Management Guidelines for **Decarbonisation Zones**

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

SUSTAINABLE ENERGY COMMUNITIES

Introduction

Background to this Guidance

These management guidelines were developed on behalf of the Decarbonisation Zones National Steering Group by the Sustainable Energy Authority of Ireland (SEAI) with support from M-CO (www.mco.ie).

The guidelines are an evolution of the 2011 Sustainable Energy Community Guidelines for Local Authorities and updated to take account of the 10 years experience SEAI have supporting sustainable energy communities, energy master plans and grant aiding €300 million in community level energy upgrades.

A number of Local Authority consultation events and feedback received on the draft version. As this is an early point in the national development of Decarbonising Zones, it is expected that this guidance will be updated as the Decarbonising Zone process evolves.

The guidance will also share the experiences of community collaboration in the delivery of climate projects and provide a number of case studies as successful examples of this.

Contents

1.
Introduction & Context

- Local Authorities driving change
- How to use this Guidance?
- When should you use this Guidance?

2.
What are Decarbonising Zones?

- What can Decarbonising Zones achieve?
- Decarbonising Zones and Climate Action
- Decarbonising Zones and Planning
- The Policy Imperative

3.
Involving communities & stakeholders

- Why involve communities & stakeholders?
- Who should be involved in Decarbonising Zones?

4.
Key considerations for decision makers

- Key challenges with community and stakeholder engagement

5.
Decarbonising Communities in Ireland

- Places to learn from

6.
The Five Step Process

- Commit
- Identify
- Plan
- Do
- Review

Section 1

Introduction & Context

Context and background

The Irish Government has pledged to achieve net zero emissions by 2050 in order to meet our contribution towards limiting global warming to 1.5°C. This requires **“rapid, far-reaching and unprecedented changes”** across all aspects of Irish society. There have been significant climate policy changes impacting on Irish Local Authorities, with more changes anticipated in the coming years.

Irish Local Authorities are integral to tackling climate change, as an implementer of climate adaptation actions, a source of innovative climate mitigation solutions and by incorporating climate action into City and County Development Plans, Local Economic and Community Plans and other relevant policies.

By investing in infrastructure and services, Local Authorities have a crucial role in ensuring that towns, cities, and counties pursue **a low carbon and climate resilient development pathway**. These investments can help Ireland achieve our National Climate Policy Objectives, and ensure the long-term prosperity, health and wellbeing of communities and the local natural environment.

Some of the actions towards decarbonising our society are underway, but many have yet to commence or are at an early stage. To bring about these “unprecedented changes” we need social and technical innovation to change whole systems, such as energy, transport, the built environment, agriculture and land use. We need to develop new ideas and approaches and act simultaneously on multiple levels to **enable large scale transition to a net zero emissions and climate resilient future**.

It is critical that we co-create these innovations through:

- **Identifying the main systems to change in terms of emissions and the barriers to doing so**
- **Designing multiple interventions and innovations that tackle these barriers**
- **Learning what works through implementation then investing in interventions and innovations that can replicate & scale as necessary**
- **Integrating meaningful community and stakeholder engagement, activation and mobilisation alongside democratic decision-making and innovative governance**
- **Creating the conditions for decarbonisation through policies and programmes that establish a clear vision and intent towards achieving ambitious targets of net-zero emissions and climate resilience**
- **Supporting the above through innovative business models and financing**

Local Authorities driving change

Local Authorities in Ireland are already designing and implementing solutions to mitigate and adapt to climate change through decarbonisation and increasing climate resilience.

Many Irish Local Authorities have already committed to reduce carbon emissions in their administrative areas, key towns, cities, and counties by 2050 and are making energy infrastructure central to capital investment, creating new energy companies (e.g. South Dublin District Heating Company) and accessing Climate Action Funding to deliver decarbonising initiatives (e.g. Laois County Council).

Recent experience by Local Authorities in Ireland has shown that decarbonisation is not limited to technological interventions and innovation, but it requires using an array of change levers, often at the same time.

Recent experience by Local Authorities in Ireland has also shown that decarbonisation is an iterative and collaborative process of testing options, combining different interventions, understanding what works and then scaling up as necessary.

Local Authorities are already working on changes to Governance, Planning, Policy and Regulation, Finance, Community engagement, Skills development, Training and Behaviour change. Local Authorities also recognise climate action and decarbonisation as drivers for local social, economic, and environmental objectives.

If properly resourced, Local Authorities can be more agile than regional or national governments as they understand the local context, needs and constraints which can ensure that more ambitious and effective action is being taken.

Local Authorities are also better positioned to measure the impact of climate action on the performance of services, changes at a community level, increased building efficiency, and local transport.

Local Authorities are best positioned to create impact through climate actions that are tangible and meaningful to the wider public, such as:

- **Scaling up building retrofit and sustainable energy**
- **Creating liveable, low carbon and resilient places**
- **Enabling low carbon mobility and active travel and transport-oriented development**
- **Enhancing climate adaptation assets, including reforestation**
- **Making climate risk and impact data more accessible**
- **Tackling distributional impacts through a just transition and tackling energy poverty**

Decarbonising Zones

The Intergovernmental Panel on Climate Change called for **“urban and infrastructure system transition consistent with limiting global warming to 1.5°C”**. These urban system transitions are unprecedented in terms of scale and require deep emissions reductions in all sectors, especially buildings and transport, using a wide portfolio of mitigation options and an upscaling of investment.

The Government of Ireland’s 2019 Climate Action Plan required the identification of one location in each Local Authority that could be a Decarbonising Zone. These Decarbonising Zones are to act as demonstrator projects harnessing a portfolio of technologies and interventions for decarbonisation through climate mitigation, adaptation, and biodiversity actions.

They address multiple energy and non-energy related issues that drive decarbonisation such as mobility, heat, buildings, infrastructure, fuel energy poverty, skills, employment, well-being, circular economy, and land use.

The successful implementation of Decarbonising Zones presents several opportunities to Local Authorities, such as:

1. Ensure climate action by local authorities aligns with national climate policy and that national climate policy can consider local priorities
2. Improve the built environment and low carbon infrastructure while creating a more liveable, healthier, and cleaner environment
3. Amplify the influence of local authorities over meeting national emissions and energy efficiency targets and develop a clear pathway to meeting national climate policy objectives
4. Facilitate investment and funding into local authorities from central government and other sources
5. Coordinate and prioritise decarbonisation initiatives and projects (e.g. social housing retrofit, district heating, community energy projects and electric vehicle charging infrastructure)
6. Ensure value for money across investment for decarbonisation between now and 2050 by evaluating what works
7. Strengthen dialogue between Local authorities, communities, private sector, and energy network operators

How to use this guidance

This guidance is intended to inspire Local Authorities to consider “what is possible” in Decarbonising Zones and to build capacity for wider community engagement around climate action over time.

The guidance is not a set of prescriptive recommendations or a strict process that every Local Authority must follow. This guidance is designed to be accessible to all Local Authorities and includes a variety of resources that allow Local Authorities to engage to the level that is appropriate for them.

While the guidance should complement existing energy planning, climate action and community engagement approaches and structures, such as LCDCs, PPNs and community officers and environmental awareness officers, it is recommended that you to focus on using one or two tools in each section as effectively as possible.

The guidance has been designed with a consistent structure throughout. The sections in the “5 Step Process” all use the following structure:

1 Check in

Check you are ready to get started and clarify what the outcomes for the stage will be

2. Key tasks

These are the minimum actions that you could consider implementing

3. Tools overview

A summary of key tools that can be used, it includes an indication of the time, resources and skills required to use each tool, as well as scenarios or groups that the tool would be most appropriate to use with

4. Templates

Many tools are supported with either an external example or a ready-to-use templates

5. Pathways

Journey map that indicates the next steps

When to use this guidance

This guidance can be used by Local Authorities in a range of scenarios when developing and implementing Decarbonising Zones.

Any activity suggested in this guidance should be delivered in the context of national and local regulations, City and County development plans and Local Authority Climate Action plans.

1. Scoping

Prior to implementation to help inform the decision-making process around the selection of intervention or projects in the Decarbonising Zone

2. Planning

To build legitimacy, political and community support for projects in the Decarbonising Zone

3. Design

To make sure that the projects are understood by and meets the needs of the community

4. Implementation

To determine if the Decarbonising Zone is achieving its objectives

Glossary

Active Travel
Includes walking, running, cycling, scootering, skateboarding, low-speed electrical devices such as motorised wheelchairs, e-scooters, and electric-assist bicycles.

Adaptation
Adaptation seeks avoid harm or exploit beneficial opportunities from expected climate change and its effects.

Carbon neutral
Net zero Greenhouse Gas emissions from fuel use in buildings, transport, and industry, the use of grid-supplied energy, treatment of waste generated within the city boundary.

Circular economy
Economic activity that is decoupled from the consumption of finite resources. A circular economy aims to keep resources in the economic system for as long as possible and phase waste out of the system.

Climate action
Any policy, programme, project, or activity initiated with the intention to provide some contribution to climate mitigation or adaptation.

Climate action plan
A strategic document (or series of plans and documents) that demonstrates how a city will deliver on its commitment to address climate change.

Climate change
A long-term shift in global climate patterns predominately attributed to anthropogenic, or human-induced, greenhouse gas emissions.

Climate risk assessment
An evaluation to understand the likelihood of future climate hazards and the potential impacts of these hazards.

Co-benefit
Non-greenhouse gas-related benefits of climate actions e.g. provision of basic services, health, prosperity, and other sustainable development agendas.

CO2 equivalent (CO2e)
The universal unit of measurement to indicate the global warming potential of each greenhouse gas.

Community
A group that is bound together by a common interest, characteristic and/or place.

Decarbonisation
A process of reducing greenhouse gas associated with energy consumption, industry, and transportation.

District heating
District energy systems utilise underground utility networks to connect multiple buildings in an area to one or several central energy plants that produce heating and/or cooling.

Energy efficiency retrofits
Upgrading inefficient buildings, equipment, or appliances by replacing them with more efficient systems or appliances, insulation changes and envelope improvements to reduce heating and cooling demand.

Glossary

Hard-to-reach/Easy to Ignore
Groups or individuals that are systematically under-represented in public engagement processes or have limited capacity to participate.

Just transition
A framework for social change that provide socially and economically just pathways for workers to transition away from carbon intensive employment.

Mitigation
Any process of limiting greenhouse gas emissions.

Nature-based solutions
The use of natural systems to address climate challenges e.g restore wetlands in catchment areas to minimise the impact of flooding and runoff pollution.

Renewable Energy Community
A community delivering a range of possible renewable energy initiatives such as production, supply, distribution, sharing and consumption), often in partnership with small and medium enterprises and local public authorities.

Resilience
The capacity of an area (city or county) to function no matter what stresses or shocks it encounters e.g. climate resilience is the capacity of cities and counties to respond to climate hazards and risks.

Scope 1 emissions
Greenhouse Gas emissions from sources located within the Local Authority boundary.

Scope 2 emissions
Greenhouse Gas emissions occurring because of the use of grid supplied electricity, heat, steam and/or cooling within the Local Authority or Decarbonising Zone boundary.

Scope 3 emissions
All other Greenhouse Gas emissions that occur outside the Local Authority boundary because of activities taking place within its boundary (e.g. procured products, construction materials etc.)

Sustainable Energy Community
A community in which everyone works together to be as energy efficient as possible, to use renewable energy where feasible and to develop decentralised energy supplies.

Transport-oriented development A planning approach that links land-use and transportation by focusing on mixed housing, employment, and commercial growth around transit nodes.

Section 2

What are Decarbonising Zones?

"A Decarbonising Zone is an inspirational demonstration and test bed of what is possible for decarbonisation and climate action at a local and national level"

What are Decarbonising Zones

The Intergovernmental Panel on Climate Change called for **"urban and infrastructure system transition consistent with limiting global warming to 1.5°C"**.

These systems transitions are unprecedented in terms of scale and require deep emissions reductions in all sectors, especially buildings and transport, using a wide portfolio of mitigation options and a significant upscaling of investment.

The Government of Ireland's 2019 Climate Action Plan required the identification of one location in each Local Authority that could be a Decarbonising Zone.

These Decarbonising Zones are to act as demonstrator projects harnessing a portfolio of technologies and interventions for decarbonisation through climate mitigation, adaptation, and biodiversity actions.

A Decarbonising Zone is an inspirational demonstration and test bed of what is possible for decarbonisation at a local and national level.

They address multiple energy and non-energy related issues that drive decarbonisation such as mobility, heat, buildings, infrastructure, fuel energy poverty, skills, employment, well-being, circular economy, and land use.

Decarbonising Zones may:

- **Help Local Authorities to either accelerate or moderate decarbonisation actions depending on local capacity, resources, and ambition**
- **Provide forward visibility of potential/likely decarbonisation actions across the city and/or county and potentially unlock new investment opportunities**
- **Ensure future decarbonisation actions benefits the local area**
- **Provide an initial framework for future decarbonisation and put in place the necessary structures to find out if decarbonisation projects work**
- **Help better target existing commitments and planned investment in decarbonisation, such as retrofit of existing building and housing stock**

What can Decarbonising Zones achieve?

Decarbonising Zones are a key way of learning what works for decarbonisation and what can be scaled given the urgency of 2030 and 2050 targets and significant uncertainty.

Decarbonising Zones could become a key implementation tool for wider climate action particularly is they incorporate low carbon action in strategic plans City and County Development Plans and across areas such as waste, social care, transport, and housing.

