

GW4



GW4 living labs: Scope 3 and the road to Net Zero

WORKSHOP REPORT

28 February 2023 - 10:00-15:00

Delta Hotels Bristol City Centre

Summary

The GW4 Living Labs: Scope 3 and the road to Net Zero workshop, held in Bristol on 28 February 2023, brought together 75 people from the GW4 universities (universities of Bath, Bristol, Cardiff and Exeter), research funders, local authorities, industry and community organisations from across the Southwest of England and South Wales. The aim was to discuss challenges and create proposals for decarbonising our supply chains and travel (Scope 3 emissions) as part of delivering a shared vision of a Net Zero region.

The event was structured around three facilitated sessions to allow participants to engage in meaningful conversation. The event was the culmination of a 6-month project, including two previous GW4 on-line university workshops held to agree key features of living labs projects, clarify the building blocks of and barriers to success, and identify areas for collaboration.

Carla Denyer, Bristol City Councillor and co-leader of the Green Party of England and Wales gave the keynote address. Professor Pete Walker, Climate Action Chair at the University of Bath, chaired the event, with closing remarks from Dr Joanna Jenkinson MBE, Director of GW4.

Tackling climate change requires action at local and regional levels. The event was a key activity for GW4 and the GW4 Climate Alliance, as part of their work to support a sustainable and just transition to Net Zero in Southwest England and South Wales through living labs. This workshop report sets out the participants' shared vision, the proposed living labs and project ideas to help deliver the vision.

The image features a large graphic at the bottom of the page. On the left, the letters 'GW4' are written in a bold, white, sans-serif font against a dark blue background. To the right of the text is a stylized map of the GW4 region, which includes parts of the Southwest of England and South Wales. The landmasses are colored in a bright yellow, while the surrounding water bodies are dark blue. The map is set against a larger dark blue rectangular background that spans the width of the page.

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Our Shared Vision

Our vision for the future is one where people in the Southwest of England and South Wales share a closer sense of community with each other and with nature. We measure prosperity and progress differently. We prioritise health and wellbeing, time with family and community, and meaningful work. In making the transition to a circular economy, people enjoy a healthier work-life balance. With active travel as the standard and few cars on the road, it is safe for children to play in the street. Natural ecosystems and wildlife are valued and enjoyed in their own right, with existing natural areas protected and new ones created – be it as community gardens, outdoor working spaces, or nature reserves. We consider the needs of present and future generations as we build communities and infrastructures that are resilient to the impacts of climate change.



1. Introduction

The GW4 universities, together with local authorities, public bodies and private organisations in Southwest England and South Wales, have set themselves ambitious Net Zero targets. In July 2022, the GW4 Alliance funded the GW4 “Living Labs for Net Zero” network to strengthen this process. Activities have included a review of living labs and support for student-led projects. A key aim was to hold a workshop with external stakeholders to collaborate on solutions to Scope 3 emissions, focusing on procurement and travel.

The workshop was held on 28 February 2023. This report briefly summarises the shared vision and key proposals for Living Labs from the event. The full shared vision statement is available here:

[GW4 Living Labs - vision for a Net Zero society.](#)

The workshop was structured around three facilitated sessions:

- Session 1: Shared vision of a net zero value chain in our region. Designed to provoke discussion and elicit responses from participants in order to develop a shared vision for a net zero world for our region.
- Session 2: Roadmaps toward net zero in Scope 3. Discussion towards a roadmap for net zero in Scope 3 emissions, including: Supplier engagement; Just transitions; Carbon accounting; Circular economy; Education for sustainable development; Data & digitalisation; Skills.
- Session 3: “Change doesn’t happen alone”. Discuss proposals for living labs: i) How are we already working together in positive ways? ii) What is happening already, that we could tap into? iii) What can I contribute to the process? iv) What ideas do we have for living lab projects?

2. Living Labs

2.1 What is a living lab?

There are a variety of living lab models across the world. At their heart, living labs are about solving real-life problems often based around issues of sustainability. What makes them unique is that they involve all relevant stakeholders in defining the problem, creating and testing solutions, and learning from that process to tackle new problems. Crucially, they involve end users in the development, research and evaluation. The term “living lab” refers to the approach to experimentation and innovation as well as the physical space in which it operates.

The most common types of living labs are “campus-based” living labs and “urban” living labs. Early living labs were often based around university campus operations, with the university as a ‘microcosm’ of society. Partners in a campus-based living lab may include a combination of academic staff, students, professional staff, campus operations and external stakeholders. More recently, living labs have become more focused on tackling sustainability challenges in cities, hence the name “urban” living lab. However, the “urban” living lab model equally applies to local, regional, rural or coastal living

labs. A key element of urban living labs is that they involve all relevant stakeholders; local authorities, companies, community organisations, universities, and/or other partners. Successful living labs tend to have strong governance, which involves all stakeholders, including end users.

