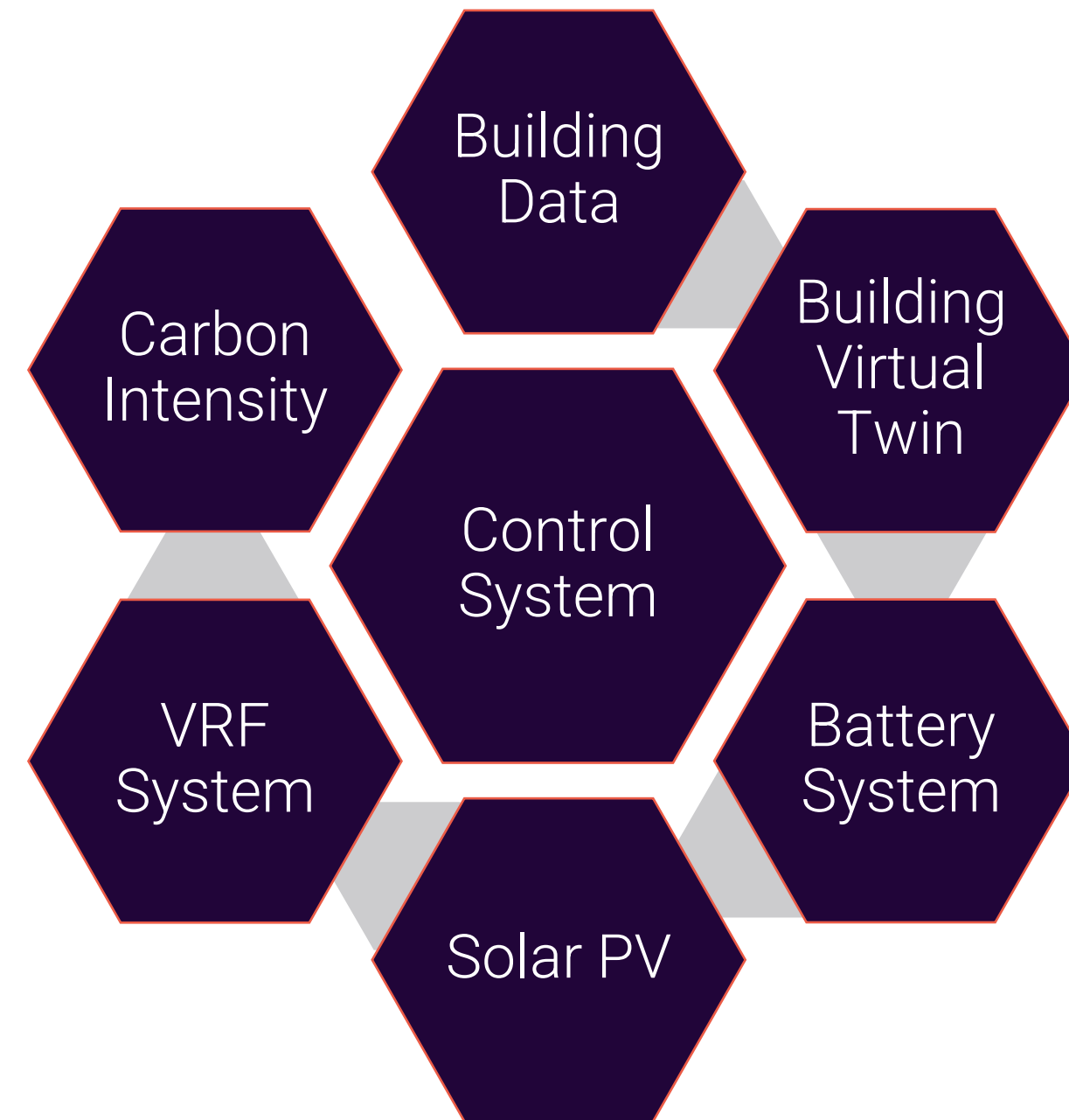
What we implemented...indoors

- LED Lighting
 - 1,160 lights in total
 - 790 just in Unit 4
- Renovation & improved insulation for the top floor
- VRF System
 - Comfortable temperature management throughout the year
 - More efficient than the 'wet central heating'
- System Monitoring
- Smart Central Heating System