They will provide a signal to how we can best make transformational changes to existing energy infrastructure and markets, how, and when, energy is used, changes to infrastructure and buildings in local areas while providing opportunities for communities and for local areas to influence and benefit from this

While Local Authorities lead on the development of Decarbonising Zones, the Climate Action Regional Offices (CAROs) the Dublin Energy Agency (CODEMA), highlighted that Decarbonising Zones should involve public and private sectors, communities and civil society in place-based climate innovation that tests disruptive technologies, governance innovation and social innovation.

This includes working with existing enabling initiatives such as Sustainable Energy Communities, Renewable Energy Communities, Energy Cooperatives or the Renewable Electricity Support Scheme.

Decarbonising Zones can also be test beds for viable and impactful climate adaptation actions such as re-wetting and restoring peatland areas, enhancement of carbon sinks, afforestation, and other nature-based solutions.

Decarbonising Zones can also act as test beds of how to deliver a cost effective and socially acceptable low carbon transition.

Because of this, Decarbonising Zones need to design-in systematic and deliberative learning about the impact and effects of interventions in order to produce an evidence base for decision-making. This includes medium term decision-making in relation to success of individual

Decarbonising Zones & Climate Action

A high- level goal for Decarbonising Zones is they provide a vision of what a low carbon, climate-resilient, liveable, and sustainable Ireland might look like.

Decarbonising Zones can drive systemic changes that include innovation across infrastructure, regulation, governance, values, and mindsets.

Some of the key focus areas for reducing carbon emissions are energy use in buildings and transport. Heating accounts for over 39% of the Ireland's total demand for energy and decarbonising heat is critical to achieving national Climate Policy. A very large proportion of domestic heating in Irish buildings is by oil with oil accounting for 40% of all final energy used in the residential sector in 2018. A growing number of homes in the Ireland have low carbon heating (such as heat pumps) and renewable energy.

Each Decarbonising Zone will be influenced by the different characteristics of Local Authority areas and there will be no 'one size fits all' solution but will likely include actions such as:

- **Increasing rates of building and house retrofitting to drive deep cuts in emissions**
- **Expanding electrification of heating and, where appropriate, vehicles**
- **Accelerating the move towards low carbon, zero-emission and active mobility – including public transport and mobility service systems**
- **Creating healthy, vibrant, creative, and accessible public spaces**
- **Upgrading electricity networks so they are smart and better-connected – including greater uptake of district heating networks, where appropriate**
- **Developing municipal district scale renewable energy production - with electricity supply becoming dominated by (locally generated) renewables**
- **Advancing connected home technology and domestic energy services**
- **Increasing circular and bioeconomy resource loops and material flows, including urban food production and nutrient recycling**
- **Using procurement to consider embedded carbon and avoided emissions where possible.**
- **Mainstreaming nature-based solutions for infrastructure and ecosystem regeneration**
- **Disseminating climate risk information, for example flood and coastal erosion risk**

Decarbonising Zones & Planning

Ireland's National Planning Framework recognises the important role of spatial planning in climate mitigation and adaptation by creating urban and rural environments that support less carbon-intensive lifestyles and communities.

The National Planning Framework outlines strategic outcomes such as a Transition to a Low Carbon and Climate Resilient Society, Compact Growth Sustainable Mobility and the Sustainable Management of Water, Waste, and other Environmental Resources, all of which have the potential to drive decarbonisation.

These strategic outcomes signal that spatial planning and urban design can make a major contribution to climate mitigation and adaptation through decision-making on land use and the form, location, scale and mix of developments.

For example, the master planning process has the potential to establish a long-term perspective on how an area should be developed to maximise decarbonisation compared to equivalent areas.

A master plan can outline how an area's energy networks, transport network and building energy systems can interact while providing a coherent framework for cost effective decarbonisation.

This approach to planning for decarbonisation can function effectively in a wider framework of sustainable development that brings about environmental, social, and economic opportunities, and benefits to a local area.

Decarbonising Zones will need to consider the whole energy system not just within the Local Authority area. For example, measures to increase the decarbonisation of transport (e.g. charging infrastructure for electric busses and cars) could have a significant impact on electricity networks.

There may need to be grid reinforcement as changes to supply and demand occur so as not to affect measures to decarbonise heat using electric heating systems.

Decarbonising Zones will need to link into wider planning processes and City and County Development Plans to ensure a co-ordinated approach, so that short and medium term actions support the longer-term ambitions for net-zero emissions by 2050.

Like the master planning process, the design and implementation of Decarbonising Zones provides an opportunity to enable a collaborative dialogue amongst Local Authority networks, network operators and other stakeholders to help plan for the delivery of changes needed to decarbonise towns, cities, and counties.

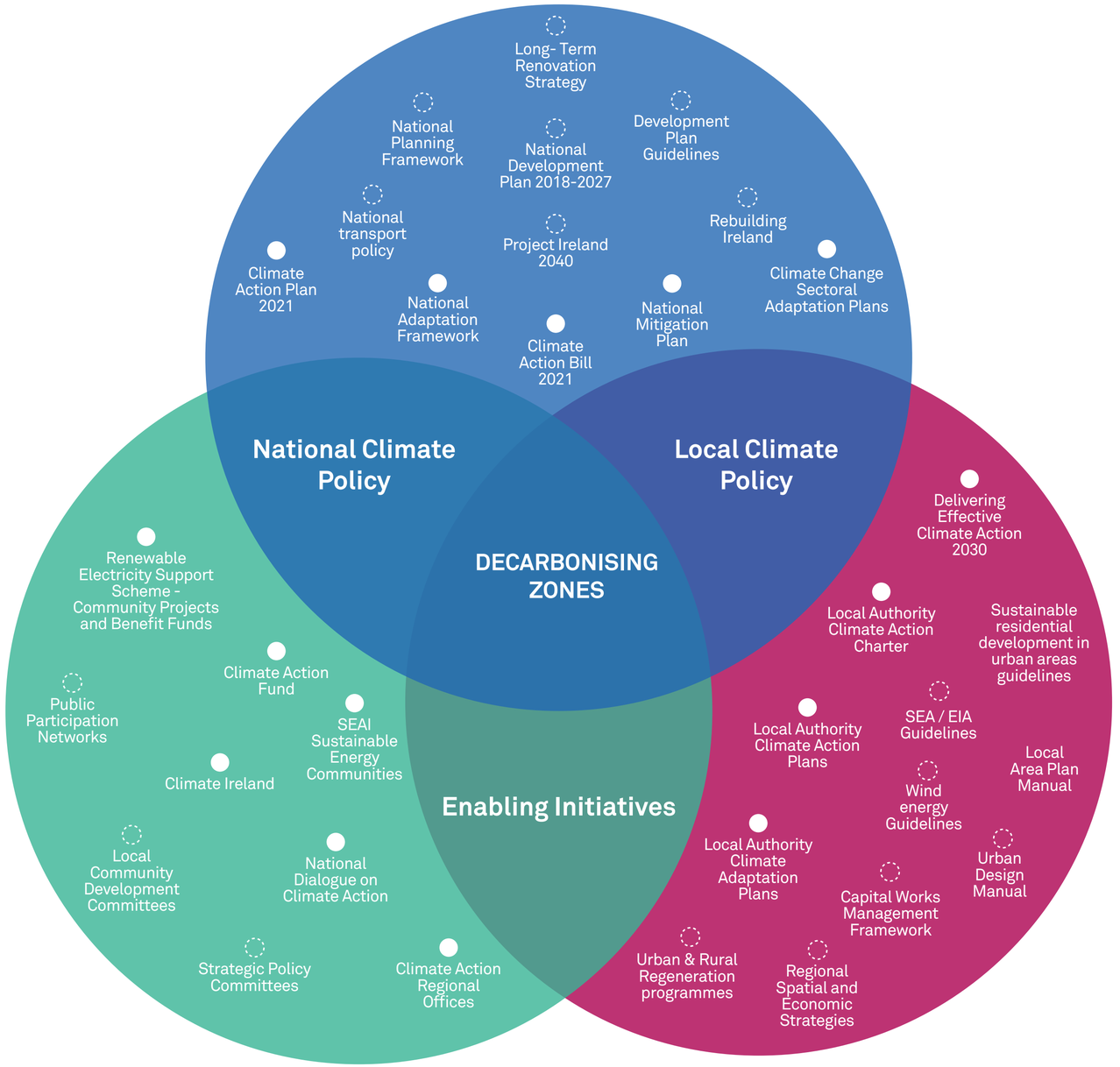
The Policy Imperative

The Climate Action Bill is establishing sectoral climate targets and carbon budgets in Ireland. This includes a reduction of emissions by 51% by 2030 against the baseline and an improvement of energy efficiency by 50%.

These targets will be very challenging for Local Authorities to deliver for several reasons. Many local authorities lack relevant information to support decisions on decarbonising options. For example, energy performance and emissions data are not granular enough and often retrospective rather than real time.

Local Authorities have the very real potential to meet targets for decarbonisation while creating better towns, cities, and counties. Recent experience has shown that Local Authorities in Ireland can deliver rapid rates of change by mobilising ingenuity, allocating resources and work with **enabling initiatives** that already exist in communities across Ireland.

Decarbonising Zones could give a signal to the levels of space, resources, innovation, leadership required for transformative systems change. Change of this breadth will require new ways to engage all citizens, encouraging different types of behaviour and innovating with urban policy levers.



Section 3

Involving communities & stakeholders

Why involve communities & stakeholders?

Local Authorities will need to engage various stakeholders and communities so they can better understand how Decarbonising Zones can be impactful, inclusive and fully informed about disproportionate climate risks across communities. Some communities are more at risk from climate change and often these have the least power and input into decision making and implementation.

It is crucial that Local Authorities actively use local knowledge to support decision making, otherwise decarbonising zones risk being poorly designed and inappropriate for communities. Other key reasons to invest in community and stakeholder engagement include:

1 Building resilience & social capital

Community engagement in Decarbonising Zones has the potential to develop individual skills and community capacity by tackling the shared problem of climate change. This will become more important as we see increasing impacts from climate change such as flooding, coastal erosion and land use change.

2 Building trust

Decarbonising zones have the potential to be seen to have unintended consequences, particularly for lower income groups. This includes impacts on transport, public space and land use. The decarbonising zone may also help lower-income variable tariff households to manage energy different and save money.

Local Authorities will need to use innovative participation tools, particularly to include hard-to-reach groups in the development of climate action and strengthen the credibility and legitimacy of Local Authority action.

3 Changing behaviour

Local authorities will need public consent to implement certain climate actions. National surveys in Ireland show that the public are broadly in favour of climate action as long as the actions are fair and effective. Community engagement can frame climate action around the issues that matter to communities, such as improved community facilities, safe and integrated infrastructure, liveable towns, and cities. To adopt new behaviours or accept changes, communities will expect to see integrity in how the Local Authorities approach decarbonising zones, and are working with communities to develop a climate resilient future.

Why involve communities & stakeholders?

4 Building capacity

Community engagement can present challenges for Local Authorities due to a lack of resources, low internal capacity, existing mistrust from local groups.

Local Authorities can empower and support their staff to get involved in community engagement through training opportunities. Active engagement, if delivered collaboratively, can build capacity and new skills across the community while increasing ownership in delivering climate action.

5 Building community support

Decarbonising zones are framed as “living labs” where local authorities can test ideas before scaling up.

Implementation will require a critical mass of people, knowledge and innovation and community engagement can ensure that the climate actions delivered through the zones are innovative and impactful.

6 Complement resources

Community engagement can complement Local Authority resources by facilitating the development and deployment of new cost-effective solutions within decarbonising zones. Building capacity

Who should be involved in Decarbonising Zones?

Local Authorities alone can not enable the transition to a low carbon economy and so Decarbonising Zones should build a platform for collaborative action with other stakeholders and communities that will be enabled by the necessary regulatory, policy and planning changes.

Local authorities have relatively complex structures and varying populations to serve. Some state agencies and planning authorities functionally overlap with local authorities but are not always aligned.

For example, enforcement, enterprise development, transport and planning responsibilities are split between various tiers of government. Because of this, there are no fixed rules on the appropriate scale for Decarbonising Zones

There are a wide range of **local organisations through the Public Participation Networks, Climate Action and Environmental Awareness Officers, Chambers and enabling initiatives such as Sustainable Energy Communities** that could become involved in Decarbonising Zones.

Local Authorities can play a role in leading and creating the conditions for collaboration between other stakeholders and communities. Local Authorities are best placed to take on this leadership role as they will be in place for the long term and can engage stakeholders and communities in decision-making and policy making.

Local authorities already have statutory responsibilities, reserved functions, and **networks across a range of sectors and issues such as housing, waste, environment, transport, community development and economic development**.

They also have a role in planning and development powers with a wide range of relevant operations and assets.

Importantly the implementation and scaling of Decarbonising Zones will require strong **political leadership**, long term commitment and continuity of policy approach.

Through **elected members, strategic policy committees and other policy structures**, Local Authorities can provide leadership and geographic reach to make Decarbonising Zones work.

Section 4

Key considerations for decision makers

Key considerations for decision makers

The strategic focus for engagement in Decarbonising Zones should be on issues that matter to communities and stakeholders e.g. improved community infrastructure, better places, liveable towns and cities, warmer homes, safe infrastructure, and visible progress on climate action.

While community and stakeholder engagement will differ across every county, there are some core principles that can ensure that the engagement is meaningful, genuine, effective and involves a wide range of community stakeholders, particularly those most affected by climate change.