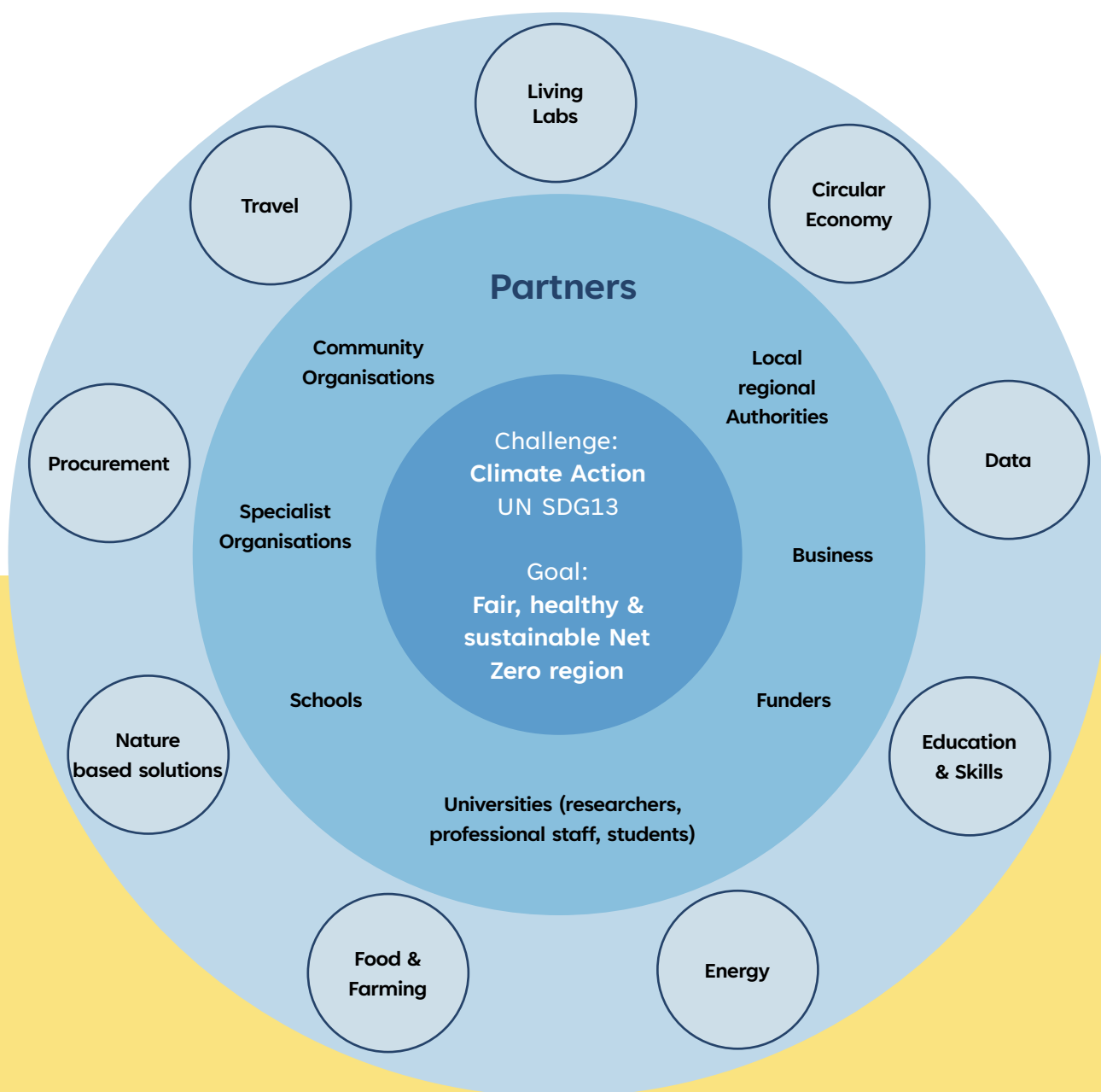
Living labs have clearly defined stages: exploration, experimentation and evaluation. They work iteratively – the aim is to develop and test solutions, and learn from that process to develop and test again. Instead of ‘experts’ defining the problem and solutions, living labs involve end users in the development, testing and learning, from the beginning of the design process until the end.

To clarify focus and objectives, living labs can be designed around one or more [UN Sustainable Development Goals](#) (SDGs). Once the goal is defined, it is easier to identify the associated projects and stakeholders. Organising living labs in this way can help link projects, allows for interdisciplinary collaboration, and acts as a framework for communication for external stakeholders and funders.



2.2 A proposed model for GW4 Living Labs

The GW4 Living Labs model is based on best practice from UK and European living labs. It uses a mission-oriented research model¹, addressing UN SDG 13 on Climate Action. The separate living labs fit within the overarching mission. The projects that sit below each living lab can be campus-based or local or regional, i.e., using the “urban” living lab model. They all contribute to find, trial, evaluate and share solutions. The proposed living labs have emerged from two virtual GW4 workshops in 2022, the living labs [literature review](#), and the in-person GW4 Living Labs workshop on 28 February 2023.



¹ See for example Greater Manchester Combined Authority (GMCA) and UCL Institute for Innovation and Public Purpose collaboration on [A Mission Oriented Approach to Clean Growth](#).

