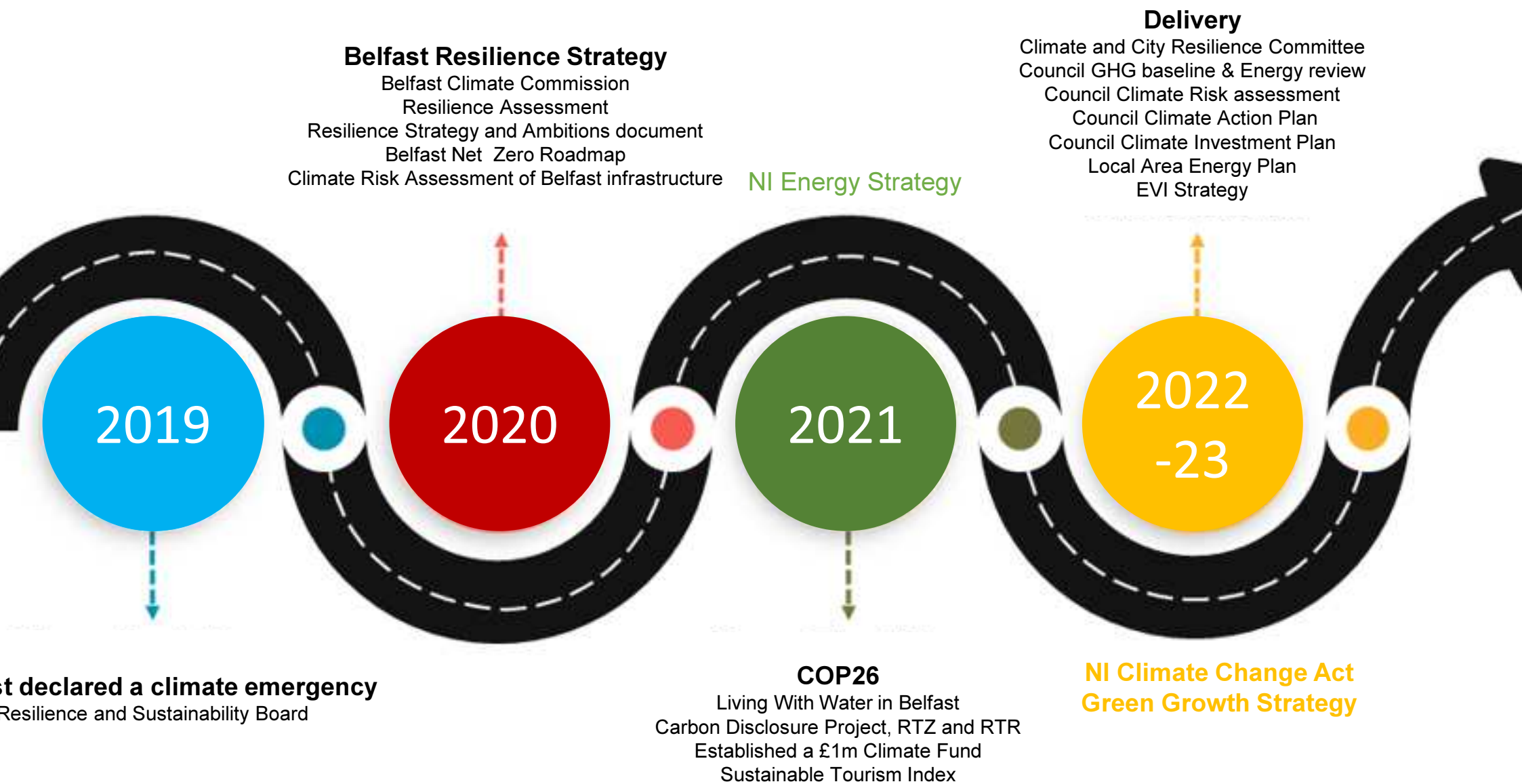




Supporting the transition to an inclusive, net zero-emissions, climate- resilient economy in Belfast

Debbie Caldwell, Climate Commissioner, Belfast City Council



Belfast's Net Zero journey

FUTURE PROOFED CITY

governance structure

Belfast
city wide

Belfast
City Council



Belfast Agenda

A sustainable city shared and loved by all its citizens



Resilience Strategy

To transition to an inclusive, net zero-emissions, climate resilient economy in a generation



Delivered by



Resilience and Sustainability Board

Advised by



BELFAST
CLIMATE
COMMISSION

Produce



City wide climate adaptation and mitigation plan



Our own climate adaption and mitigation plan by 2022



Supported by



Climate and City Resilience Committee



Supported by



Climate Plan Programme Board (BCC Officers)

Approval process



SP&R



Council

NI targets and key trends

15%

of generating capacity has to be turned off.



50%

of our electricity coming from renewable sources.