1 Have a clear purpose and vision

The vision, purpose and objectives of the engagement should be outlined clearly and linked to the overall process of implementing a Decarbonising zone.

2 Develop internal capacity

Local authority staff will need to be supported to deliver community and stakeholder engagement. This can be through empowerment of through internal delivery teams through to offering training opportunities and involvement of the PPNs.

Working through cross-office delivery teams can enable a greater sense of ownership and staff engagement in driving Decarbonising Zones and wider climate action forward.

3 Ensure Transparency and integrity

Transparency should be maintained throughout the engagement process. This includes clearly communicating and announcing publicly the purpose and objectives of the engagement, where possible clarifying the funding process, clarifying how the Decarbonising Zone measures actions will be evaluated and any relevant materials (briefing documents, evidence, podcasts, and video recordings of those presenting should be available to the public).

Key considerations for decision makers

4 Design with, not for

Community and stakeholder engagement should not be a transactional process. It should be grounded in active and inclusive involvement of communities and stakeholders to deliver the most impactful climate actions within the Decarbonising Zone.

5 Multiple engagement strategies

Community and stakeholder engagement involves diverse strategies that are locally appropriate, incorporating multiple channels of communication reaching diverse audiences through consistent messaging.

6 Engagement is ongoing

Community and stakeholder engagement is not an output but needs to be incorporated into the wider programme of Decarbonising Zone implementation. Community engagement in Decarbonising Zones should build on what works well in the Local Authority while including ongoing monitoring and evaluation of the quality and impact of engagement.

Key challenges with community and stakeholder engagement

Despite the benefits for Local Authorities and communities from engagement in the development of Decarbonising Zones and wider climate action, there are several challenges facing Local Authorities in planning and implementing effective engagement

Communities or stakeholders may choose to disengage due to negative previous experiences, lack of trust or dissatisfaction with the overall process. This may include Local Authority failing to effectively use feedback or input provided by their communities through previous engagement.

Communities or individuals may also feel they are unable to provide feedback through an open and transparent process, due to a concern of negative repercussions in subsequent government actions.

Communities or individuals may consider themselves not vulnerable to climate change or actions responding to its impacts, and if they do, that it is a government's responsibility to act on it and therefore would not seek to provide input.

Easy to ignore and marginalised groups often face regular and systematic exclusion from community engagement processes, particularly those related to climate change.

There are numerous factors driving such exclusion including cultural barriers e.g. the process is seen to be too technical or using technical language, technological barriers which may prevent certain groups e.g. engaging via online tools and representation barriers e.g. informal or migrant groups.

There are also many common barriers that prevent communities and stakeholders from mobilising and Local Authorities will need to consider this. Typical community level barriers include:

- **Lack of internal capacity (skills, knowledge, finance)**
- **Lack of a critical mass of committed individuals with the desire to participate**
- **Lack of finance to support community activities or fund the organisation**
- **Low social capital, connectedness, and influence with other community organisations**
- **Lack of specialist knowledge**
- **Lack of understanding of the policy, political, planning, and regulatory system and how these may impact communities and individuals**
- **Unfamiliarity with the commercial context e.g. seeking investment, raising capital**
- **Lack of short-term impacts which can build confidence, motivation, and positive feeling**

Section 5

Decarbonising Communities in Ireland

Case Study
Templederry Community Power

1. What is it?

Ireland's first community owned electricity supplier.

2. Who started it?

Four individuals from the community completed a Certificate in Renewable Energy at the Tipperary Institute and, following from this, sought to develop a wind energy project in the region.

3. Who is involved?

It is a partnership of community energy groups working for a sustainable energy future for Ireland. Supported by Tipperary Energy Agency, Friends of the Earth and Smart M Power.

4. Investment

Supported by the European Regional Development Fund through Interreg North-West Europe. The total investment for the project was €6.2million.

Case Study **Templederry Community Power**

The Community Power initiative has three components;

- **Catalyse, part fund and project manage community owned, renewable energy facilities such as solar, wind, hydro and biomass**
- **Provide communities with optional PPA's (power purchase agreements), so they can sell their excess electricity, thereby improving their revenue stream from their power plants**
- **Sell electricity to communities and the wider market**

Decarbonisation

Their two turbines are generating about 15 GWh of electricity every year, which is about the amount of electricity used by the town of Nenagh. They are buying renewably generated electricity from a handful of small and micro hydro and wind generators across Ireland and selling it to our customers to use in their homes, businesses, farms and community buildings.

Community role

The membership of the Templederry Energy Resources group consists of 28 people representing a diverse cross-section of society, including clergy, farmers, students etc. They are collaborating with other community energy organisations, Energy Community Tipperary Co-operative, Aran Islands Energy Co-operative, Tait House Community Enterprise, Claremorris and Western District Energy Co-operative.

External support

North Tipperary LEADER Partnership and the Tipperary Energy Agency are key external support agencies.
North Tipperary LEADER Partnership provided funding for the initial feasibility study and Tipperary Energy Agency provided technical advice to the community group at every stage of the process.

Timeframe

The concept of wind energy was first mooted in 1999 as part of the "environmental protection" pillar of the Community Development Plan.

It took almost 12 years to build their first wind farm, and it has been operating selling it to the grid since November 2012. Community Energy was then founded in 2008 and started trading as an energy supplier in 2019.

Additional impact

They provide businesses, large and small, with an ideal opportunity to lead by example in terms of Corporate Social Responsibility.
Every euro spent and every kilowatt hour of electricity used – facilitates the development of additional community owned renewable energy generation facilities, in their neighbourhood, and around the country.

Case Study: Dingle Peninsula 2030

1. What is it?

An initiative for a more environmentally and economically sustainable future on the Dingle Peninsula.

2. Who started it?

Established in 2018, a multi-partner initiative consisting of, The Dingle Creativity and Innovation Hub, ESB Networks, MaREI, North East West Kerry development.

3. Who is involved?

The four founding groups previously mentioned lead the initiative, but partners include: Science Foundation Ireland, SEAI, Bord Iasca Mhara, Teagasc.

4. Investment

Each project part of the initiative, is funded individually. For example, The ESB choosing the Kerry Peninsula, for a five million euro project to pilot, new sustainable technologies.

Case Study: Dingle Peninsula 2030

The Dingle Peninsula has several different projects focused on different aspects of the Peninsula:

- **Energy:** This looks at energy use within the Peninsula has lead to the development of an Energy Master Plan (EMP).
- **Transport:** Reducing emissions and improving public transport links.
- **Marine:** Working with MaRIE to monitor the environment.
- **Agriculture:** Investigating the use of biogas, and smart meters to reduce emissions and increase labor efficiency.

Decarbonisation

Development of Energy Master Plan, that if implemented that will reduce yearly energy use to EMP will reduce the yearly demand to 224 GWh, saving €8 million. 70GWh of this demand could be met using energy from local renewable resources.
An electric vehicle (EV) trial, involving 17 Electric vehicles.
The installation of solar photovoltaic (PV) panels on 25 local home and installation of 20 battery management systems in twenty different homes.

Community role

The initiative engages with the community in different ways such, as hosting yearly festival, where residents can learn about different projects. Also, there was public consultation, before any projects began. Locals were also invited to join a 12 week course to become a Community Energy Mentor, who get training from experts, and in return highlight to the community their journey to save energy.

External support

It is supported by the European union, though FLAG program (European Maritime and Fisheries Fund Operational Program, and EU Horizon project. On the national level, it is supported by organisations such as SEAI, when it comes to energy improvements, Bus Éireann, for transport improvements.

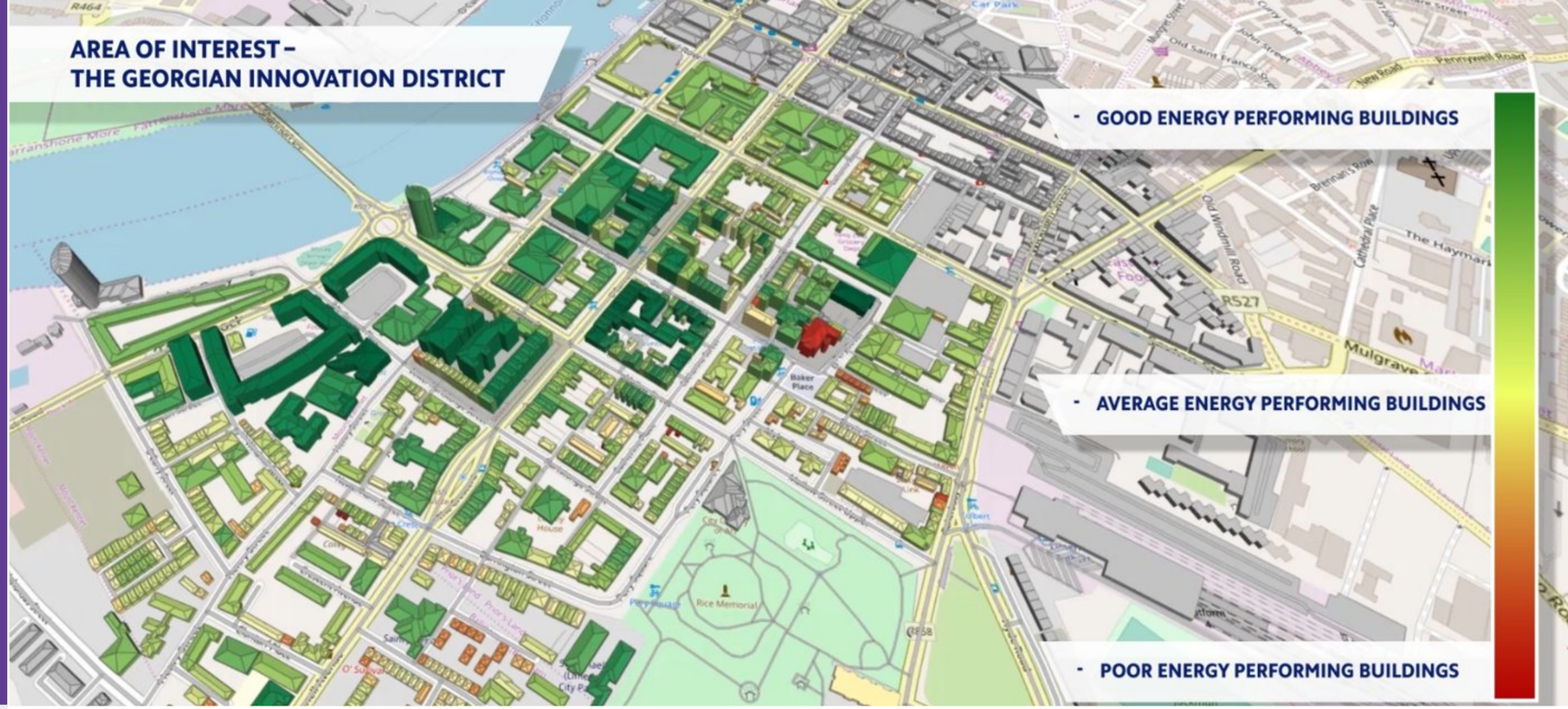
Timeframe

Founded in 2018, the project is set to finish in 2030. However, since many of the projects are pilot schemes, full implementation might take longer.

Additional impact

The dingle innovation hub hopes to attract and support social entrepreneurship within the Peninsula, leading to the creation of local jobs. The agricultural initiatives plan to also increase labor efficiently, leading to greater profitability. The preservation of the environment, is also hoped to lead more ecotourism.

Case Study: **Limerick cityXchange**



1. What is it?

Limerick is one of two EU 'lighthouse' cities that have been selected for a major climate-change pilot program that will give a lead to the rest of Europe on how to dramatically decarbonise urban areas.

2. Who started it?

Limerick City and County Council applied alongside the University of Limerick, to be part of Horizon 2020, and to be selected as one of the two lighthouse cities.

3. Who is involved?

ENGINE, a department of Limerick City and County Council focused on innovation, is the main coordinator, with both national partners, like SEAI and ESB networks.

4. Investment

A total of €24 million from the EU, spread across the 7 cities involved. The EU are financing €20 million with the remaining €4 million being raised from other sources.

Case Study: Limerick cityXchange

Limerick cityXchange consists of several different projects:

- The creation of a smart positive energy blocks , centered around the Georgian district, that through efficiently and reduction upgrades will be a net positive producer of electricity.

- Trialling different innovations to create a more sustainable city, that could be scaled to different cities.

Decarbonisation

By 2050, between 800-1100 buildings within the Georgian district of Limerick having saving technologies installed, such as smart meters, and being retrofitted, improving electric mobility, through electric cars and busses and the generation of electricity from the river Shannon, through hydrokinetic generator.

Community role

The community is invited to join City Exchange Weeks. This is a week where the council leads events related to local community efforts, different parts of the cityXchange offer people insight into their projects and engage the community. These events include, the Community Led Open Innovation Project, where local groups work with professionals to develop innovations around sustainability that can be trialed in the city. Also, the Positive Energy Champions initiative, where locals can apply to be educated about how they can reduce energy use, then post their journey online.

External support

Private companies have been brought in for specialised skills. Such as Space Engagers to help with community engagement, or Gkinetic who designs hydrokinetic technology. The Norwegian University of Science and Technology (NTNU), who provides technical expertise and leads the cityXchange consortium.

Timeframe

The project was started in 2018, with EU funding set to continue till 2023. The end of the pilot phase is aimed to be for 2030, the intention is that the initiative reaches all its goals by 2050.

Additional impact

Supporting local groups who are developing innovations and encouraging greater civic involvement.