3. Living Labs and project proposals

During the 28 February workshop discussions, proposals for living lab based projects - addressing key aspects of the broader transition to a net zero economy - were developed. These ideas are summarised below.

3.1 Living Lab: Circular Economy

A circular economic system seeks to benefit business, the environment and society. In contrast to a traditional linear economy based on manufacture, use and dispose, circular economic solutions seek to eliminate waste and pollution, keep materials and products in circulation, and regenerate nature²

3.1.1 The goal

The transition to a circular economy must be a just transition, taking a systemic approach to development that benefits society, the environment and business. It must create a job market where people are engaged in their work, and jobs have meaning and are valued rather than focused purely on production and consumption. The net zero transition will see a shift towards sustainable green growth, as well as a change of priorities in terms of how we measure prosperity and progress. We must value protecting and enhancing biodiversity, and equality with consideration for future generations.



Existing Living Lab style activity

[The Bioregion of South Devon:](#) learning centre and action learning lab on the River Dart

3.1.2 Existing work in the GW4 region

Where a circular economy is dominant, there is an emphasis on sustainable options as the default, for example in food and travel, resulting in an improvement in wellbeing and the environment. Participants identified existing initiatives that could be replicated or brought into the Living Lab on Circular Economy:

- [Share Bristol](#) Library of Things
- [Benthyg Cymru](#) supporting network of Library of Things communities across Wales
- Cardiff University [RemakerSpace](#) circular economy centre
- Universities of Bath, Exeter and Cardiff charge for non-reusable cups at campus cafes
- [Bristol Waste Centre](#) supporting ways to repair and reuse goods, including repair cafes
- [Exeter Community Food Fridge](#)
- University of Bristol's Source cafes taking part in [Too Good To Go](#) scheme where leftover food items are sold at the end of the day at low cost
- [Olio](#) and [Nextdoor](#) apps, which are national but have local and regional takeup
- University of Exeter is part of [Warp-It](#) lab and office equipment sharing scheme
- The [Devon Doughnut](#) – using Doughnut Economics in Devon
- [Icepack take-back scheme](#) at University of Bristol, started at Medical School – working with suppliers to return and reuse goods
- [ExCASES](#) collaboration between University of Exeter and National Trust on biodiversity renewal challenges

² www.ellenmacarthurfoundation.org

3.1.3 Proposed Living Lab projects

Based on the day's discussions, participants proposed the following initial projects for the Living Lab on Circular Economy:

- Regional “Doughnut”: using Doughnut Economics for decision-making at the regional level
- Nature-based systems solutions³: using university campuses as testbeds for solutions that support biodiversity and climate resilience
- New measures of prosperity: developing alternative measures to GDP
- Regenerative networks: building climate-resilient communities

3.2 Living Lab: Data & Digital

Data and digital technologies are essential tools in the transition to Net Zero. The proposed Living Lab on Data & Digital is slightly different to the others. There is only one proposed project, which projects under the other Living Labs feed into. The aim of this project is to make sure that the data and digital tools necessary to drive the green transition are available and accessible to policymakers and other decision makers.

3.2.1 Project idea

Net Zero data observatory for the region, for use by local authorities and others (e.g. based on Midlands Engine Observatory). The data observatory would house key Net Zero data for the region, and help decision makers understand and use the information. Other Living Labs' projects that would feed into the observatory include:

- Measure for emissions, via ONS, with map for existing sustainable solutions (see Procurement Living Lab)
- Regional “Doughnut”, using data from the data observatory to support decision-making (see Circular Economy Living Lab)
- Scope 3 data sharing hub, with standardised data collection and questions (see Procurement Living Lab)
- Creating connected and integrated transport hubs (see Travel Living Lab)

3.3 Living Lab: Education & Skills

Education and the skills needed to support the green transition are fundamental to behaviour, values and policy change. We urgently need education and skills, including upskilling and mid-career training, for the green transition. These needs range from an understanding of circular economies or culture change to carbon accounting or working with renewable energy infrastructures.

3.3.1 The goal

People feel inspired to build a better future. Children engage with environmental issues at school, for instance through themed days and forest schools, so they grow up environmentally aware, prepared to question established values, and comfortable addressing sustainability concepts. They know why, how and what is needed for change, leading to a sense of individual empowerment. Students take this learning with them as they enter work and/or higher education, changing corporate, governmental and societal practices. For those who have already left school, engaging them in conversations about how change can happen, with concrete examples of what has been achieved so far, helps move from fear, disengagement and resistance, to action and hope.



Existing Living Lab style activity

University of Bath [VIP programme](#) of Vertically Integrated Projects

³ an example of nature-based solutions is the reintroduction of beavers for better flood management in Devon



When we have reached our goal of a net zero region, what will it be like? (energy, transport, buildings, etc.)

Doing

- 100% renewable
- 100% electric
- 100% green buildings
- 100% green transport
- 100% green industry
- 100% green services
- 100% green education
- 100% green health
- 100% green leisure
- 100% green culture
- 100% green community

Thinking

- How do we get there?
- What are the barriers?
- How do we overcome them?
- What are the opportunities?
- How do we seize them?
- What are the risks?
- How do we manage them?
- What are the lessons learned?
- How do we apply them?
- What are the next steps?
- How do we implement them?