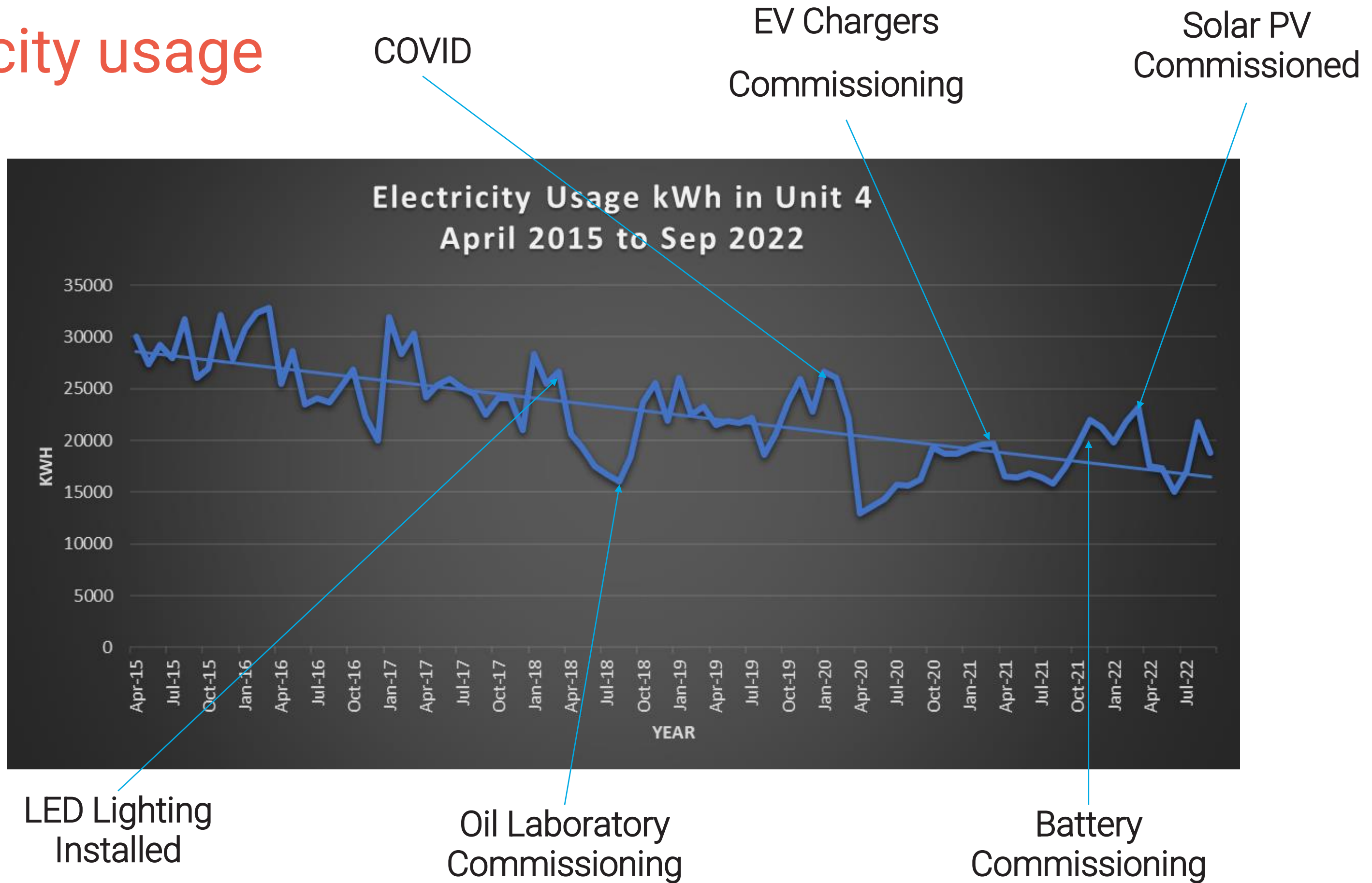


What we're currently implementing

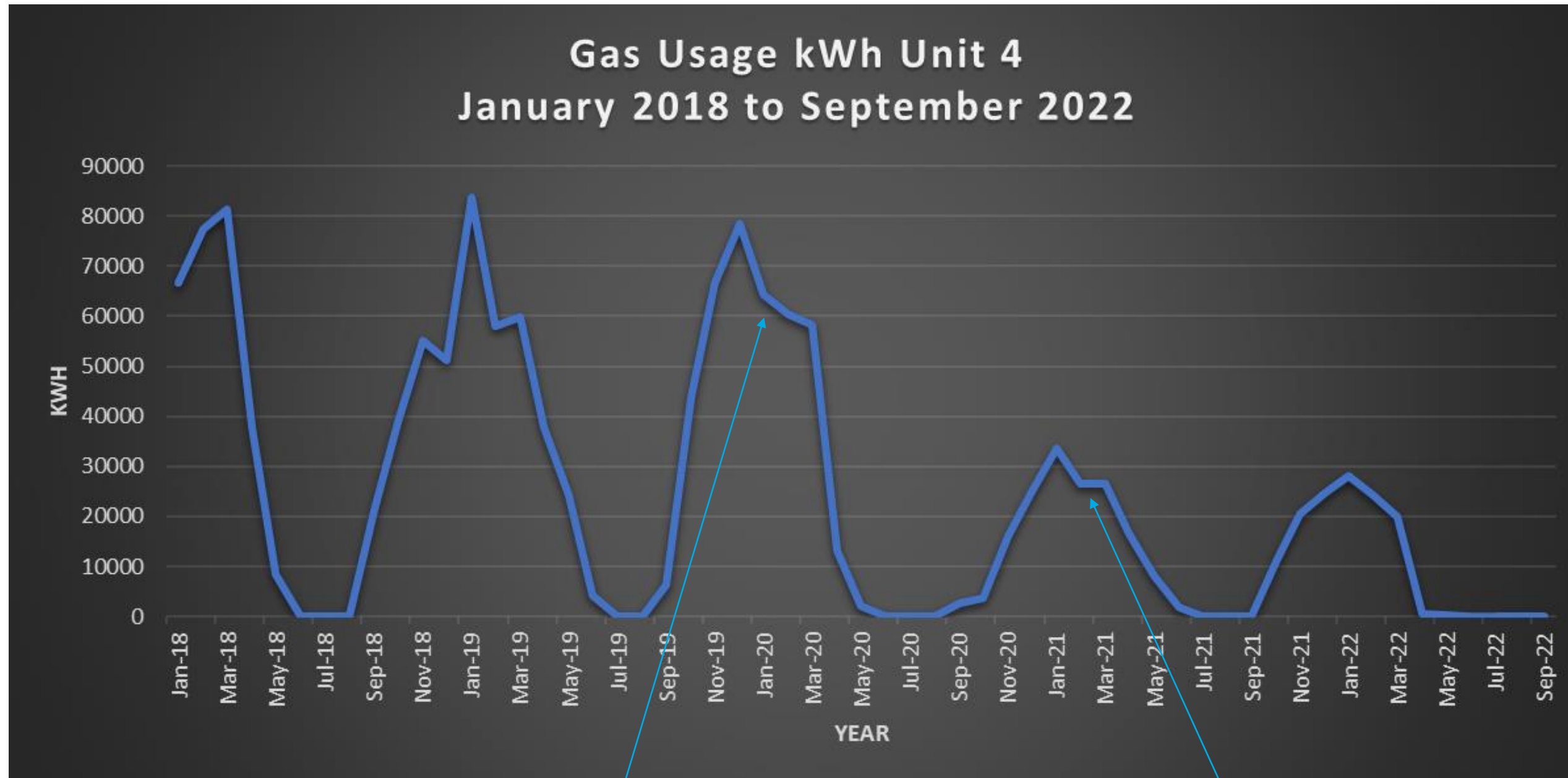
- Building Energy Management System
 - Under development.
 - The system will:
 - Control the battery, VRF system and EV chargers
 - Using:
 - Historical usage data to forecast energy requirements
 - Forecast carbon intensity of national grid energy to determine when best to import
 - Weather forecasts
 - To minimise energy import during the day and:
 - Control the battery charge and discharge
 - Manage EV charging
 - Balance top floor energy requirements



Electricity usage



Gas usage



COVID

VRF
Commissioned

Carbon and financial savings

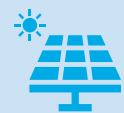


LED Lighting

~10 T CO₂e

£6k/yr saving)

5 Year ROI



Solar PV

~12.5 T CO₂e

~£8k/yr saving

6 Year ROI



Battery Storage System

1 T CO₂e pa

>£6k/yr saving

<20 Year ROI



Renovations / VRF

6.5 T CO₂e pa

£1k/yr saving



EV Charging

7.3 T CO₂e pa

Thank you



Document title

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Final Report
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Meet the Experts



Lauren Pamma
Green Finance Institute



Mark Sprawson
EA Technology



Kas Mohammed
Schneider Electric



George Ablett
Cheshire West and
Chester Council

Journey to Net Zero Tour





Cheshire and Warrington
**Sustainable and Inclusive
Growth Commission**

Thank you!

You can access the Final Report, Report Summary and case studies
via the Commission webpage.

We will send a link after the session.



“Even society as a whole, a nation, or all existing societies put together, are not owners of the Earth. They are merely its occupants, its users; and like good caretakers, they must hand it down improved to subsequent generations.”