Case Study: **Aran Islands Energy Co-op**

1. What is it?

An energy cooperative operated by the residents of the Aran Islands.

2. Who started it?

A public meeting in Cill Rónáin, Árainn, in 2012 led to the establishment of Aran Islands Energy Co-Op, where several residents came together.

3. Who is involved?

The residents and local businesses of Aran Islands. Supported by the development cooperatives of Inis Oírr and Inis Meáin.

4. Investment

Residents can join the energy cooperative for €100, and thereby gain voting rights for life. Support though EU initiatives such as Clean Energy for EU islands.

Case Study: Aran Islands Energy Co-op

Aran Island Energy Co-op consists of several parts:

- The retrofitting of homes and businesses on the Aran Islands.
- Exploring the potential for renewable energy production though wind turbines.
- Exploring and developing electric mobility options.
- Wider effort to engage the residents of the Aran Islands in reducing their energy usage.

Decarbonisation

50 houses (10% of housing on the island) have been fitted with air to water heat pumps, and with 2 kW of photovoltaic panels installed on their roofs. There are also approximately 10 houses with geothermal heating and approximately 100 houses with solar hot water panels.

Electric vehicles can be rented and used, both cars and vans.
Planning has begun for a wind turbine on Inis Mór that should provide all the energy needs of the Aran Islands.

Community role

The energy co-op has a newsletter to keep the local community up to date. Events hosted to educate the local community, they can be seen on the website of the Energy Co-op. Engagement with schools that submitted proposals to be more renewable. Proposals that were chosen were given support and funding by the Energy Co-op to see them implemented.

External support

Collaboration with NUI Galway and GMIT to secure EU funding for microgrid technologies. Part of the Clean energy for EU Islands Forum, who helped them develop a clean energy agenda. Part of the Templederry Community Power Network, who also provide their expertise. No support provided by Galway County Council.

Timeframe

The cooperative was founded in 2012 setting a timeline to succeed by 2022, however considering the current state, and planning remaining in motion for the wind turbine, it is likely that the cooperative will remain after 2020, with the turbine being several years away from construction.

Additional impact

Decreasing reliance on ferries and underwater cables, both of which can be interrupted. Building a sense of community around the goal to be more sustainable. Potentially developing the Aran Islands into an eco-tourism location.

Community-Led Biodiversity

Case Study
Monaghan Dispersed Urban Orchard

1. What is it?

A Dispersed Urban Orchard and Greenway fruit tree planting project that enhances biodiversity and creates ecological corridors through Monaghan Town. It involves volunteers planting trees in their gardens

2. Who started it?

The project was initiated by Monaghan Tidy Towns following a number of initial projects related to biodiversity.

3. Who is involved?

Monaghan Tidy Towns with some support from a local ecologist, local volunteers and Monaghan County Council.

4. Investment

Monaghan Tidy Towns purchased heritage varieties of fruit trees from Irish Seed Savers and sold them to Monaghan Town residents for a nominal fee.

Case Study **Monaghan Dispersed Urban Orchard**

The Dispersed Urban Orchard has three components;

- **Spatial mapping and analysis of a town to identify priority biodiversity sites.**

- **Using local knowledge to map ecological corridors, including using private gardens.**

- **Distributing trees to volunteers that can plant these in the identified locations.**

Biodiversity

Monaghan Tidy Towns have been working on biodiversity projects for many years. In 2010 they commissioned an Ecologist to complete a Habitat Survey of Monaghan town.

This helped to identify the sights of highest potential for biodiversity initiatives. This work also had engagement with Monaghan County Council and a biodiversity expert working on their behalf

Project design

One of the observations was that many of the pollinator-friendly habitats were cut off from each other. The need to create linkages between these sites through ecological corridors gave rise to the Monaghan Tidy Towns 'Dispersed Urban Orchard' project.

The Monaghan Tidy Towns team sourced a high-definition aerial photograph of the town. They overlaid this with a map of the identified habitats in order to identify ecological corridors that could be created between their top 10 sites. This mapping identified that that private gardens were ideally suited to being ecological corridors. This would involve collaborating with the community to create a dispersed orchard.

Community role

Monaghan Tidy Towns sourced heritage variety fruit trees and advertised 'Fruit Trees for a Fiver' to the community.

Volunteers that bought trees had to provide their address and commit to planting the tree in their garden. Volunteers took between 2 and 6 trees each and this resulted in a good dispersal of trees through the town.

Impact

The project has created new connections and linkages with a network of pollinator-friendly habitat throughout the town.

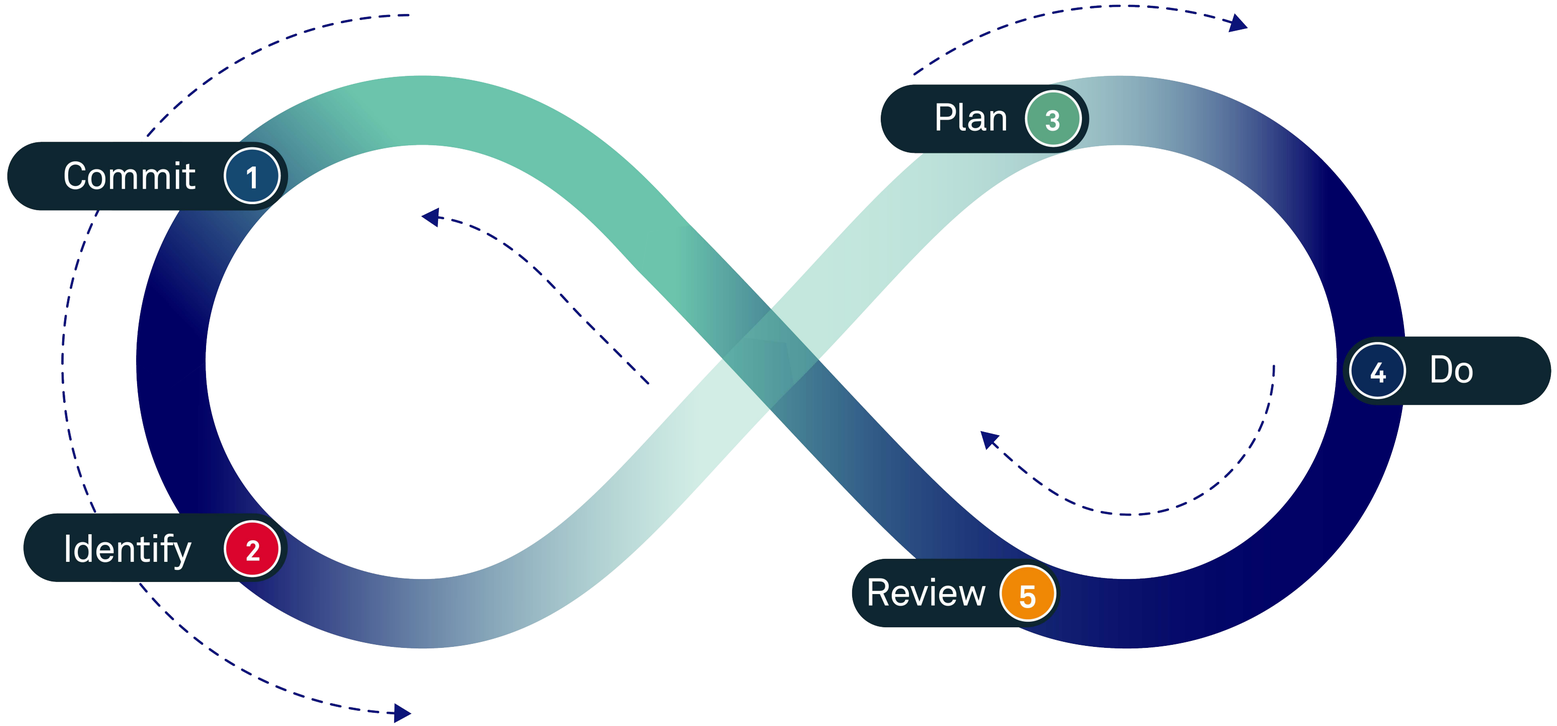
.

Section 6

The Five Step Process

Key phases

Managing and implementing a Decarbonising Zone is not to be a one-off project but a repeated and iterative process, with ongoing learning and feedback loops.



Phase 1: Commit

Making a clear commitment, developing the governance structure, developing a vision and strategic narrative that can be communicated to internal and external stakeholders.

Phase 2: Identify

Mapping and analysing energy demand across the Decarbonising Zone, mapping stakeholders, identifying early-stage projects.

Phase 3: Plan

Defining the portfolio and pipeline of decarbonisation projects and developing an appropriate plan for delivery.

Phase 4: Do

This stage involves implementation of the identified projects and delivering on the vision, aims and ambitions.

Phase 5: Review

Evaluating impact and feeding back to communities and stakeholders.

Key engagement opportunities

Establishing a robust process for community and stakeholder engagement is important. An effective engagement process will have a coherent programme, or timeline, in which communities and stakeholders can influence the Decarbonising Zone at the appropriate points.

This should consider how feedback data will be collected and analysed effectively and efficiently, to inform decision making, track how successful the engagement has been and to report back to communities and stakeholders how their feedback has influenced the Decarbonising Zone.

Engagement during Identify Phase

Initiate open discussions on the high-level vision of the Decarbonising Zone with communities and stakeholders so they can develop a clearer understanding of the climate challenges facing the area, and to garner initial responses to possible Decarbonisation actions and opportunities from implementing them.

Feedback and monitoring
Recording and feeding back the **insights and learnings**, explaining how these will influence the implementation plan and overall Decarbonising Zone development process.

Engagement during Plan Phase

Explain to communities and stakeholders the direction of the Decarbonising Zone and emerging projects that could be undertaken to address opportunities and identified in phase one.

Feedback and monitoring
Providing feedback on the outcome of phase two engagement and consultation, setting out the final vision for the Decarbonising Zone and explaining how community and stakeholder input has influenced the plan.

Engagement during Do Phase

Facilitate ongoing dialogue with communities and stakeholders so they are informed, engaged and, where relevant, involved in delivering the Decarbonising Zone projects.

Feedback and monitoring
Informing community and stakeholders about the **outputs** of individual Decarbonising Zone projects, informing about projects that may be scaled, clarifying how they can participate in the next phases of implementation.

Engagement during Review Phase

Encourage direct involvement of communities and stakeholders in the evaluation and review of the Decarbonising Zone. This could be through citizen science, deliberation, smart metering, citizen researchers, etc.

Feedback and monitoring
Informing community and stakeholders about the **outcomes** of individual Decarbonising Zone projects, involving communities and stakeholders in decision making about the next phases of implementation.

Commit

The Commit Phase is to enable you to set an initial vision for the Decarbonising Zone and to develop the appropriate governance structures.

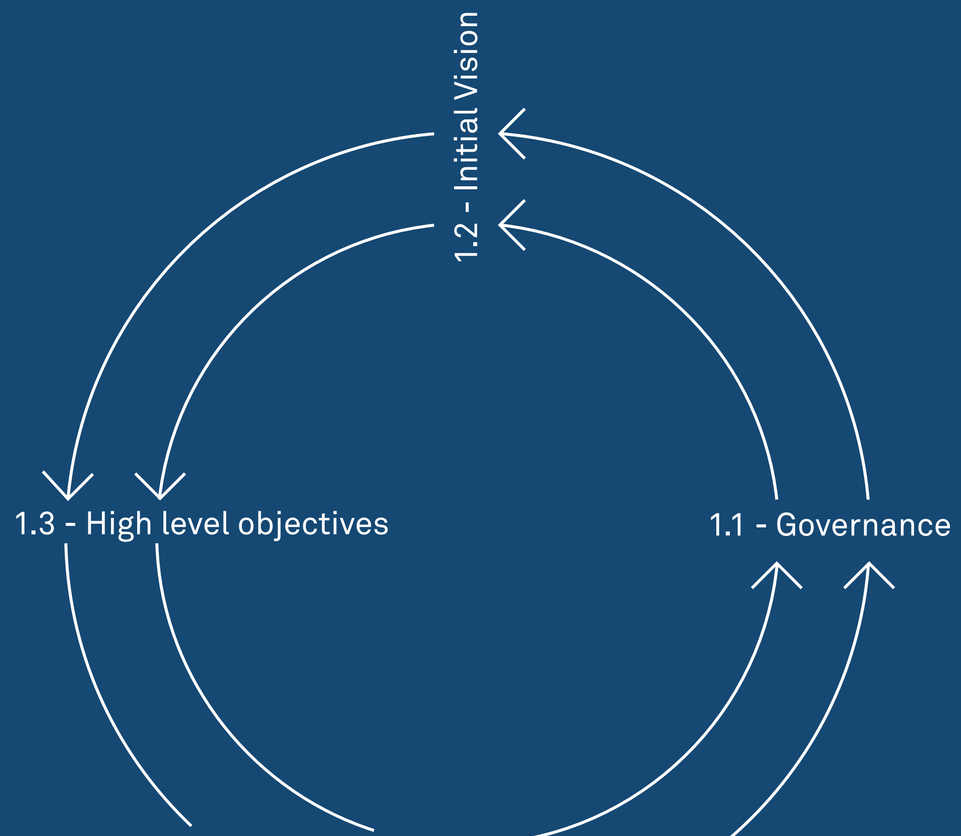
At the end of the phase you could have:

1. Identified the Project Owner/Project Lead and engaged with key staff and identified roles and responsibilities
2. Developed an initial but compelling, aspirational and realistic vision for the Decarbonising Zone (strategic narrative)
3. Identified initial high level objectives

Key questions to ask before you start:

1. Is there political and executive support for this Decarbonising Zone?
2. Have you established an approximate timeline for delivery?
3. Are there resources in place/do you need to obtain further support?