Taking

- What are the key actions?
- Who is responsible?
- What are the timelines?
- How do we monitor progress?
- What are the reporting mechanisms?
- How do we communicate?
- What are the success stories?
- How do we celebrate them?
- What are the challenges?
- How do we address them?
- What are the future prospects?
- How do we prepare for them?

Conclusion

- Net zero is a challenge, but it is achievable.
- It requires a systemic change.
- It requires a collective effort.
- It requires a long-term vision.
- It requires a strong leadership.
- It requires a transparent process.
- It requires a continuous improvement.
- It requires a resilient mindset.
- It requires a positive attitude.
- It requires a strong belief in the future.
- It requires a strong belief in ourselves.
- It requires a strong belief in our community.
- It requires a strong belief in our planet.
- It requires a strong belief in our future.

3.3.2 Existing work in the GW4 region

Participants identified existing initiatives that could be replicated or brought into the Living Lab on Education & Skills:

- [Climate Literacy in North Somerset Council](#)
- [SPARKS](#) centre in Bristol
- University of Bath Climate Action Framework - working with the city of Bath, taking a whole-institution approach with education, research, campus and partnerships on climate action
- [ICE Time is Running Out exhibition](#)
- [Climate Change Education Research Network](#) working with teachers to develop the climate teaching resources they need

3.3.3 Project Ideas

Based on the day's discussions, participants proposed the following initial projects for the Living Lab on Education & Skills:

- Open collection of resources for education and skills building across the region, such as guidance in Scope 1,2 & 3 emissions (to be used in training and to promote behaviour change in SMEs, communities)
- Formal and informal skills development to include green skills (e.g. West of England Combined Authority skills lab), community and business carbon literacy training, upskilling and mid-career training in collaboration with professional bodies
- Accreditation scheme, such as micro credentials or a skills passport, for 'green' skills
- Outreach in schools, such as through the [Climate Change Education Research Network](#)

3.4 Living Lab: Energy

While energy falls under Scope 2 rather than Scope 3 emissions, workshop participants felt it was important to include given the interconnections with transport, community engagement, behaviour change, and a just transition to Net Zero.

3.4.1 The goal

Energy firms engage with customers' direct needs and support them in making informed energy choices. The energy transformation includes practical energy use, with wind farms, electric vehicles, and solar panels, heat pumps and insulation for homes.

3.4.2 Existing work in the GW4 region

Participants identified existing initiatives that could be replicated or brought into the Living Lab on Energy:

- Exeter City Council [retrofitting all council-owned housing stock](#)
- [SuSy.House](#) 'digital twins' platform to analyse houses or neighbourhoods, enabling homeowners to transition their homes to emit zero carbon

3.4.3 Project Ideas

Based on the day's discussions, participants proposed the following initial projects for the Energy Living Lab:

- Retrofit all social housing stock
- Create a neighbourhood of 'social housing' dwellings to study their daily energy behaviour as a group and create bespoke projects to improve efficiency. Contact SuSy.house.
- Support engagement between energy firms and communities to determine needs
- Place hydrogen research in a whole systems approach (e.g. public transport, electric power, homes, better public understanding, behaviour change)

3.5 Living Lab: Food & Farming

Sourcing locally produced food can reduce energy and CO2 emissions, as well as boosting local economies and livelihoods. It brings with it food security, health and wellbeing, access to food, and local food supply chains.

3.5.1 The goal

We understand and work with our bioregional food systems. Agriculture is more efficient and supports biodiversity. Communities have access to more locally grown foods and local allotments. We mostly eat seasonal and vegetarian foods, and there is a higher demand for plant-based options.



Existing Living Lab style activity

Devon bioregional [Food Shed](#) project mapping local and regional food systems

3.5.2 Existing work in the GW4 region

- [Green Future Associates](#) – supporting communities to upscale nature friendly urban farming and food growing and supporting regenerative agroecology
- The Heart of the [South West LEP South West Environmental Living Lab](#), enabling the trial and demonstration of sustainable agricultural and environmental technology
- The WRAP [Courtauld Commitment 2030](#) – Reducing food waste, cutting carbon and protecting critical water resources

3.5.3 Project ideas

- Establish a living lab around the transition to a bioregional food economy. Links with Living Labs on Nature & Environment and Circular Economy.
- Determine what marketing techniques are most effective for influencing food choices

3.6 Living Lab: Nature-Based Solutions and the Environment

In order to achieve our shared vision for a Net Zero region, we need to change our relationship with nature and the environment. The importance of access to green and blue spaces for human health and wellbeing is well known, and needs to be prioritised in policy and decision making.

3.6.1 The goal

Access for all groups to natural areas rich in biodiversity, such as community gardens, outside working spaces, nature reserves and national parks. People feel a stronger connection with nature and wildlife.

Protecting ecosystems means that landscapes are more resilient to the impacts of climate change.