Northern Ireland needs to double its renewable generation by

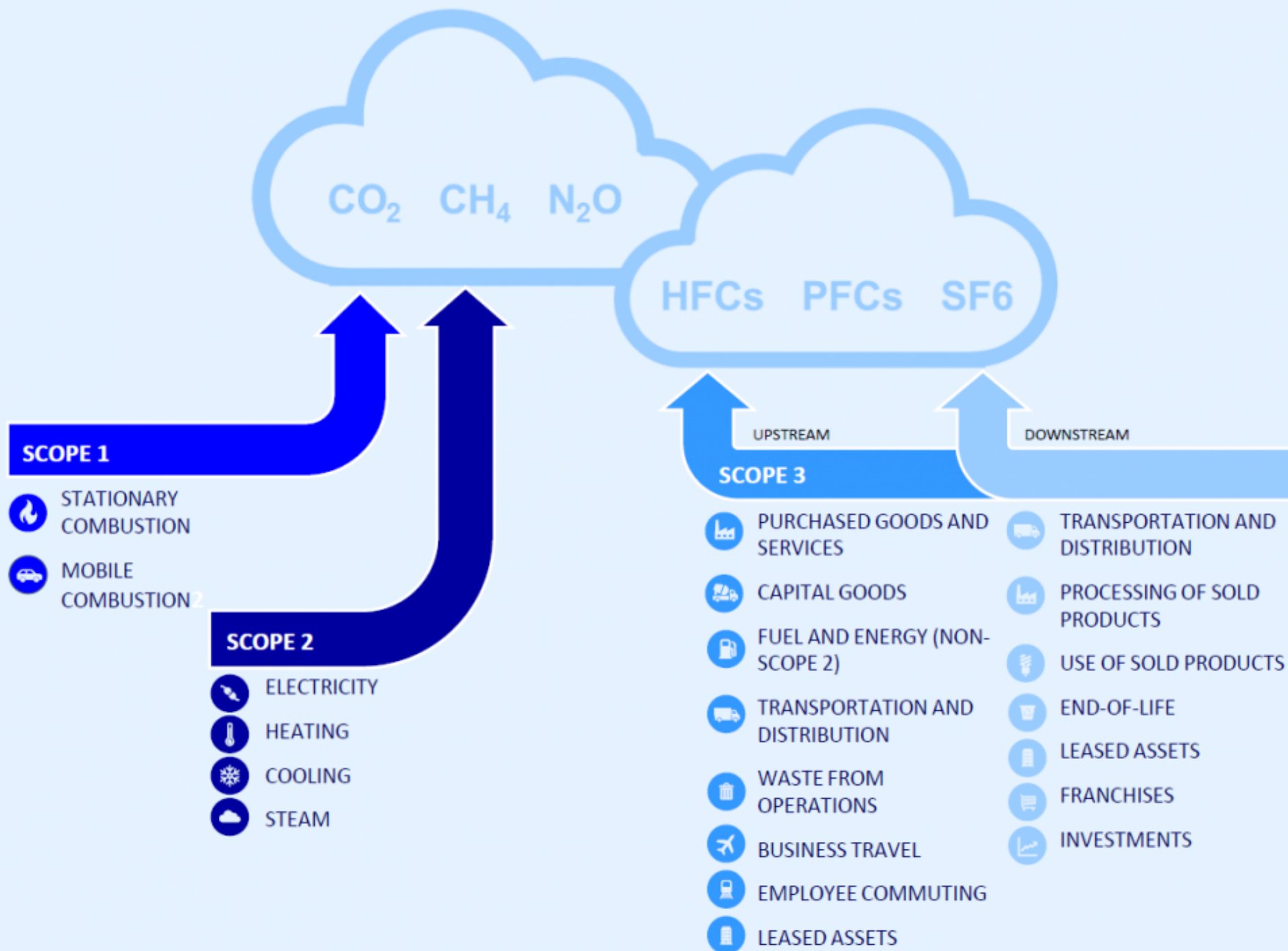
2030

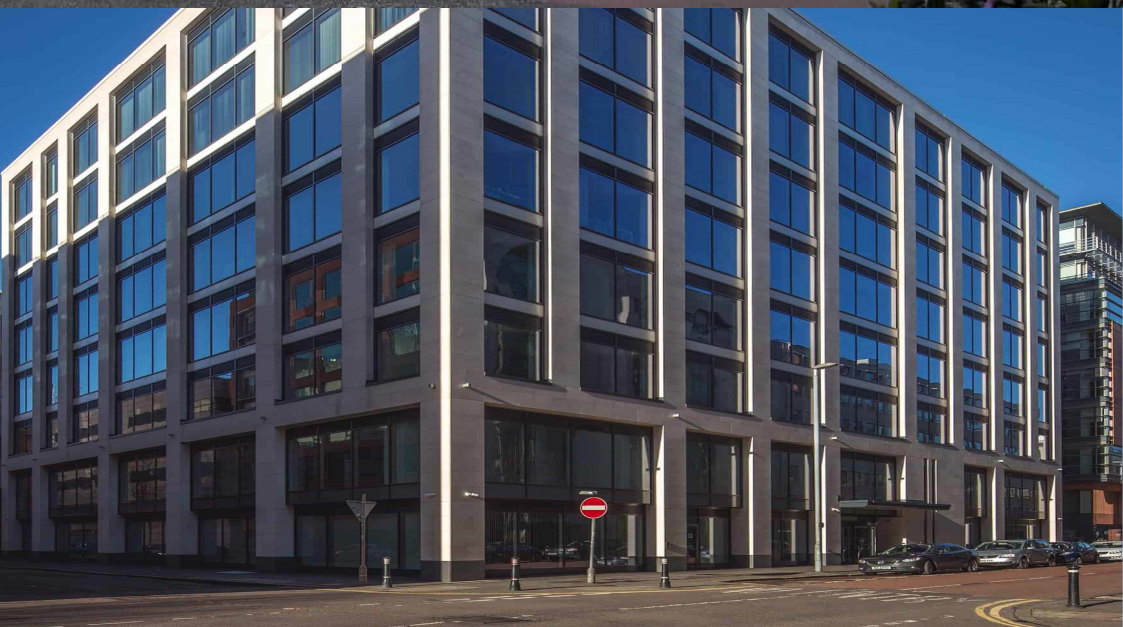


And reduce emissions by 48% by 2030 and reach net zero by 2050

What is the role of councils in delivering NI climate targets?

1. Showing leadership across our own estate and operations
2. Using the Council estate and procurement to drive change
3. Unlocking the economic, social and environmental benefits
4. Creating a value proposition for Belfast as a green city
5. Promoting place based interventions that enable a systems approach
6. Promoting behavioural change
7. Using place to foster collaboration and innovation





Climate Risk Assessment ("CRA")



Objective:

To develop a Climate Risk Assessment that will inform resource allocation and development of a risk register for BCC.

The specific objectives are to:

- ✓ develop climate risk assessment to enable BCC to identify and manage current and future climate;
- ✓ identify key risks, assesses the magnitude of climate impacts on the Council's assets, supply chains, infrastructure, and recommended actions and costs.

Climate Action Plan ("CAP")



Objective:

The overall objective is to develop a Climate Action Plan that enables BCC to reduce emissions and risks to current and future climate change.

The specific objectives are to:

- ✓ identify and prioritise climate actions that are feasible, impactful and cost effective;
- ✓ prepare a Climate Action Plan;
- ✓ develop a comprehensive monitoring, learning and reporting framework to track progress.

Climate Investment Framework ("CIF")