Commit



Key tasks - Minimum actions to consider

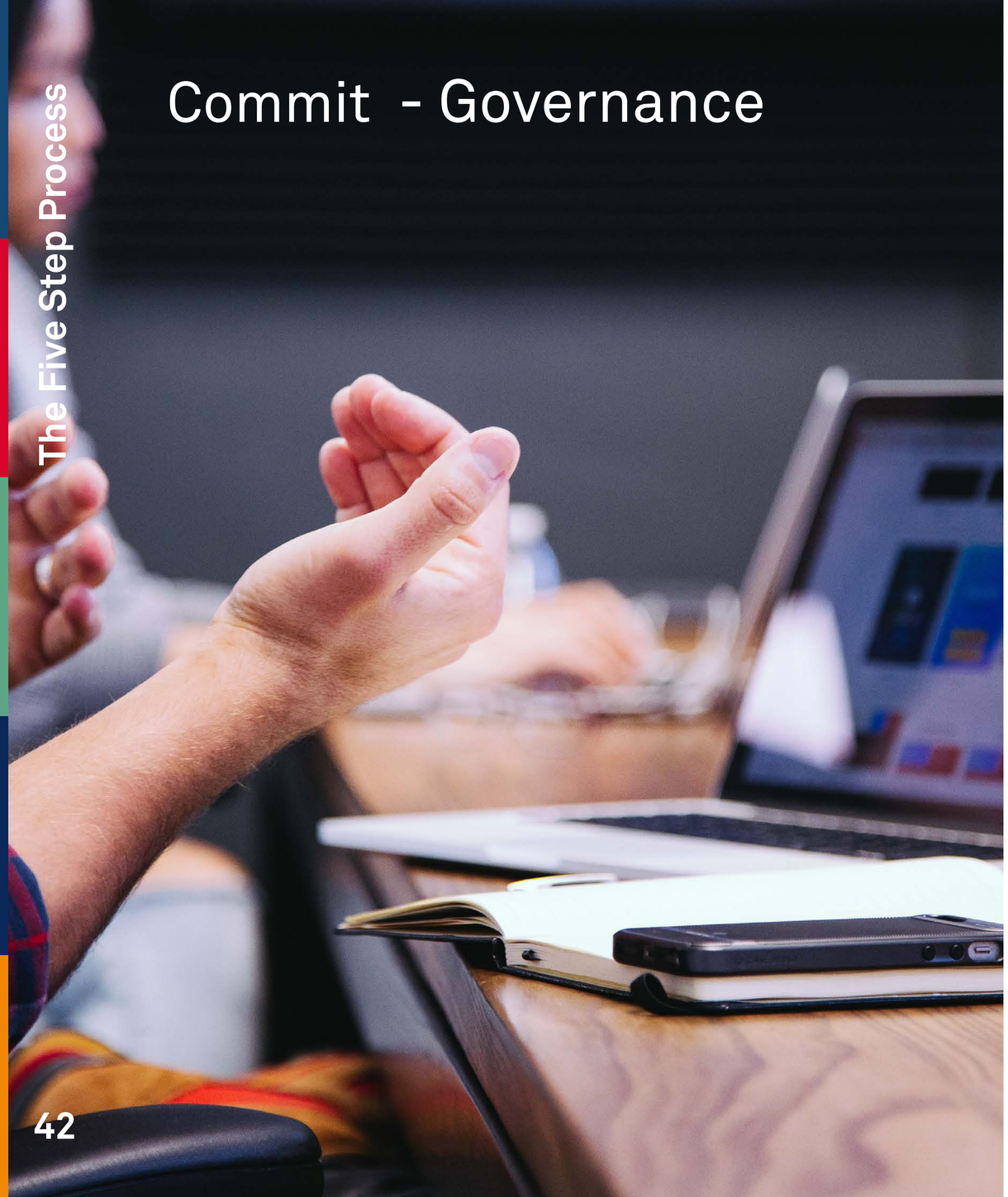
At this stage the Local Authority should establish a clear commitment to collaborating on the implementation of the Decarbonising Zone, developing the appropriate **governance structure** for developing a portfolio of innovative low carbon actions that can be implemented and scale beyond the Decarbonising Zone.

Local Authorities will also need to start articulating the **purpose, intent, and high-level strategic vision** for the Decarbonising Zone.

This high-level vision is not an end point but a basis for engagement with internal and external stakeholders and communities. This vision will adapt as the implementation of the Decarbonising Zones evolves.

A key outcome of this stage will be securing political and executive support, establishing commitment, and providing leadership and resources.

Commit - Governance



Decarbonising Zone Programme Owner

The implementation of Decarbonising Zones will span multiple Local Authority departments and functions, but all staff can have a role to play.

For effective, cross-departmental action, identify a **'Programme Owner'** with the seniority and influence to implement change, for example Director of Service or Senior/Executive Engineer.

They may be supported by an elected official with a responsibility or role in strategic policy committees dealing with Climate and Environment.

The "Programme Owner" of Decarbonising Zones should have some of the following characteristics e.g.

- **Be senior, in an established role and respected**
- **Be able to foster positive engagement while having strong existing relationships across the Local Authority and wider community**
- **Be able to lead with authenticity and empowered to take decisions and where necessary escalate issues to the Local Authority executive**
- **Be well resourced through a dedicated team**
- **Be able to listen to key stakeholders, understand local or sectoral challenges, as well as climate policy commitments**
- **Be able to identify the multiple systems requiring change**

Commit - Governance

Core Delivery Team

There will need to be a core delivery team (steering role) of people whose focus is to plan and facilitate implementation and mobilise support across the Local Authority, monitor progress, explore opportunities for innovation, challenge business as usual approaches and evaluate outcomes.

While there may be different “project owners” as the portfolio of decarbonising actions grows, it is important to work with all relevant stakeholders and communities, understand their needs, interests, and priorities and to develop shared objectives for the Decarbonising Zone. This core team will comprise of a mix of Local Authority staff but can include external representatives from communities and other stakeholder groups, including the private sector. This core team can play a steering role while providing both technical input and community representation. Each Local Authority can decide the size of the delivery team and the type of external stakeholders that sit on it.

The Decarbonising Zone ‘owner’ should act as the chairperson for the group but be supported by a secretary. A consistent structure could be developed around this delivery team with fixed meeting dates set for each year, having agenda led meetings and consistent minutes of previous meetings circulated. The delivery team may administer the overall programme management documentation (e.g. RACI Matrix).

Decarbonising project teams

The purpose of these project teams is to deliver specific projects that the Delivery team identify (similar to task and finish groups).

Decarbonising project teams will have a project lead/owner, that ideally sits on the Core Delivery Team, a project manager and other team members as necessary, and work alongside any external contractors.

These teams could be developed around specific skills requirements (technical and socio-economic) and establish clear objectives, finances, timeframe, outcomes and outputs.

The project lead/owner will be responsible for ensuring that the project is delivered and that it aligns with the overarching vision of the Decarbonising Zone.

The Decarbonising project team only exists for the duration of the project and when the project is delivered and evaluated the team is disbanded.

Commit - Vision

Setting a vision for your Decarbonising Zone is the opportunity to articulate how the Local Authority intend to take climate action in the coming years, what it hopes to learn and inspire communities and stakeholders to get involved. The vision could align with local and national climate policy ambitions and targets but present a clear narrative for the Decarbonising Zone that is meaningful to everyone living and working in the area.

The vision could create a shared understanding of climate action and raise awareness around the scale of changes required and how these will be tested in the Decarbonising Zone.

The overall aim should be to build a compelling, aspirational and realistic vision for a transition to a low carbon future for a specific area, supported by consensus amongst stakeholders. This will mobilise collective resources and stakeholders.

Including a wide range of stakeholder views in the process of setting and reviewing visions and targets, from politicians down to community engagement and individual residents.

For example, a high-level vision could be:

"To develop a Decarbonising Zone that shows how our city/ county will transition to an affordable and decarbonised energy system while supporting Ireland's ambition of net-zero carbon emissions by 2050".

Commit - Objectives

Establishing outcomes and objectives will be an important step to achieve the vision. Objectives in the medium and longer term are required to drive long-term decision-making and transformation.

This task can be undertaken by the Core delivery team.

For Decarbonising Zones to be successful, there is a need to reduce carbon emissions, generate more local renewable energy and change the way we plan for transport and other key areas of energy demand.

Targets may already be set for some Local Authorities through the national climate policy process, Local Authority Charter, or Climate Action Plan.

These can be reviewed to ensure they remain appropriate for the Local Authority and are consistent with national decarbonisation objectives.

A key focus of the objectives should be on decarbonisation, but they can also aim to achieve other co-benefits and deliver on local priorities, such as:

- **Developing stronger networks and coordination with other climate related activities**
- **Broadening awareness of Local Authority climate policies, strategies and plans**
- **Encouraging economic growth, investment and employment**
- **Delivering social impact and a just transition e.g. energy poverty and affordability of energy**

Commit - Tools

This is a summary of key tools that can be used, it includes an indication of the time, resources and skills required to use each tool, as well as scenarios or groups that the tool would be most appropriate to use with.

Tools overview

Tool	Objective	Description	Time	Skills	Resource
Outcome mapping	Vision setting	Outcome mapping is a tool to plan your key objectives based on what is in the capacity of the Local Authority (and Decarbonising Zone) to change	Low	Medium	Low
Self-assessment	Resource identification	This is a tool to assess your capacity, skills and resources	Low	Medium	Low
Develop SMART Targets	Vision setting	This tool allows you to develop initial measurable targets that can be evaluated against the implementation of the Decarbonising Zone to determine if your objectives have been achieved. The targets should be SMART (specific, measurable, achievable, realistic and time bound) and they should translate a vision into concrete objectives.	Low	Medium	Low
Co-design workshops	Vision setting	Co-design workshops bring together different perspectives to rapidly develop initial ideas and concepts	Low	Medium	Low

Identify

The Identify phase is to enable you to start identifying opportunities for emission reduction; identify leverage points where change can occur, assess climate risks; understand linkages between Local Authority, community and stakeholders.

At the end of the phase you could have:

1. Identified, prioritised and, if possible, engaged with key communities and stakeholders
2. Developed an understanding of the Local Authority area's current energy system, energy demands and other relevant characteristics
3. Created a spatial representation of the above
4. Considered how energy and emission data will be collated, assessed and used
5. Understood community and stakeholders' interests, priorities and ambitions for decarbonisation
6. Developed initial objectives to achieve the vision

Key questions to ask before you start:

1. Have resources been identified e.g. staff, finance and skills?
2. Have data sources and gaps been identified? E.g. energy/emission data
3. Has the level of interaction with the community and stakeholders been decided – inform, consult, involve
4. Have the priority principles of engagement been discussed?

The Five Step Process

Identify

Key tasks - Minimum actions to consider

The development of a Decarbonising Zone requires an evidence-based approach. The Local Authority will need to identify cost effective and impactful opportunities for emission reduction; assess and manage climate risks; understand linkages between Local Authority, community and stakeholder activities that can be leveraged to achieve impact at scale.

When developing the evidence base, some of the key issues to understand include:

- **The current and future energy demand of the Local Authority area, or just the identified Decarbonising Zone (e.g. SEAI M&R Data, bespoke inventory)**
- **The key sources of Greenhouse Gas emissions within the Local Authority area (SEAI M&R Data, bespoke inventory)**
- **Likely climate risks and adaptation actions being planned or in place (desk research, stakeholder and community engagement)**
- **The capacity of the Local Authority to meet the vision, objectives, and targets for the Decarbonising Zone (strategic review)**
- **The needs and expectations of stakeholders and communities (stakeholder and community engagement)**
- **The local context and policy commitments (strategic review)**

Identify - Energy Demand

By taking an evidence-based approach, the Local Authority can better understand energy consumption and emissions, identify opportunities for emission reduction, undertake forward and scenario planning as well as track progress overtime.

The first step is to understand the current situation (buildings, energy demand, heating systems, etc.) to develop a local area representation. This is essential to inform what changes are required to make the necessary low carbon transition.

Building up a representation of an existing local energy system accurately can be challenging. The key challenge relates to data, as relevant energy and emissions data is not readily available or may not exist yet. Emissions data at Local Authority organisational level is published annually by SEAI but this may not include the majority of emissions in the Decarbonising Zones, or Local Authority area.

Local Authorities can develop a bespoke inventory of energy and emissions to allow a more detailed evidence base. Using a data framework, such as an SEAI Energy Master Plan, allows for the creation of a spatial picture of energy demand. The Energy Master Plan allows for the collation of available data in a structured format, and it supports decision making. It can also visualise energy network assets, e.g. location, capacity, and relationship to buildings.