Existing Living Lab style activity

Heart of the South West LEP [South West Environmental Living Lab](#) - trialling sustainable agricultural and environmental technology

3.6.2 Existing work in the GW4 region

Participants identified existing initiatives that could be replicated or brought into the Living Lab on Nature-Based Solutions and the Environment:

- [Pharmabees](#): Cardiff University, city of Cardiff and schools collaborating to create a bee friendly city while researching how pollinators can help fight 'superbugs'
- [Grange Pavilion](#): green community space collaboration between Cardiff's Grangetown community and Cardiff University

3.6.3 Project ideas

Based on the day's discussions, participants proposed the following initial projects for this Living Lab:

- Valuing nature & the environment in their own right
- Tree planting schemes in school (e.g. [Cardiff University project](#), or [Woodland Trust](#))
- Creation of community gardens
- Demonstrating links between biodiverse environments and human health & wellbeing
- Showcase of councils' climate and ecological emergency projects and community-led solutions, as an opportunity to learn from each other

3.7 Living Lab: Procurement

The consumption of goods and services is typically the most significant proportion of total carbon emissions from universities and other large organisations.

3.7.1 The goal

Supply chain engagement starts early, with supply chain managers embedded in larger procurement teams to engage with and support companies as needed, including SMEs. Supply chain alignment is seen as one journey and procurement teams collaborate across GW4 region to work with suppliers, giving them the tools for measuring and reporting their carbon in supply chain. We work together with aligned targets and unified supply chain reporting.

To achieve this, there is consistency on what and how data are collected, which is made available on an open platform. As part of the collaborative process, staff in all areas of the value chain undertake the same training and complete the same questionnaire to ensure a shared understanding and avoid duplication. The result is that carbon accounting is meaningful, transparent and done by all suppliers. Larger suppliers that do not engage or improve on sustainability measures do not have contracts renewed. In areas we are unable to

decarbonise, we are transparent about what we have offset and how. Where we need to work beyond the local and regional scales, we look for ways to engage collectively at the national level.

3.7.2 Existing work in the GW4 region

Participants identified existing initiatives that could be replicated or brought into the Living Lab on Procurement:

- [Green Futures Network](#) (GFN) Scope 3 Community of Practice: shared learning on challenges, opportunities and potential for collaborative outputs
- [Bristol Green Capital Partnership](#) developing template questionnaires for suppliers around climate – share knowledge and best practice and support consistency. Contact [Claire Jacob](#), BGCP Communications and Partnerships Manager
- University of Exeter workshops for suppliers on carbon accounting – open for all
- [South West Procurement Alliance](#) (SWPA) developing frameworks for public use
- All GW4 universities are part of Higher Education STEM sustainability networks: Laboratory Efficiency Action Network (LEAN) [www.lean-science.org](#) and [Sustainable European Labs](#) (SELS)
- All GW4 universities' Climate Action Teams are sharing learnings and best practice
- All GW4 universities' Sustainability teams work with procurement teams
- Universities of Bath and Exeter use supplier surveys: these include carbon action plans, targets they have or are working towards, and asks if they need help from us to progress
- Public services innovation lab at Cardiff University: [Y-Lab](#)

3.7.3 Proposed Living Labs projects

Based on the day's discussions, participants proposed the following initial projects for this Living Lab:

- Southwest consortium on procurement
 - » Needs to involve relevant people from the start
 - » Should include physical meeting space for procurement teams to discuss a synchronised or combined approach to suppliers, and to pool knowledge and share training
- Effective supplier engagement tools
 - » Range of tools to be developed with users, procurement teams, researchers (procurement & education/communication), and suppliers
 - » Should include standard supplier questionnaires, joint GW4 supplier training, and effective communication tools
- Scope 3 data sharing hub
 - » Central register of supply chain sustainability information and data, including a measure for emissions (via ONS) with a map for existing sustainable solutions
 - » Links to regional Net Zero data observatory (see Living Lab on Data & Digital)
- Standard methodology for carbon footprinting for goods
 - » Aim is to build unified and accurate data and unified measurements, reporting and targets. For example, a standard methodology for furniture carbon footprinting would mean we could buy furniture from suppliers with options of new desks vs re-manufactured desks, with carbon calculations for both. Contact Matthew Jones, Sustainability Manager at Welsh Parliament.
 - » This links to the living lab on circular economy, encouraging a market for re-manufactured furniture and other goods

3.8 Living Lab: Travel

Travel for business and commuting to work comprises a significant proportion of Scope 3 carbon emissions for universities and most other large organisations. Alternative working and business models, that support active travel, where possible, and reduce the impact of travel by staff and students, are required.

3.8.1 The goal

Local and regional travelling is more efficient, with affordable and connected transport links supported by integrated transport hubs. This includes accessible public transport suitable for the needs of different groups, with better bus and rail links between suburban and rural areas and cities. There are better low-carbon travel options, such as car-sharing scheme, accessible electric vehicle options, connected cycle ways and pedestrianised areas.