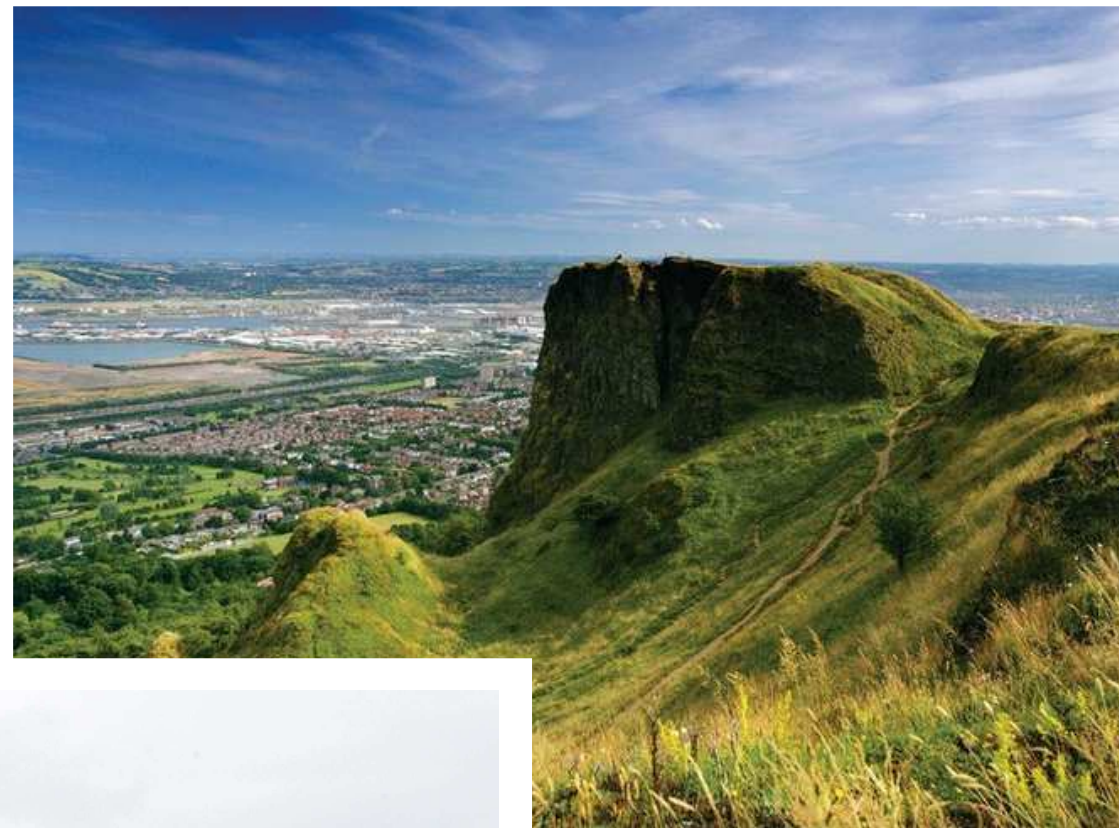


Objective:

To develop a Climate Investment Plan that enables BCC to deliver its Climate Action Plan.

The specific objectives are to:

- ✓ develop a fully costed long term investment plan so investments can be sequenced in a logical order and to enable accurate and effective financial planning;
- ✓ identify funding opportunities and develop a delivery plan to secure funding



ur approach

1. Start measuring and disclosing progress
2. Develop the evidence base
3. Start building a pipeline of projects
4. Strengthen coordination, collaboration, outreach
5. Start engaging with financial institutions and the investment community

**Build a
team**





Measuring, monitoring and reporting



The Responsible
Business Network
Northern Ireland



5C

Level of rise
we trigger
serious climate
change

14m

Tonnes. Belfast's
share of the
global carbon
budget 2020-50

5m

of
per year
d by

2030

The year we will
have used up our
carbon budget

42%

Decline in
Belfast's
emissions
since 2000

66% by 2025

80% by 2030

100% by 2050

Belfast - the road to

NET ZERO

3%
3%

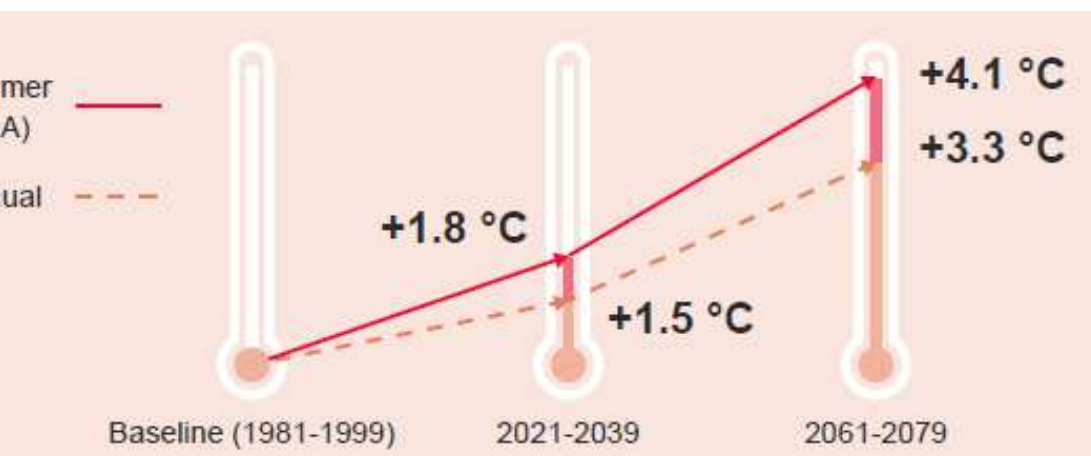
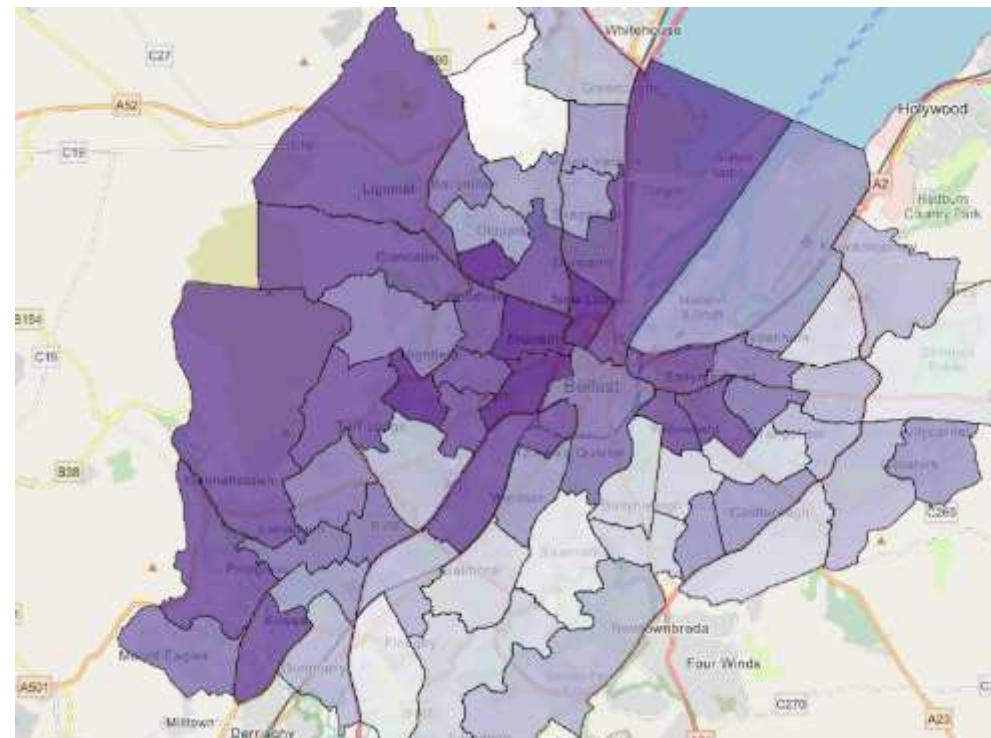
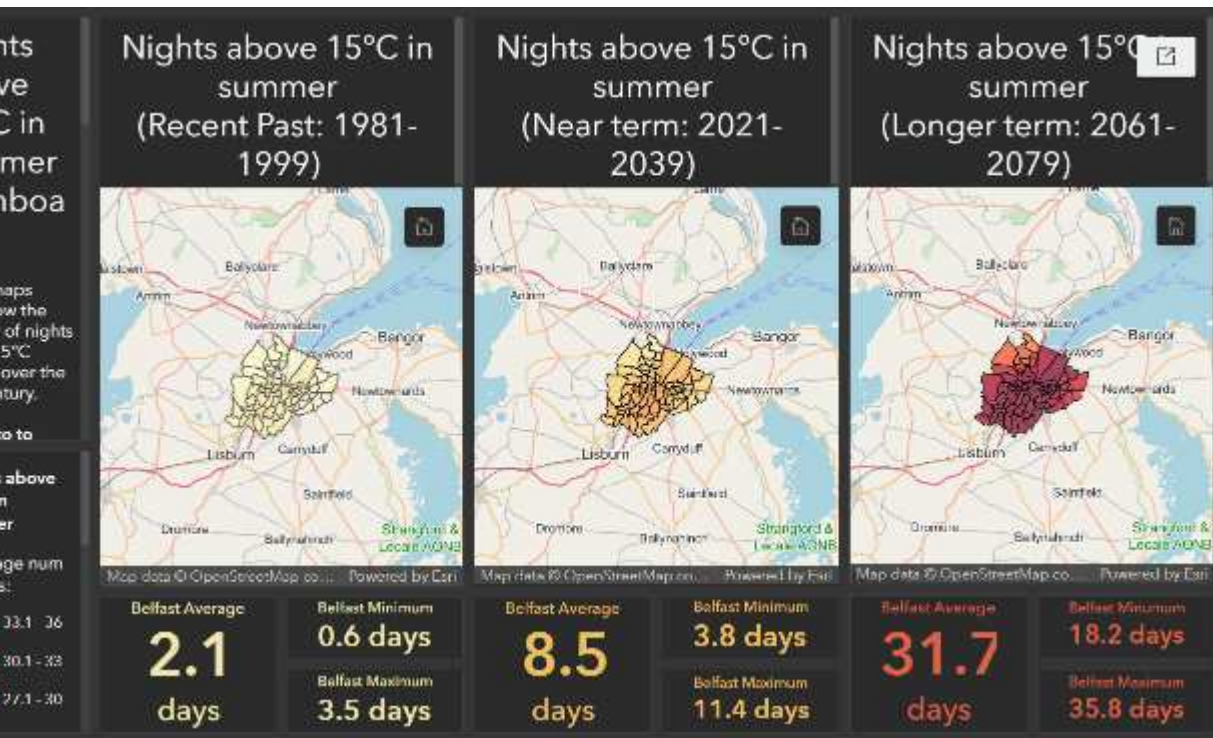