At a high level, the SEAI Energy Master Plan approach identifies and quantifies several key factors, such as:

- **Domestic building types, numbers, locations and heating systems**
- **Industrial and commercial building numbers, locations and uses**
- **Local constraints such as heritage sites, conservation areas and listed buildings**
- **Local Authority buildings with high potential for emission and energy reduction through retrofit or buildings that can act as anchor loads for district heat networks**

Energy Master plans can be advanced to include:

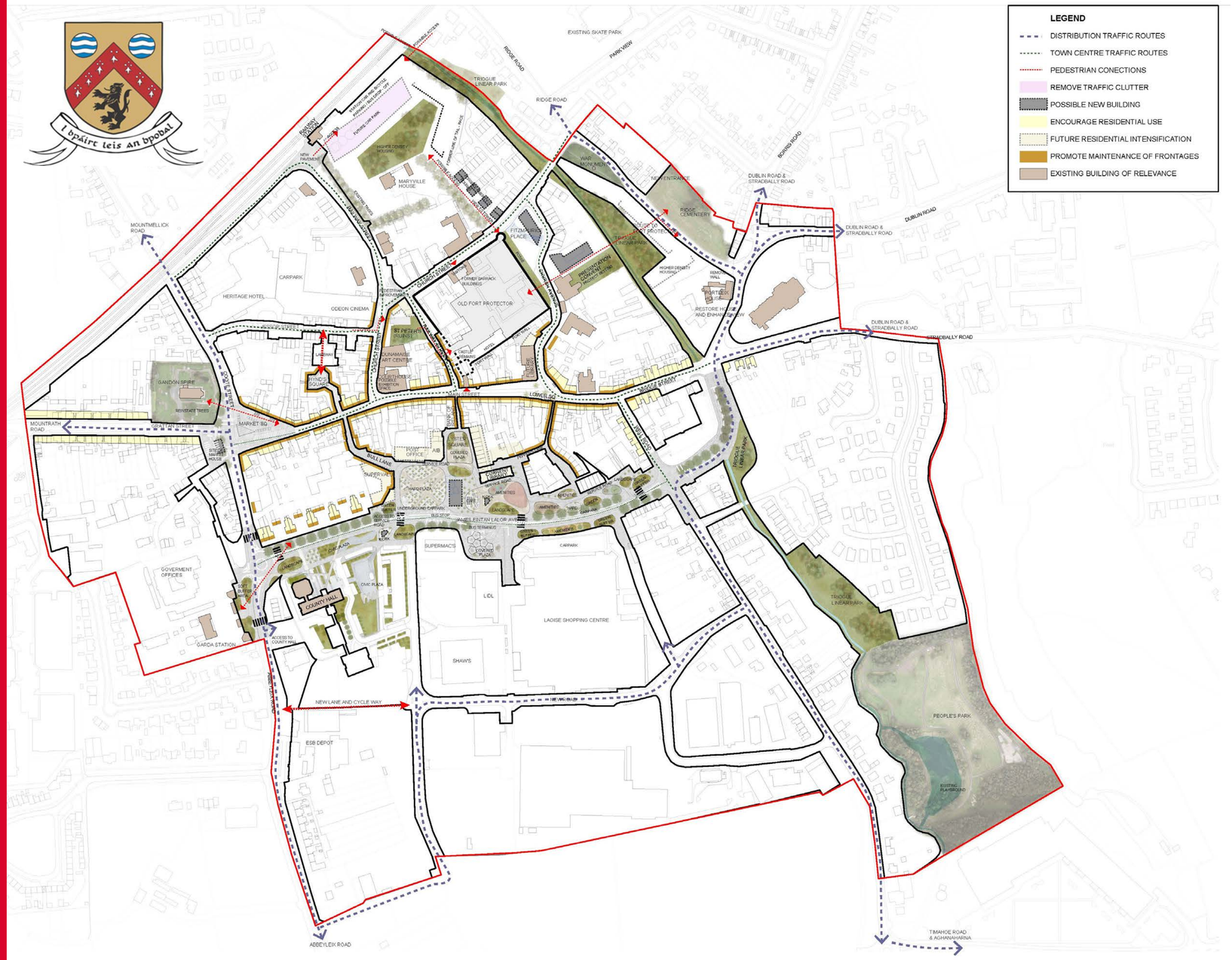
- **Current energy networks, their capacities and the buildings connected to them**
- **Projections of future energy demands, including from electric vehicles and other growth demands**
- **In process developments, City and County development plans and other spatial planning considerations**
- **Improved Greenhouse Gas emissions profile and inventory**
- **Combined building performance and socio-economic data (e.g. income, deprivation index)**
- **Improve evidence base for future energy infrastructure e.g. electric vehicle charge point locations, potential district heat network locations**
- **Identify upstream energy considerations such as new housing developments**

It is worth noting that many Sustainable Energy Communities will have developed Energy Master Plans already and these could be reviewed as part of this process.

Identify - Energy Demand

Building up a spatial picture of the local area energy system can be informative and can benefit Local Authorities in several ways.

The data gathered can be collated and presented graphically and spatially to help communicate the scale and scope of the Decarbonising Zone. This provides the starting point from which to conduct analysis and the investigation of future local decarbonisation scenarios, and in turn the development of a Decarbonising Zone.



Identify - Local context

Understanding the existing local policy context in relation to climate change and community development will help you to identify specific challenges and opportunities that could be addressed in your Decarbonising Zone.

This should ideally be done during the first stage of Decarbonising Zone development as part of the vision setting process and assessment of local context and priorities.

Find out what climate commitments have already been made at the local level and the status of any plans approved or in development.

Ideally understand the types of actions promoted through these plans. It's also helpful to try and gauge how ambitious your local plan is compared with the sorts of interventions being promoted at the National level.

You could also seek to understand how any existing plans conflict with the net zero target, and whether there is potential to mitigate this in your Decarbonising Zone.

Identify - Stakeholders

The design and implementation of a Decarbonising Zone is a collaborative process involving multiple stakeholders and communities, but the process and its outputs will need to be owned by the Local Authority.

The first step in the process is to identify, prioritise and engage with relevant stakeholders and communities, hard to reach groups, organisations or individuals that will be of value in planning the Decarbonising Zone.

Stakeholder and community engagement should be a continuous process which starts early, continues throughout implementation and the review period. It may be helpful to:

- **Undertake stakeholder and community mapping**
- **A stakeholder and community prioritisation appraisal (categorised by influence, impact and interest)**
- **Hold workshops to gather insights and data, discuss quantitative and qualitative aspects of the Decarbonising Zone, build alliances and support**
- **Prepare a Stakeholder Engagement Plan to establish a sequence of engagement with priority stakeholders and communities.**

The plan can set out types of communication to be used with different stakeholders, the nature of involvement they are expected to have and at what stage, and the overall aim of engagement with each relevant stakeholder.

Local Authorities should be looking to develop new networks with relevant stakeholders as well as strengthening existing networks.

Decarbonising Zones can only be achieved through collaboration, and they cannot be viewed in isolation from the wider Local Authority area and national energy system.

The Decarbonising Zone process can support communities and other stakeholders by providing insight into future energy infrastructure changes and implications of the relative investments being made. While they are test beds and living labs, it is essential that Decarbonising Zones are not implemented in isolation from the City and County Development Plan and other key Local Authority strategies and policies.

The stakeholder and community engagement could:

- **Enable further consensus building around which actions should be implemented**
- **Share evidence base so that communities and stakeholders can engage with, plan for, invest in and deliver the decarbonisation projects**
- **Identity opportunities to deliver Decarbonising Zones in collaboration with others**

Identify - Tools

This is a summary of key tools that can be used, it includes an indication of the time, resources and skills required to use each tool, as well as scenarios or groups that the tool would be most appropriate to use with.

Tools overview

Tool	Objective	Description	Time	Skills	Resource
Energy Masterplan / Baseline	Identify	To develop a technical baseline using existing data is established using an Energy Master Plan and socio-economic baselines are established by completing community surveys.	Medium	High	Medium
Stakeholder database	Identify	To keep track of the communities and stakeholders you are seeking to engage with	Low	Medium	Low
Stakeholder mapping / prioritisation appraisal	Identify	Mapping existing networks to develop a list of stakeholders and the relationships between them	Low	Medium	Low
Climate vulnerability mapping	Identify	To map members of the community with different characteristics against key climate hazards.	Low	Medium	Low

Plan

The Plan phase is to enable you to identify a portfolio of decarbonisation actions (what), develop a pipeline for delivery (when) and to put a structure in place for implementation (how).

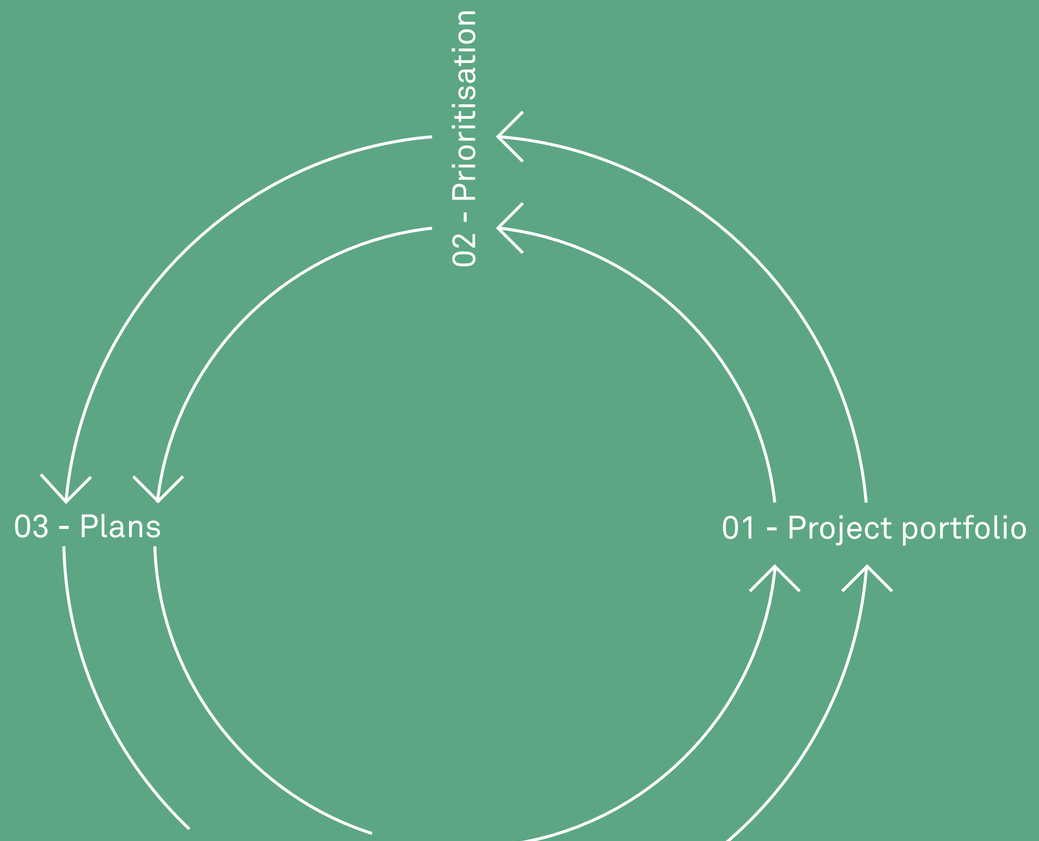
At the end of the phase you could have:

1. Developed a short term implementation plan
2. Determined roles and responsibilities to progress the Decarbonising Zone, in collaboration with communities and stakeholders
3. Established how you will communicate with your communities and stakeholders

Key questions to ask before you start:

1. Have we shared lessons from previous decarbonisation projects, and the challenges faced in engaging communities and stakeholders?
2. Will the Local Authority have an advisory role, implementation role or a combination of these?
3. Has the Local Authority conducted internal training, if necessary, to build understanding and skills?

Plan



Key tasks - Minimum actions to consider

Decarbonising Zones require a **portfolio and pipeline of projects** that match the complexity and scale of the climate challenge.

Decarbonising Zones should not reinvent the wheel for the sake of it but should be strategic and focused on changes that could lead to large scale emission reductions.

The portfolio of projects needs to address leverage points and **prioritise primary focus areas** for decarbonisation and adaptation identified in the “identify stage”.

Delivering the portfolio and pipeline of projects within the Decarbonising Zone requires a **plan that sets out what needs to happen, when it will happen, who will be involved, and how will it be implemented.**

For some Local Authorities it may be more appropriate to integrate the plan for Decarbonising Zones into other plans and strategies, such as their Climate Action Plan, rather than create another document.

The plan can build on the “identify phase” by allowing the Local Authority to investigate multiple decarbonisation scenarios. These scenarios could take account of how the Decarbonising Zone can help deliver wider development and regeneration objectives of the Local Authority.

Plan - Project portfolio

Decarbonisation project portfolio

The portfolio of projects will include multiple decarbonising innovations and solutions and may incorporate new technologies, behavioural changes, new approaches to community engagement, policy innovation and skills development.