3.8.2 Existing work in the GW4 region

Participants identified existing initiatives that could be replicated or brought into the Travel Living Lab:

- £30mn programme for living labs on decarbonising transport, several of which will be in the Southwest. Contact [Colin Taylor](#), Emeritus Professor at the University of Bristol.
- [Western Gateway](#) Sub-National Transport Body (STB) [Strategic Transport Plan](#) 2020-2025

3.8.3 Project Ideas

Based on the day's discussions, participants proposed the following initial projects for this Living Lab:

- Creating connected and integrated transport hubs
- 'European style' communities: trialling accessible cycle routes and pedestrianised areas
- Monitoring university students' international travel and generating student-informed solutions. Contact [Paul Howard-Jones](#), Professor of Neuroscience and Education at the University of Bristol.

12

Distance again

When we have achieved our vision of a net zero region, what will YOU be seeing, hearing, saying, thinking, feeling, doing?

Knowledge about nature - connected

Hear more wildlife

less traffic

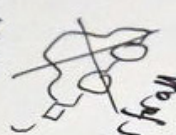
travel for longer trips (less short breaks)

Collaborative visible across spaces cheaper taxis outside Bristol (near)

Environmental projects IN YOUR FACE local type initiatives

have heart pump all hand

happier



happier for all

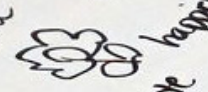
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Community outdoors together

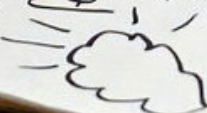
local know more people locally



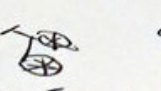
super-variety feel safer more comfortable



clearer feels clearer - fresher



cycle lanes see like cycles in children + families



star Army brigade

Combined academic year - epic times - hand saw

localised

incubation on home

Environmental things in schools

smaller not behind

more public transport cleaner

return of nature

Subject



4. Moving forward

The discussions during the day made it clear that while many of us are working to tackle Scope 3 challenges locally, we need to work at the regional level to accelerate the transition to a fairer, healthier and more sustainable Net Zero society.

This report sets out participants' proposed Living Labs and initial project ideas. Some of these projects will be new. In many instances, we can use existing projects in new ways, adopting the Living Labs approach to co-create, test, evaluate and share solutions. One of the major success factors for Living Labs is getting the project governance right, i.e., making sure end users and other key stakeholders, such as community organisations, local and pan-regional authorities, business, and academia, are involved from the outset.

Most of these ideas require funding to get started. Moving forward, we will take a two-pronged approach, where some projects can start immediately, while a working group starts developing the longer-term plans needed to enable region-wide Living Labs:

1. We invite all workshop participants to start work on proposed projects. Those who were in the same groups have already been invited to share contact details, and the GW4 Climate team can help put participants in touch where needed. For some projects, people have already put their hand up to coordinate. We encourage those who are interested in joining to contact them directly.
2. The GW4 Climate Alliance will support a strategic working group to develop next steps and engage with funders. While the big UK research funders have started encouraging local place-based projects, it is clear that place-based approaches are also needed at the regional level. Local authorities, industry, community organisations and universities cannot reach Net Zero in procurement and travel alone. We need to develop regional programmes with governance models that bring in end users and other key stakeholders to co-design, trial and evaluate solutions through Living Labs.

All participants, and those who were unable to join on the day, are welcome to take leadership on projects or join the working group. For anyone submitting research proposals, please feel free to use the openly available GW4 Living Labs **literature review**.

Please keep the GW4 Climate team updated on any developing projects, via Climate@GW4.ac.uk.

5. Appendices

A1. Workshop programme

10:00	Tea/coffee & networking
10:30	Welcome & introduction to GW4 living labs Pete Walker : Climate Action Chair, University of Bath.
10:40	Keynote address: Vision for our net zero region Carla Denyer : co-leader of the Green Party of England and Wales, and Bristol City Councillor.
11:00	Shared vision of a net zero value chain in our region An engaging exercise drawing on all participant perspectives: where do we want to get to, and what can we achieve by working together on Scope 3 emissions?
12:00	Roadmaps toward net zero in Scope 3 Cross-sector breakout groups on priorities and practical steps for decarbonising procurement and travel. Participants choose priorities for collaboration, e.g., supplier engagement, just transitions, carbon accounting, circular economy, education for sustainable development, data & digitalisation, and skills.
13:10	Lunch
14:05	“Change doesn’t happen alone”: Proposals for living labs Pathways for using living labs to deliver our net zero priorities: funding opportunities and next steps.
14:45	Closing remarks Joanna Jenkinson MBE : Director of the GW4 Alliance.
15:00	Event close