39
50

0%
9%



24
18



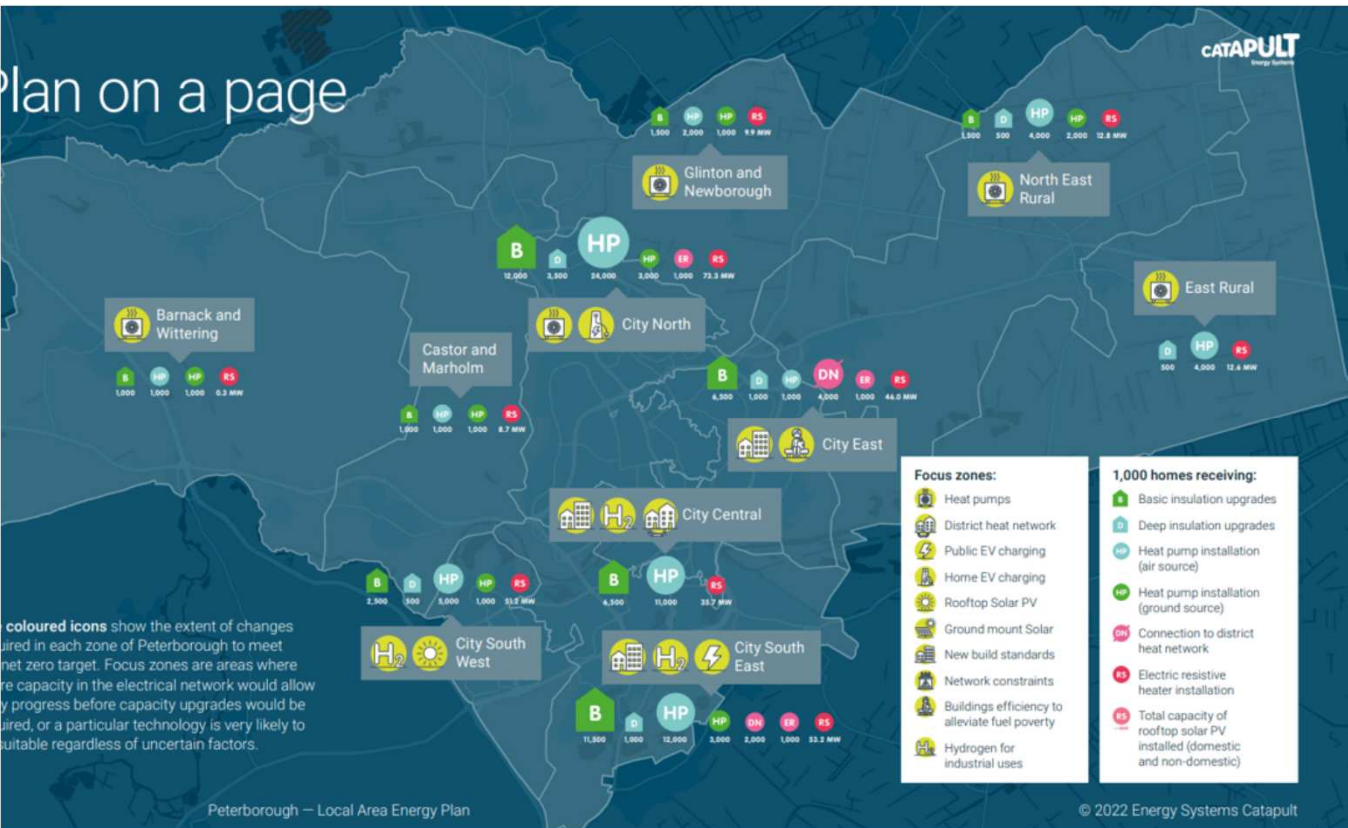
Heat maps for Belfast



OUTPUTS - EXAMPLES

Local Area Energy Plan for Belfast

CATAPULT
Energy Systems



Hydrogen opportunity area



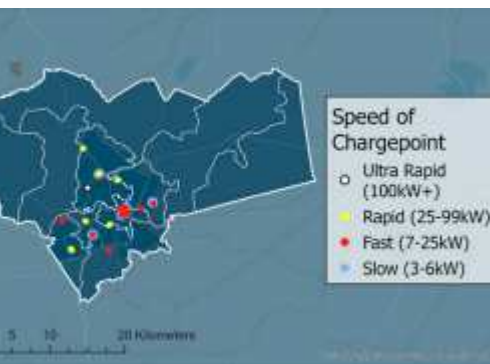
Domestic rooftop PV focus



Domestic heat pump focus zone



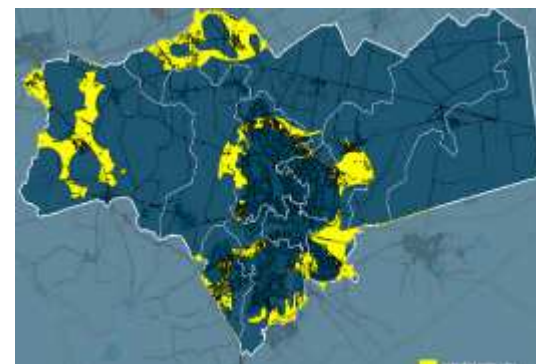
Heat network focus zone



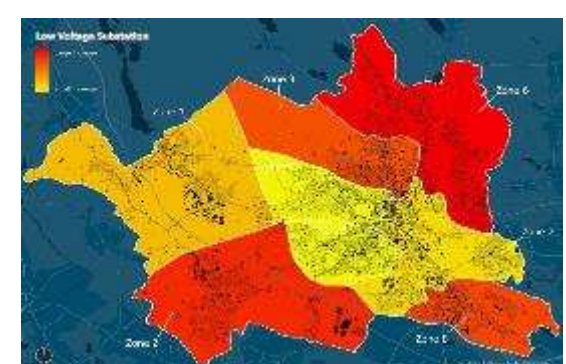
Electric EV charging hubs



Fabric retrofit focus zone



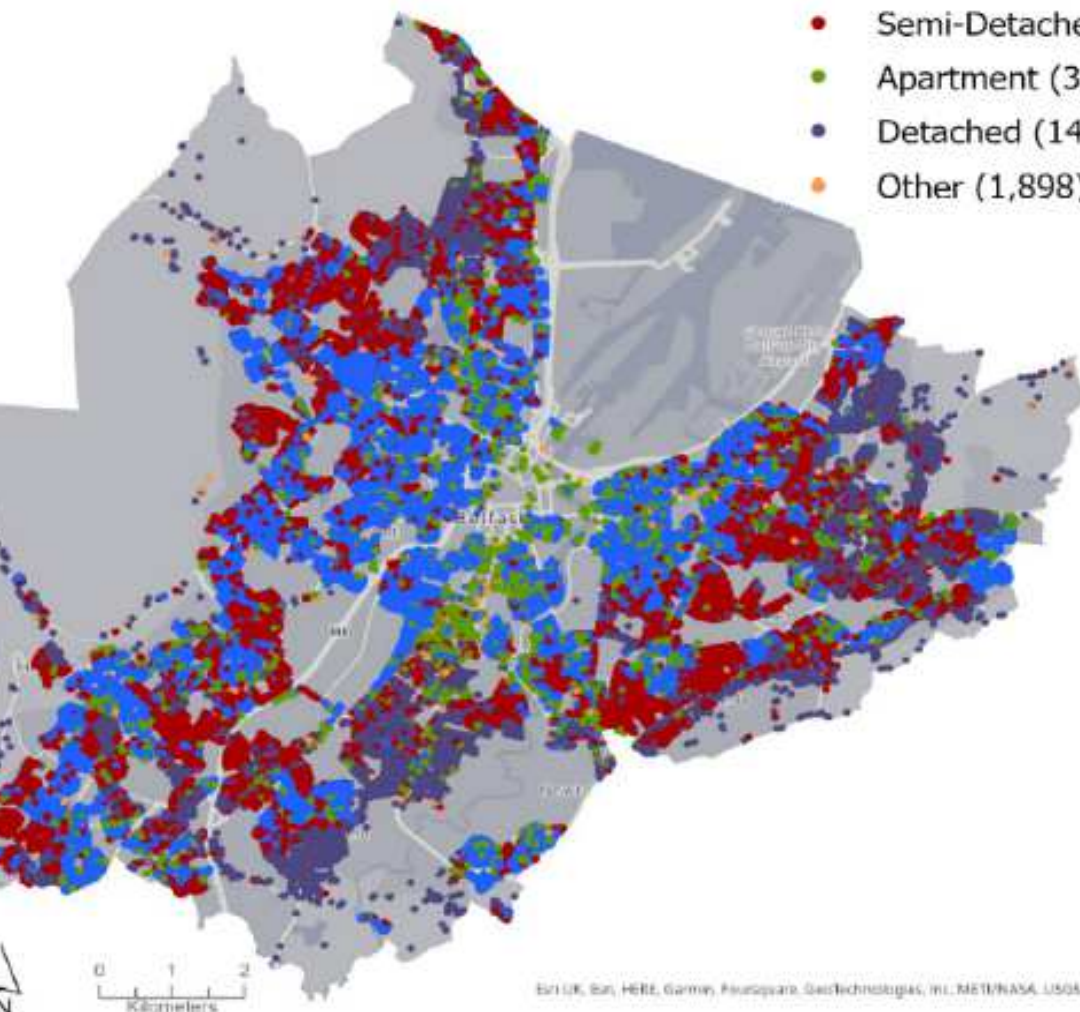
Large scale renewables opportunity areas