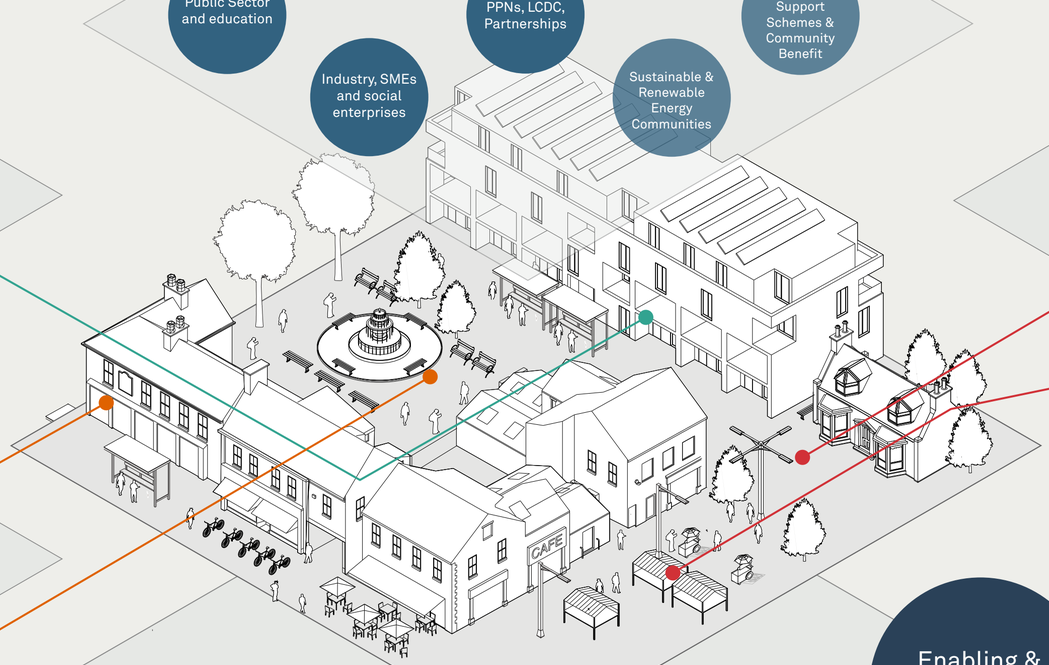
Developing the portfolio of projects could be built on estimates of the potential impact on decarbonisation and other climate risk profiles. They could form part of an overall emission reduction goal and target.

The “pipeline” will allow the Local Authority to consider how projects can integrate and build on each other over time. The pipeline can make the scale of implementation require more manageable. For example, the early phases of the pipeline may include projects that are fully within Local Authority operational control and stakeholder influence, but later phases may incorporate other delivery approaches and external investment.

Given the pace of change and the urgency to achieve climate targets, it will be important to look at agile planning. This means that the plan need not be fully complete before starting with implementation.

There are going to be data and capacity gaps in the short term but developing the plan around the evidence available to the Local Authority is a legitimate starting point.

Decarbonising Zones
A Portfolio Approach



Buildings, public space and assets

Municipal district level renewal

Energy management, monitoring, DECs

Community retrofit/district renewal systems

Place-based systems, both material and energy flows

Transport, mobility & active travel

Demand managament measures

Mobility, logistics and public space

Active travel initiatives

Connected and smart telematics

Public, Partners & Enabling initiatives

Communities and formal Community groups

Other local authorities

Energy Cooperatives

Public Sector and education

PPNs, LCDC, Partnerships

Renewable Electrical Support Schemes & Community Benefit

Industry, SMEs and social enterprises

Sustainable & Renewable Energy Communities

Biodiversity Nature based solutions

Green & Blue spaces

climate resilience/urban adaptation systems

Managing our land, promoting local food

Rethinking the role of land use, planning and development

Enabling & complementary infrastructure

Data, GIS

grid balancing, frequency control)

Finance

Governance, Policies, strategies & plans

National & EU Climate policy - Mitigation & Adaptation

Local Areas Plans, Strategic Development Zones

Planning & built environment policy

City & County Development plans, LECPs

Co-Benefits - Examples

Economic

Local job creation

Revenue from energy generation (e.g. landfill methane capture)

Reduced price volatility for energy services

Cost savings to occupiers

Cost savings from energy and resource efficiency measures, demand management

Cost savings to building owners and occupiers

Reduced congestion

Reduced health costs associated with poor air quality

Municipal revenues (congestion charging, parking fees)

Social

Reduced fuel poverty

Improved health via reduction in outdoor air pollution

Improved mobility

Improved road safety

Reduced health impacts from air pollution

Improved quality of life

Healthier lifestyles

Reduced car dependency

Environmental

Improved air quality
Reduced landfill waste

Increased urban green space, biodiversity

Improved air quality (reduced PMs, SO2, NOx, other pollutants)

Reduced extraction of primary resources

Reduced land contamination

Plan - Prioritisation

The plan for the Decarbonising Zone should be ambitious but grounded in realistic and cost-effective delivery with a focus on projects that have the greatest impact for Greenhouse Gas Emissions reduction and climate adaptation.

The plan should articulate the potential co-benefits such as health and wellbeing, air quality, employment and local economic development, resource efficiency and the circular economy.

The plan should also prioritise projects that:

- **Remove barriers to decarbonisation at a local level - e.g. structural, technical, financial, or cultural barriers**
- **Are inclusive and address, where possible, the just transition - e.g. benefits from decarbonisation are distributed across the community**
- **Focus on demonstration projects that deliver visible quick wins in areas of high footfall so communities and stakeholders remain engaged and motivated**

By considering these aspects, the Local Authority can prioritise Decarbonisation projects that are aligned with other local needs.

Plan - Budgets and Finance

The plan could include where possible estimated costs and benefits of each project. Forward planning for budget will be critical to developing a pipeline of projects and a long-term action plan.

In setting budgets consider the possibilities for payback and cost-offsetting or investment recovery through cost reductions (e.g. energy efficiency) or new revenue streams.

Where possible, quantify co-benefits of Decarbonising Zones and present as comprehensive a cost-benefit comparison as possible. For example, health & wellbeing, economic development and ecosystem service benefits can be derived through Decarbonising Zones.

Explore a variety of funding and innovative financing options to secure investment for implementation and review planned investments in Climate Action across the Local Authority to determine whether some outcomes of the wider climate related investments can be delivered through Decarbonising Zones.

Not all aspects of Decarbonising Zones will require additional investment from Local Authorities, for example incorporating decarbonisation targets in new developments or updating performance requirements in contracts for energy services, waste management and other services needn’t come at significant additional cost.

Decarbonising Zones should consider increasing economies of scale and improving by including projects in the decarbonisation portfolio that span different sections of the Local Authority or are delivered in collaboration with external public and private sector organisations, e.g. anchor employers.

Engagement Plan

Decarbonising Zones require collaboration with communities and other stakeholders. Local Authorities will not have the power to directly influence all emissions, but they are well placed to facilitate large-scale collective action. Local Authorities can also influence action indirectly through advocacy and encouragement, especially with regards to Scope 3 emissions (See Glossary).

At this stage, it is important to design an engagement plan to make use of key relationships and build new ones. This will build upon the initial stakeholder mapping and prioritisation undertaken in the "Identify" stage. Consider ways to involve the community early in the design of the engagement plan. This could be through surveys, outreach and open sessions or a citizen's assembly/jury to generate Input.

It is important that the Local Authority is clear from the beginning about how communities and stakeholders can participate in the Decarbonising Zone and what they can expect from the engagement.

The Local Authority should set out the objectives, expectation and aspiration of the engagement. This will help communities and stakeholders understand the scope of the Decarbonising Zone and what success will look like. Communities and stakeholders will need to be clear on the benefits as well as the risks and challenges that are unique to the city or county.
.

The approach should be relevant, appropriate and authentic to your Local Authority area but common principles that inform your approach should include:

- **Transparent about decision-making process and how feedback will be used and responded to**

- **Accessible and Inclusive to all, and everyone that engages is treated with respect throughout the process**

- **Communities and stakeholders can express their views openly, particularly young people**

- **Information is made available and communicated in a clear and straightforward way - consideration can be given to people whose first language is not English**

- **Engaging the community and stakeholders from across the area through bespoke mechanisms to ensure wide participation**

For the engagement to be meaningful, communities and stakeholders need to feel they have genuine influence over the development of the Decarbonising Zone and that input will be sought from a wide range of stakeholder groups.

Engagement Plan

Consideration should be given to how the Local Authority will engage those that do not ordinarily participate in consultation. The onus will be on the Local Authority to look beyond conventional methods of engagement that do not appeal to or actively prevent some people from engaging. The Local Authority should inspire them to get involved as this will help ensure that the vision and commitment to the Decarbonising Zone is shared across a range of stakeholders.

The two primary cohorts to consider here are:

Those that are prevented from engaging because of barriers such as disability, economic barriers, geographic isolation, language barriers or those that may feel they do not have a role e.g. recently arrived residents, refugees, or commuters. Once you understand the barriers that prevent engagement you can develop bespoke plans e.g. working with representative organisations, running dedicated events in relevant settings, developing targeted communication materials.

Those that are disinterested, disengaged and/or interested but may be time limited/restricted but do not face a specific barrier to engagement. Often these are not inspired to engage or do not feel that engagement activity is meaningful, and they will not be able to influence outcomes. The focus would be on making it as simple and accessible as possible to engage and using communication approaches that people can relate to e.g. social media.

Engagement tactics

Engagement tactics can reflect and build upon existing structures and approaches that are delivered within the town but should consider additional opportunities to engage more widely.

This could include:

- **Thematic workshops (on and offline) to explore and discuss general issues or specific aspects of your Decarbonising Zone.**
- **Working with established but informal community networks and organisations including sports and cultural organisations, youth networks**
- **digital engagement platforms that allow people to input and participate**
- **Pop-up awareness raising and engagement in community locations with high footfall e.g. local events, shopping centres, markets, train/bus stations**
- **Deliberative polling, opinion polling and market research to directly reach out to individuals, businesses and organisations across the Decarbonising Zone**

Communications plan

The Decarbonising Zone will need a communications plan and campaign to support it. Even if the Local Authority intends to achieve widespread community participation or is only interested in a more focused group of stakeholders, it should communicate the aspirations and vision of the Decarbonising Zone and explain how communities and stakeholders can participate in it.

The audiences for the communication and engagement plan will be identified primarily through the Identify stages but the plan needs to be updated and evolve as Decarbonising Zones move through implementation.

It may be appropriate to establish a communications and engagement steering group that can focus on both internal and external stakeholders. which is able to ensure that the key objectives of the project are being met and principles of engagement are upheld.

The communications plan could include a guide on tone of voice, framing of key messages and a schedule of communication releases to ensure that communities and stakeholders are properly informed. If possible, the communications plan should align with the communication plans of the Local Authorities so that messaging is consistent and that opportunities to bring the message to diverse audiences are sought.
The communications plan can be delivered through a wide range of channels, including:

- **Pre-existing digital communications or consultation platforms, to both host engaging content and to collate feedback**
- **Existing Local Authority channels (e.g. PPN newsletters)**
- **Local media through engagement with local journalists press releases or through targeted advertising**
- **Digital communications and engagement tools creating videos, podcasts, digital newsletters and webinars**
- **Existing Local Authority social media channels with established followers**
- **Paid-for and targeted social media advertising**
- **Outdoor advertising and presence at local events using public noticeboards, stands and advertising**
- **Newsletter/leaflets / direct mail**
- **Existing community and stakeholder networks. It may be possible to establish a ‘Decarbonising Zone Forum or Network’ which can support and promote engagement through the PPN, Sustainable Energy Communities and other enabling initiatives**
-

Plan - Structure

Overview	What is the vision of the Decarbonising Zone?
Scope	What is the Decarbonising Zone doing and not doing?
Schedule	Pipeline/Roadmap and Milestones or detailed plan showing what will be done, and when
Requirements	Details of what has to be done, i.e. how many, what size, where etc.
Roles and responsibilities	What are each of the people doing and what are they accountable for and to whom, including the Local Authority?
Assurance	How do you know everything is on track?
Governance	Who decides what and when?
Stakeholders	Who has an impact on the project (individuals, communities, organisations)?
Commercial	Procurement and contracts
Impact	What are the benefits? how are they managed and monitored?
Key risks	Highlight risks, how severe they could be, and what the mitigation action is
Dependencies	Consider both internal and external dependencies. For examples, other Local Authority projects, Local Authority Climate Action Plan etc

Plan - Tools

This is a summary of key tools that can be used, it includes an indication of the time, resources and skills required to use each tool, as well as scenarios or groups that the tool would be most appropriate to use with.

Tools overview

Tool	Objective	Description	Time	Skills	Resource
Scenarios / Project portfolio	Measurable vision	Scenario planning is a strategic planning method that helps when making flexible long-term plans.	Low	Medium	Low
Pop-up / On street discussion	Consult	To have structured conversations around specific topics.	Medium	Medium	Low
Community Jury / Panel / assembly	Consult	Large groups can be a less time-consuming way to engage multiple people and communities at once, often used earlier in a plan/policy development to gather initial feedback.	High	Medium	Medium
Intercept surveys	Consult	Surveys are a versatile engagement method, to gain feedback on specific questions.	Medium	Medium	Low
Participatory budgeting	Co-Create		Medium	Medium	Medium
Semi-structured interviews	Consult	This is an intimate form of engagement, that can take the form of an interview or vox pop.	Low	Medium	Low

Do

The Do phase covers all aspects of implementation. There is no one size fits all solution for implementation, but should be focussed on the least cost and most desirable pathways to decarbonisation.

At the end of the phase you could have:

1. Identified decarbonisation projects that should be tested or investigated further before scaling up
2. Delivered some or all of the portfolio of decarbonisation projects
3. Established an approach for ongoing collaboration and coordination with communities and stakeholders

Key questions to ask before you start:

4. Has the Local Authority assigned responsibility for the delivery of each project to ensure consistency?
5. Has the Local Authority revisited the original high-level vision and objectives in case these have these changed/shifted?

Do

For Decarbonising Zones to be impactful and scalable they will need consistent support and strong leadership from Local Authorities.

They will also require the energy and enthusiasm from communities and stakeholders to be focussed on implementation and effective collaboration.

Key tasks - Minimum actions to consider

Decarbonising Zones will have a planning horizon of at least a decade and so the implementation will be an iterative process that can adapt to changing technological innovation, policy changes and social behavioural changes.