A2. Participating organisations



A3. List of proposed Living Lab projects

Living Lab	Projects
Circular Economy	<ol style="list-style-type: none"> 1. Regional “Doughnut”: using Doughnut Economics for decision-making at the regional level 2. Nature-based systems solutions: supporting biodiversity and climate resilience on campuses 3. New measures of prosperity: developing alternative measures to GDP 4. Regenerative networks: building climate-resilient communities
Data & Digital	<ol style="list-style-type: none"> 5. Net Zero data observatory for the region, for use by local authorities and other decision makers
Education & Skills	<ol style="list-style-type: none"> 6. Open collection of education and skills building resources, e.g. Scope 1-3 emissions guidance 7. Formal and informal skills development, e.g. green skills, carbon literacy, upskilling, mid-career training 8. Accreditation scheme, such as micro credentials or a skills passport, for ‘green’ skills 9. Outreach in schools, such as through the Climate Change Education Research Network
Energy	<ol style="list-style-type: none"> 10. Retrofitting all social housing stock 11. Creating neighbourhood of ‘social housing’ dwellings to improve energy use. Contact SuSy.house 12. Supporting engagement between energy firms and communities to determine needs 13. Placing hydrogen research in a whole systems approach
Food & Farming	<ol style="list-style-type: none"> 14. Establishing a living lab around the transition to a bioregional food economy 15. Determining what marketing techniques are most effective for influencing food choices
Nature-Based Solutions & the Environment	<ol style="list-style-type: none"> 16. Valuing nature & the environment in their own right 17. Tree planting schemes in school (e.g. Cardiff University project) 18. Creation of community gardens 19. Demonstrating links between biodiverse environments and human health & wellbeing 20. Showcasing councils’ climate and ecological emergency projects and community-led solutions
Procurement	<ol style="list-style-type: none"> 21. Southwest consortium on procurement, for procurement teams to discuss a synchronised or combined approach to suppliers, and to pool knowledge and share training 22. Effective range of supplier engagement tools (standard supplier questionnaires, joint GW4 supplier training, communication tools), developed with users, procurement teams, researchers, and suppliers 23. Scope 3 data sharing hub: central register of supply chain sustainability information and data 24. Standard methodology for carbon footprinting for goods. Contact Matthew Jones
Travel	<ol style="list-style-type: none"> 25. Creating connected and integrated transport hubs 26. ‘European style’ communities: trialling accessible cycle routes and pedestrianised areas 27. Student-informed solutions for student international travel. Contact Paul Howard-Jones

A4. Workshop design

The workshop was structured around three facilitated workshops to allow all participants to enter into practical discussion.

Session 1: Shared vision of a net zero value chain in our region

Session 1 was designed to provoke discussion and elicit responses from participants in order to develop a shared vision for a net zero world for our region. Participants discussed: “When we have achieved our vision of a net zero region, what will YOU be seeing, hearing, saying, thinking, feeling, doing?”

Session 2: Roadmaps toward net zero in Scope 3

The outcomes from the previous two workshops identified seven shared priorities which were used in Session 2 to begin the discussion towards a roadmap for net zero in scope three emissions:

- Supplier engagement: working together with suppliers to better understand emissions of their products/services, and developing solutions to reduce them
- Just transitions: how do we decarbonise in a fair and inclusive way?
- Carbon accounting: measuring and understanding our organisational carbon emissions
- Circular economy: creating zero-waste solutions
- Education for sustainable development: what are the educational needs and opportunities in the transition to net zero?
- Data & digitalisation: what are the data and digitalisation needs and opportunities in the transition to net zero?
- Skills: what training is needed for a just transition? Who will deliver it?
- Other: space to discuss a theme not mentioned

In each group, participants were asked to discuss five questions:

1. What are you doing that is already working, even if it's only part of the solution?
2. What are the emerging solutions in this area?
3. What are the actions for you personally to take in your organisation?
4. What are the actions that we could take together?
5. Who else needs to be part of this conversation?

Session 3: “Change doesn’t happen alone”: Proposals for living labs

1. How are we already working together in positive ways?
2. What is happening already, that we could tap into?
3. What can I contribute to the process?
4. What ideas do we have for living lab projects?

A5. Speaker profiles



Pete Walker

Pete is Climate Action Chair for the University of Bath's Climate Action Framework. This led to the university declaring a climate emergency in May 2020. He is currently working with colleagues implementing the university's Climate Action plan. He is also Director of the research centre for Innovative Construction Materials at the university and his research work is centred on the development of low carbon technologies suitable for new and retrofitting applications. Pete is a chartered civil engineer and a member of both the Institution of Engineers Australia and The Institution of Civil Engineers (UK).



Carla Denyer

Carla is co-leader of the Green Party of England and Wales. She is also the Green Party's MP candidate for Bristol West. Carla has been a Bristol City Councillor since 2015, forming a critical part of the largest Green councillor group in the UK. In 2018 she proposed the first Climate Emergency declaration in Europe, committing Bristol to go carbon neutral by 2030. Seventy-four per cent of UK councils, the UK Parliament and Scottish and Welsh governments have since followed her lead. Before entering politics, Carla worked as an engineer in the renewable energy industry, specialising in offshore and onshore wind energy.



Joanna Jenkinson MBE

Jo is Director of the GW4 Alliance. Previously she was the Head of Infection and Immunity at the Medical Research Council (MRC), where she had overall responsibility for the research portfolio and for managing the Infections and Immunity Board and its investments, including the Units and Centres. She also led the UKRI/DHSC/NIHR rapid response and rolling calls for COVID-19 research. Before joining the MRC she worked at the Biotechnology and Biological Sciences Research Council, initially for the Plant and Microbial Sciences Committee and then the Sustainable Agriculture Strategy Panel.