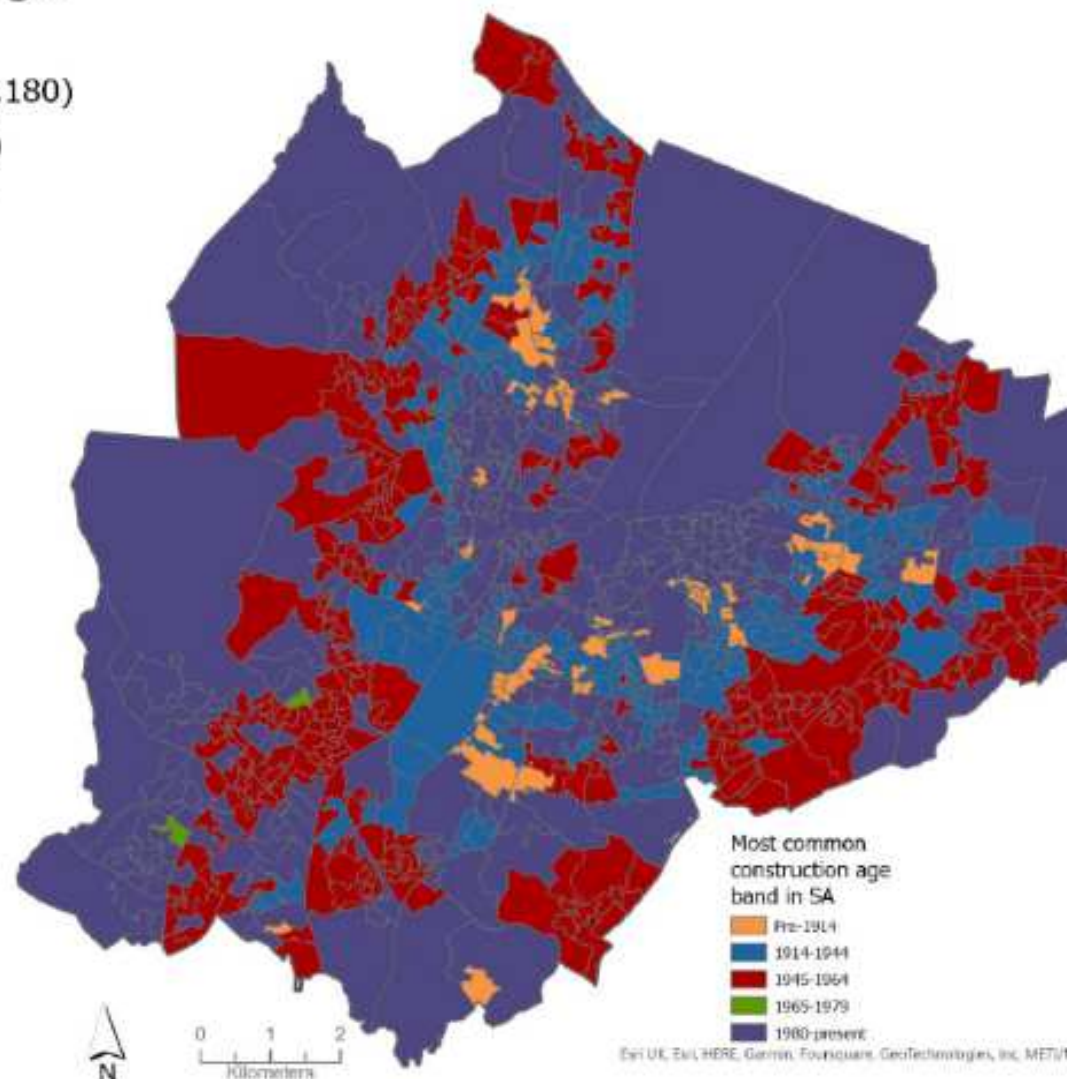
Energy network impact

Domestic Buildings

- Terraced (67,763)
- Semi-Detached (42,180)