Through implementation, the Local Authority will continually evolve and adapt the strategy, supporting new initiatives and projects accordingly.

Failure of implementation is often due to lack of resources, finance, organisational support and leadership. The implementation team will need to engage technical staff and specialists from across the Local Authority early on when preparing business cases and feasibility studies, programming work, and drawing up tenders for external contractors or consultants, if required.

The difference from normal delivery at a Local Authority level is that decarbonisation needs to be fully incorporated into project plans, assessment and tenders.

Depending on the approach taken by the Local Authority, the implementation plan can focus on short term actions, for example over a 3-year period. This timeframe will allow for the implementation of market-ready solutions as well as test and demonstrate new innovations and understand how decarbonisation can be progressed.

Future plans for the Decarbonising Zone can focus on medium and longer terms, such as to 2030 or 2050, but it is critical that projects are implemented in the short term.

The implementation plan can factor in local capabilities (e.g. sustainable energy communities, industry and academia), regional ambition for climate action, whilst also maintaining an ongoing understanding of what is being delivered through other Decarbonising Zones.

Do - Tools

This is a summary of key tools that can be used, it includes an indication of the time, resources and skills required to use each tool, as well as scenarios or groups that the tool would be most appropriate to use with.

Tools overview

Tool	Objective	Description	Time	Skills	Resource
Deliberative Poll/ Survey	Consult	Survey opinions and opinion changes	Low	Medium	Low
Consensus Conference	Deliberate	Collective recommendations	Medium	Medium	Medium
Planning Cell	Deliberate	Collective position report / citizens' report	Low	Medium	Medium
Citizens' Initiative Review	Deliberate	Collective statement of key facts	Low	Medium	Medium

Review

The Review phase is to enable you determine if the decarbonising projects were implemented in line with plans, if intended outcomes were achieved and if the Local Authority and community gain a greater understanding of climate change and decarbonisation.

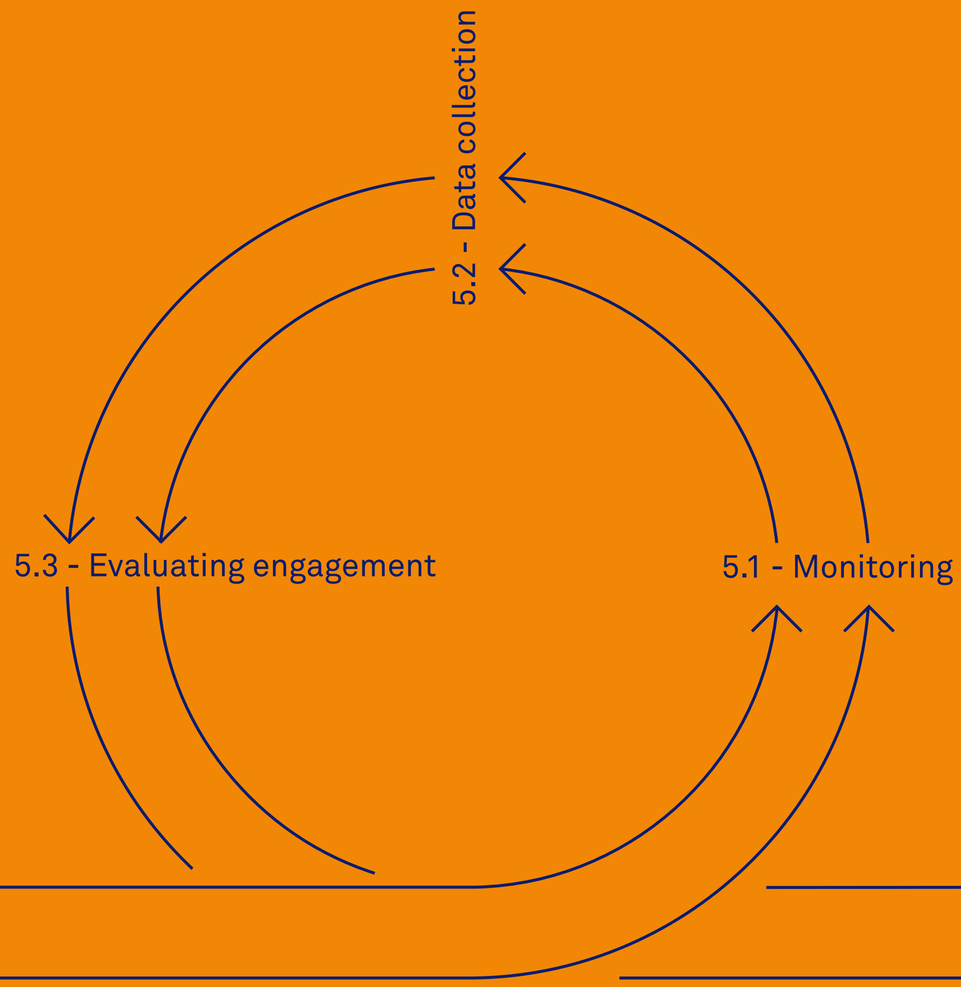
At the end of the phase you could have:

1. Agreed how outcomes of the monitoring process will be considered with communities and stakeholders
2. Established how you will communicate with your communities and stakeholders

Key questions to ask before you start:

1. Has a monitoring and review process been agreed and applied throughout the development of the Decarbonising Zone?
2. Has the core delivery team identified aspects of the Decarbonising Zone that could be tested or investigated further?
3. Has the core delivery team identified/agreed how outcomes of the review process will be considered by and communicated to communities and stakeholders?
4. Has the Core Delivery Team informed communities on how they have used their insights and what the next steps are?

Review



Key tasks - Minimum actions to consider

Decarbonising Zones need to use an evidence-based approach to delivery and use insights and learning gained to inform decision-making, particularly on what decarbonisation actions work and what aspects can be scaled city or county wide.

Through monitoring, data collection and sharing and evaluation, Local Authorities will be able to feedback to communities and stakeholders in order to explain how actions contribute to decarbonisation and net zero.

Review - Tools

This is a summary of key tools that can be used, it includes an indication of the time, resources and skills required to use each tool, as well as scenarios or groups that the tool would be most appropriate to use with.

Tools overview

Tool	Objective	Description	Time	Skills	Resource
Lessons learnt log	Evaluate	Management –To record the key lessons and outcomes, what worked and what did not work, and how these can be disseminated from the evaluation process	Low	Medium	Medium
Outcome evaluation	Evaluate	This approach maps your outcomes against your initial objectives to determine if they have been achieved	Low	Medium	Medium
Process-based evaluation	Evaluate	This approach uses internal staff and stakeholders to evaluate the process of engagement	Low	Medium	Medium
Participatory evaluation	Evaluate	This is an evaluation of the process of engagement rather than the impact or outcome of the activities.	Medium	Medium	Medium

Review - Monitoring & Evaluation

It will be essential to monitor, review and update the plans for the Decarbonising Zone over time.
It could be formally reviewed every three years with the plan updated, scaled back or aspects incorporated into wider Local Authority plans. Within the three-year review cycle, there may be shorter monitoring cycles e.g. quarterly.

The monitoring of the Decarbonising Zone will help the Local Authority know if they are meeting their desired milestones, achieving desired outcomes and to drive continued progress. It will have to consider key political, policy, emission targets and regulation change; technology developments; market trends and public behaviours.

Monitoring will support the evaluation of delivery, inform communications, and build evidence for further investment and more ambitious goals.

The review and monitoring process needs to acknowledge that the design of Decarbonising Zone will evolve gradually in the coming years and will need to be flexible to a range of different factors.

The monitoring could also identify potential negative impacts so that risks can be effectively managed. Where successful, scalable, and cost-effective decarbonisation actions are identified and have political and public support these can be developed into large-scale projects and developments.

Review - Platform for data

Using the broad Decarbonising Zones outcomes framework, Local Authorities can develop appropriate metrics and key performance indicators that help evaluate a range of identified impacts beyond the primary goals of decarbonisation and climate resilience.

The Local Authority could develop a single and shareable platform for gathering data. This could be a simple excel database and folder for storing relevant files.

As part of their review, the Local Authority can choose to update their emissions inventory, incorporate M&R data, Gap to Target data and climate risk assessments to take account of actions delivered, and to re-baseline for future work.

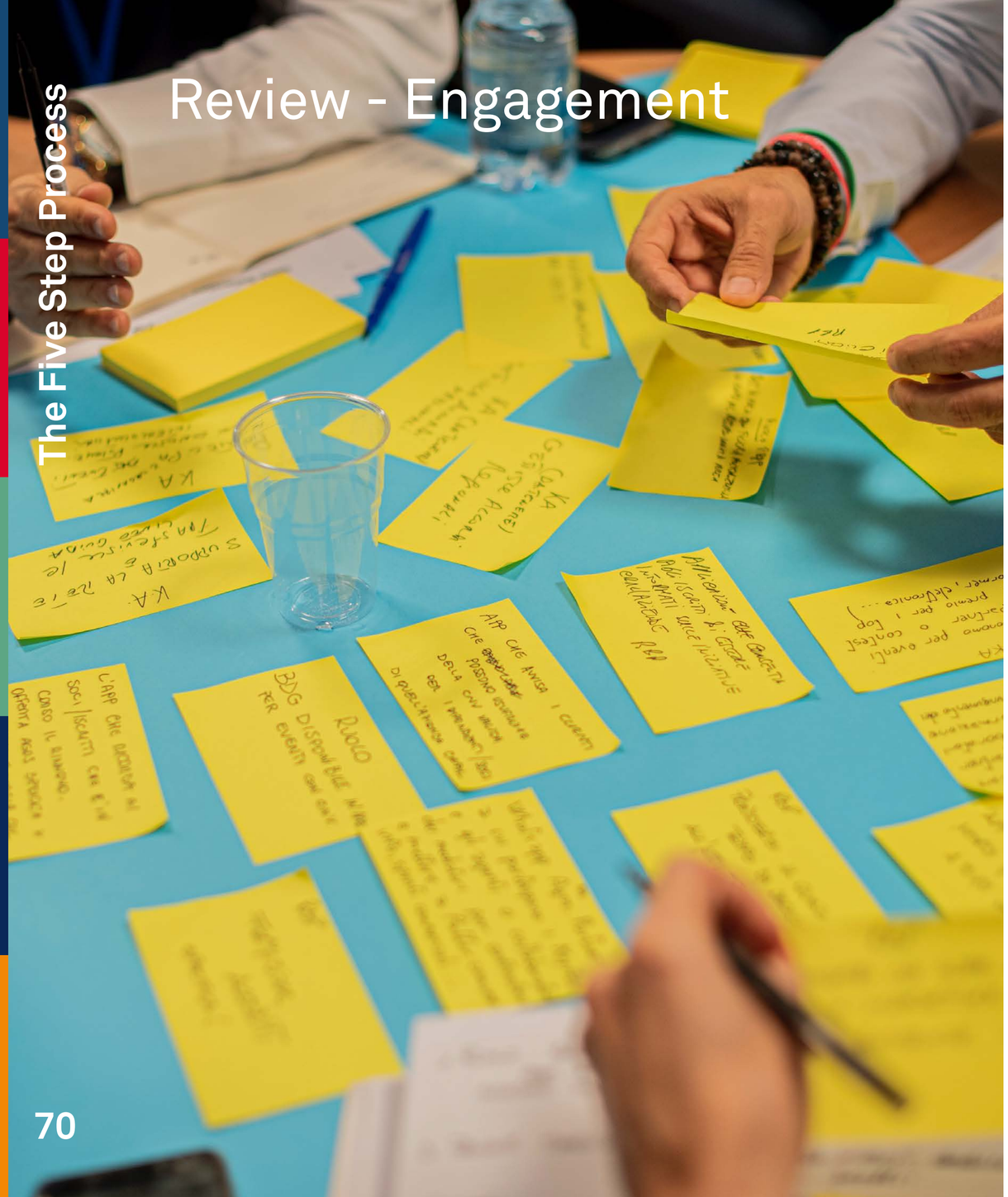
Through the decarbonising zone, Local Authorities may consider innovative ways of gathering the data, such as community researchers, citizen science, open data and machine learning.

The evidence and data you collect does not need to start with the Decarbonising Zone and can include previous engagement and consultation data.

The Local Authority may have delivered a public consultation around the City and County Development Plans, Local Economy and Community Plans or some other regeneration and redevelopment initiative.

There may also be publicly available data from consultations carried out by the PPN, Chamber of Commerce, Comhairle na nÓg, Local Enterprise Office, Business Improvement District, or similar.

Review - Engagement



Evaluating engagement

Evaluating engagement will need to be bespoke because all Decarbonising Zones have different challenges and priorities; population sizes and demographics; stakeholder networks and ways of communicating; scope and scale of activity; levels of engagement from community and stakeholder groups; and levels of resource available for engagement activities.

At a minimum, Local Authorities should be able to demonstrate how the vision and strategy for the Decarbonising Zones reflects the hopes and concerns of communities and stakeholders. This evidence could show how the Local Authority engaged and the steps taken to encourage wide participation.

A simple framework of questions would include:

1. **When engagement took place?**
2. **Who designed and delivered it?**
3. **What topics were consulted on?**
4. **What questions were asked?**
5. **What methods were used? (Online workshop, survey or questionnaire, focus groups, pop-up event)**
6. **What did people say - use both statistics and direct quotes or comments?**

Sustainable Energy Authority of Ireland

3 Park Place
Hatch Street Upper
Dublin 2
Co.Dublin
D02 FX65

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

SUSTAINABLE ENERGY COMMUNITIES