About the GW4 Climate Alliance

The [GW4 Climate Alliance](#) is an interdisciplinary research consortium of the universities of Bath, Bristol, Cardiff and Exeter working to develop transformative systems responses to the climate crisis.

The GW4 Climate Alliance is uniquely placed to address the global challenge of climate change, due to both our regional ‘ecosystem’ and the complementary critical mass of expertise across the GW4 institutions. It combines the expertise, network of collaborations and enthusiasm across the GW4 Universities to deliver world-leading innovative climate solutions, shape policy and practice and contribute to positive and equitable social change.

We aim to:

- Connect practitioners, industry, policymakers, and the public with researchers through our network, and influence socially equitable change through long-term, co-created and diverse partnerships.
- Champion and demonstrate transformative place-based solutions to the climate crisis using universities as ‘living labs’ and co-developing regional ‘testbeds’ with stakeholder partners in order to stimulate wider and deeper change.
- Unite and augment GW4 climate expertise by developing a cohesive interdisciplinary community and supporting climate research leaders of the future.



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GW4 Living Labs: Scope 3 and the Road to Net Zero

WE ARE DEVELOPING A WHOLE SYSTEM NET ZERO!

PETE WALKER

IT'S ABOUT **CO-CREATION**

SHARED VISION FOR OUR REGION

Shared Vision FOR OUR NET ZERO REGION

HAPPY, HEALTHY people

SHARED RESOURCES

Perhaps we are seeing less?

Less rushing & buying!

Shorter working hours!

CONNECTED COMMUNITIES

TIME OUTDOORS

KEY PRIORITIES

RENEWABLE ENERGY

HOUSING INSULATION

Lowes model!

HABITS

SUSTAINABLE TRANSPORT

PRIMARY BARRIERS

POLITICAL

- NOT TECHNICAL! -

BUT COUNCILS CAN MOVE TOO SLOWLY...

YOU CAN START WITH: **SIMPLE CHANGES**

CATERING

BUSINESS TRAVEL

INCENTIVES

SUPPLY CHAINS: UP TO 70% OF CARBON EMISSIONS!

WE NEED TO FOCUS ON REALISTIC SOLUTIONS!

next 10 YEARS!

BETTER EXPERIENCE OF TRAVELLING

more LOCALISATION

Enjoying our immediate environment!

INTEGRATED TRANSPORT HUBS

- EFFICIENT
- ACCESSIBLE
- AFFORDABLE

FOOD

SEASONAL

More efficient agricultural methods!

We will have solutions - even if they won't be perfect!

WE ARE ALREADY WORKING IN POSITIVE WAYS...

SHARING LEARNING

BRINGING TOGETHER DIFFERENT SECTORS

BRISTOL GREEN CAPITAL PARTNERSHIP

WORKING WITH ORGANISATIONS AND COMMUNITIES!

EVENTS

REDUCE EMISSIONS

PLANS

RESOURCES

OPPORTUNITIES

CHALLENGES

EXPERIENCE

INFORMATION

THERE ARE THINGS HAPPENING ALREADY THAT WE CAN TAP INTO...

DEVELOPING A FRAMEWORK

EMBRACING WITH NATURAL RESOURCES DURING CO-DESIGN PROCESSES

CLIMATE LITERACY TRAINING

INTEGRATED DATA SERVICE - at ONS

BEST PRACTICE

WORKING GROUP

LOOKING AT **TEMPLATE QUESTIONNAIRES FOR SUPPLIERS!**

EVERYONE HAS SOMETHING TO CONTRIBUTE!

SKILLS

MARKETING

ACTIONS

FACILITATION

I can consume less!

IDEAS FOR LIVING LABS

MONITOR STUDENT INTERNATIONAL TRAVEL

STUDENT INQUIRED SOLUTIONS

CREATE A STANDARD METHODOLOGY FOR FURNITURE AND CARBON FOOTPRINTING

RAW - VE - RE-MANUFACTURED

CIRCULAR ECONOMY

MAPPING + DNS

MEASURE EMISSIONS AND EXISTING SOLUTIONS!

SUPPLIER ENGAGEMENT TOOLS

CONSISTENT AND JARGON FREE!

I understand these questions and ideas!

REFRAME EXISTING PROJECTS

ACCESS NEW FUNDING

TRY A SPECIFICALLY EXPERIMENTAL APPROACH!

REMODEL UNIVERSITY BUILDINGS

IMPROVE GREEN SPACES ACROSS UNIVERSITY AND COMMUNITY AREAS!

We can be a test bed!

LIFE CYCLE ASSESSMENT STANDARDS

ACCESSES OUR SUPPLY CHAINS

LCA

CENTRAL DATA SET

SUPPLIERS

PARTNERS

SUPPLIER SUSTAINABILITY INFORMATION

JOINT GW4 SUPPLIER TRAINING

FACILITATE CULTURAL CHANGE

IN ORGANISATIONS!

INDIVIDUAL CHANGE

BEHAVIOURS



GW4

Greater than the sum of our parts

For more information about GW4

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University
of Exeter