- Apartment (32,429)
- Detached (14,975)
- Other (1,898)

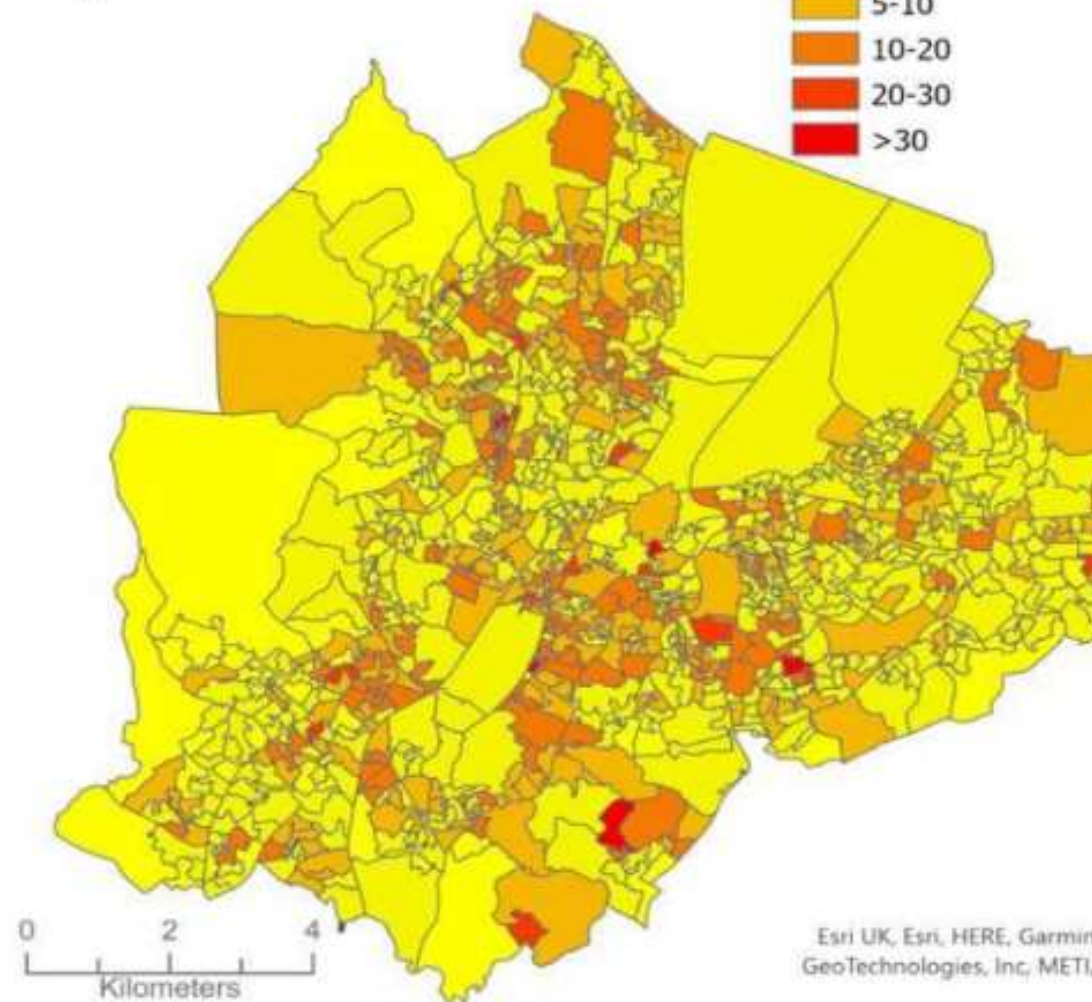
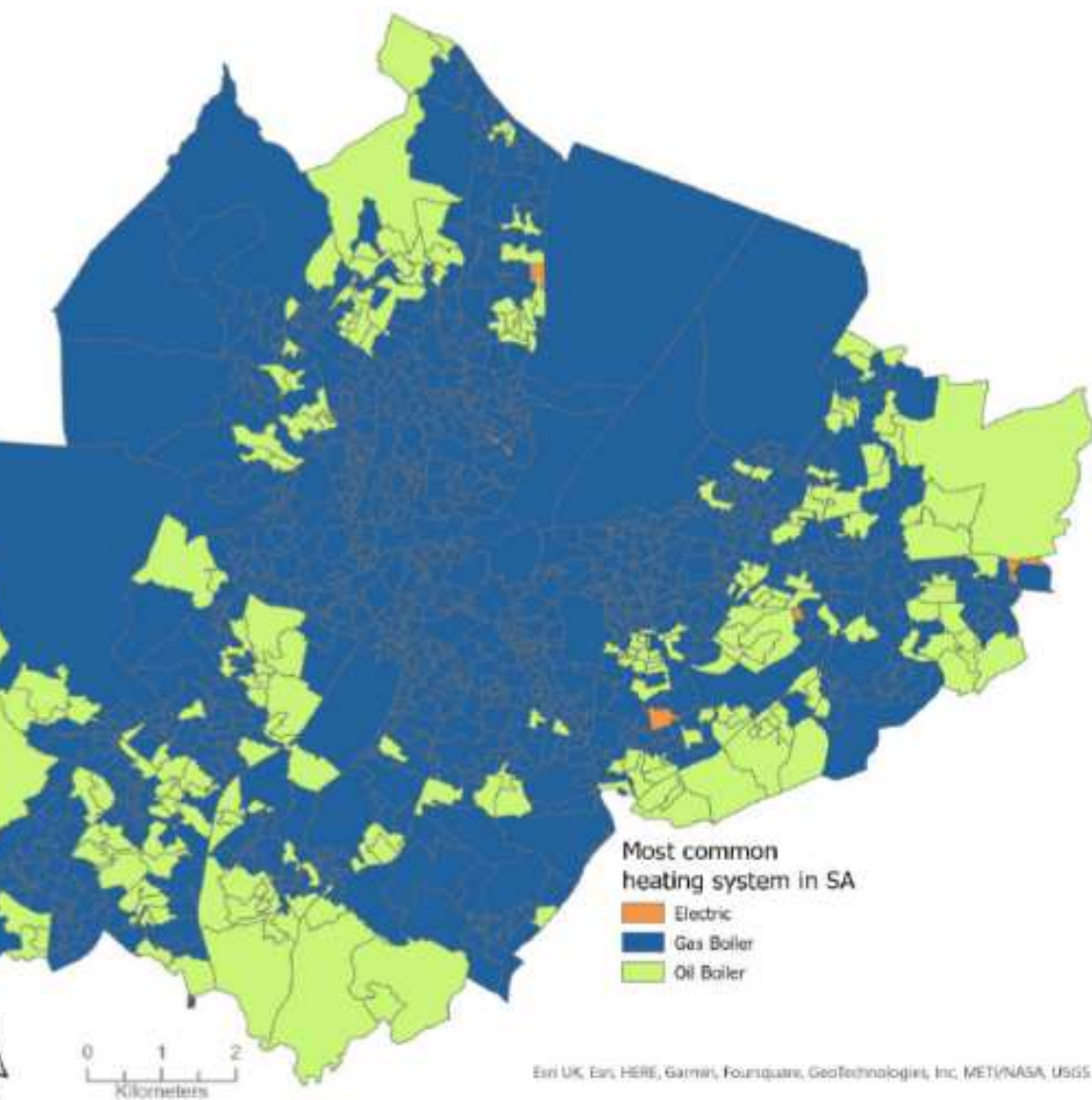


Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc., METI/NASA, USGS

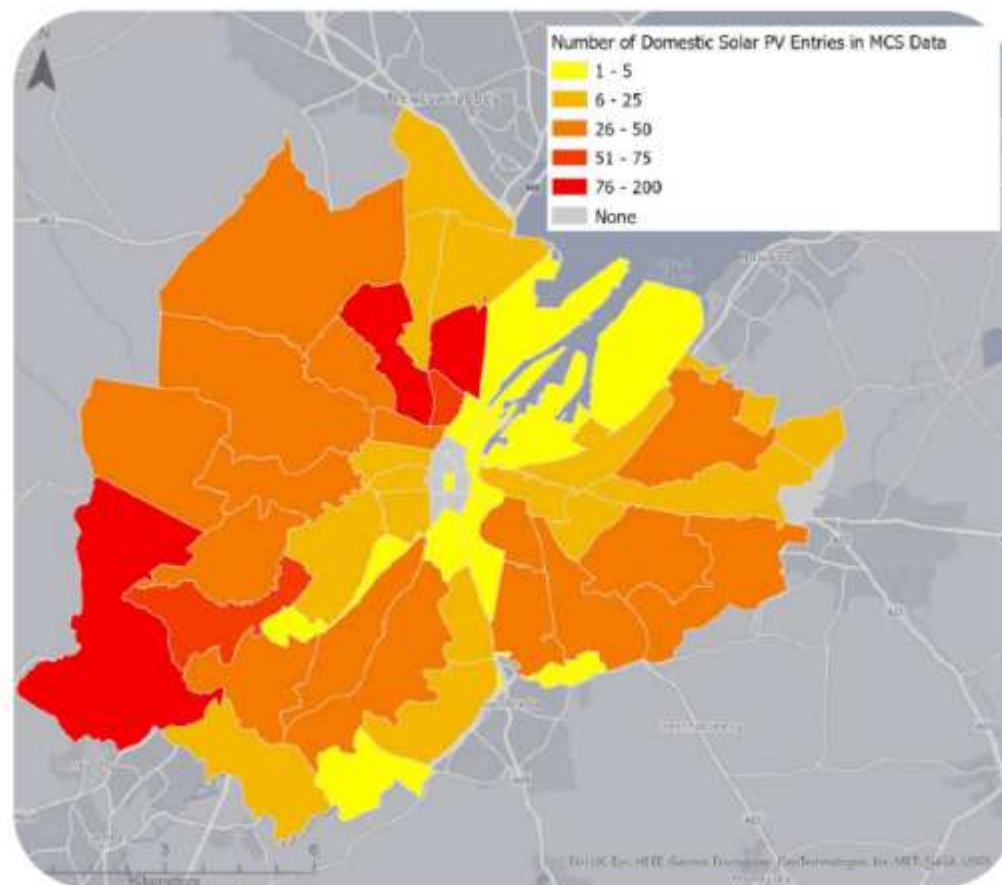
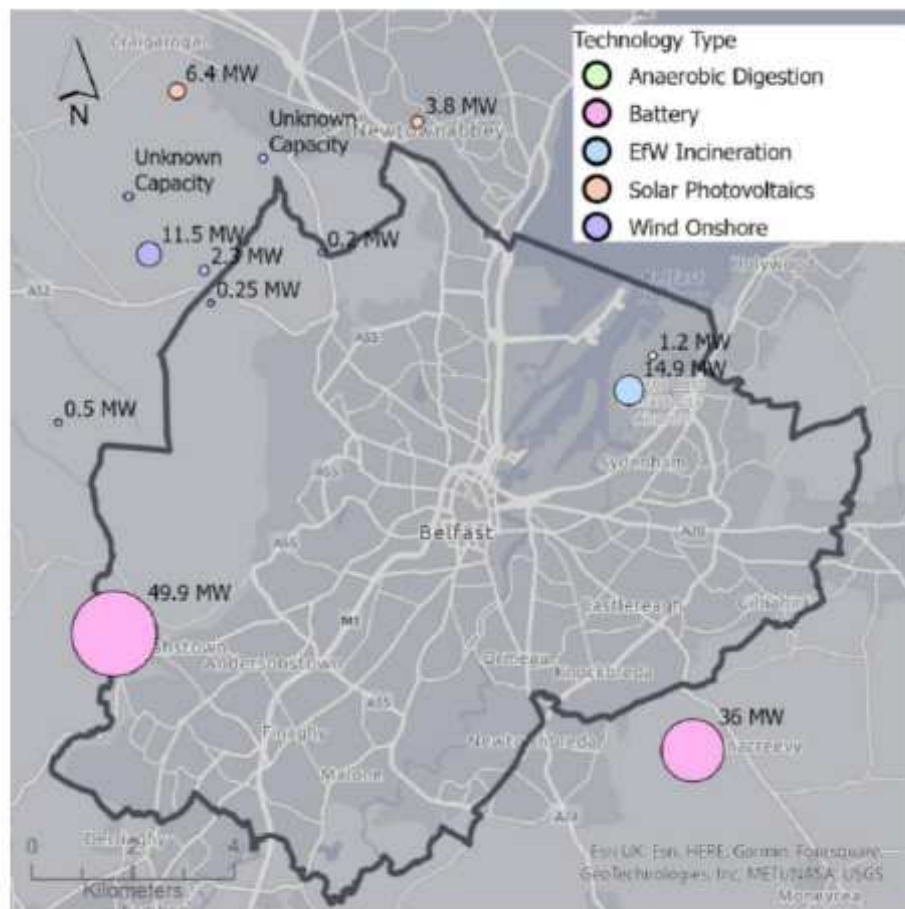


Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc., METI/NASA, USGS

Profit potential



CATAPU
Energy



U.CITY Belfast



57 sq km
55,594 buildings
accurate to 15 cm



262,835 trees
accurate to height & canopy width



35 data layers
Localised data and historical data

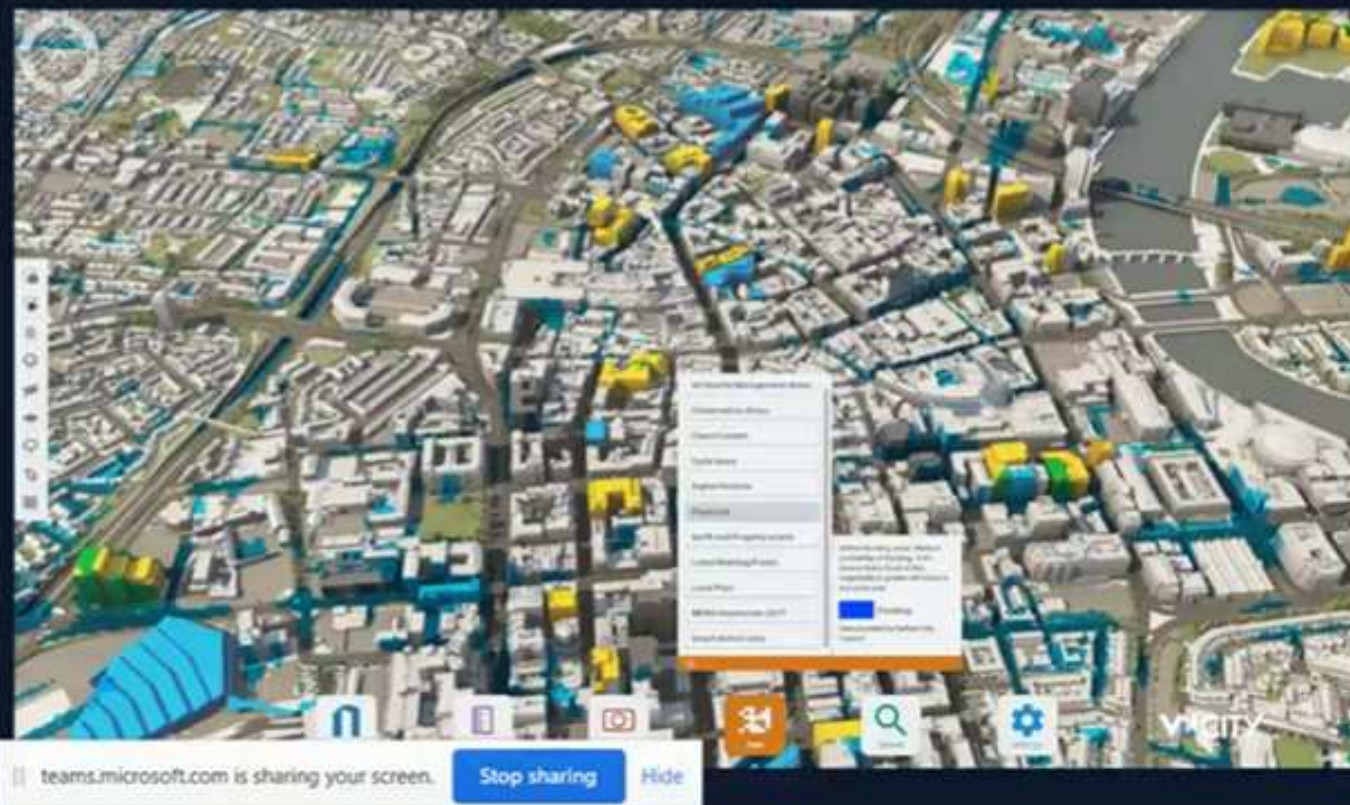


15 interactive
design and planning tools



New GIS Data Layers incorporated into the Belfast platform to assist with city shaping decision making and environmental goals

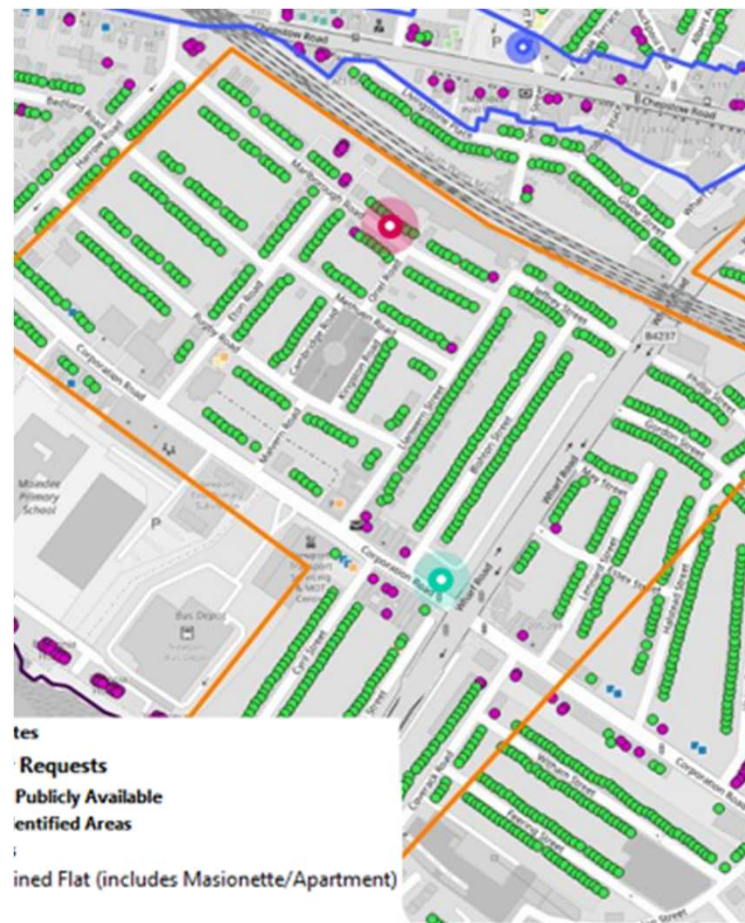
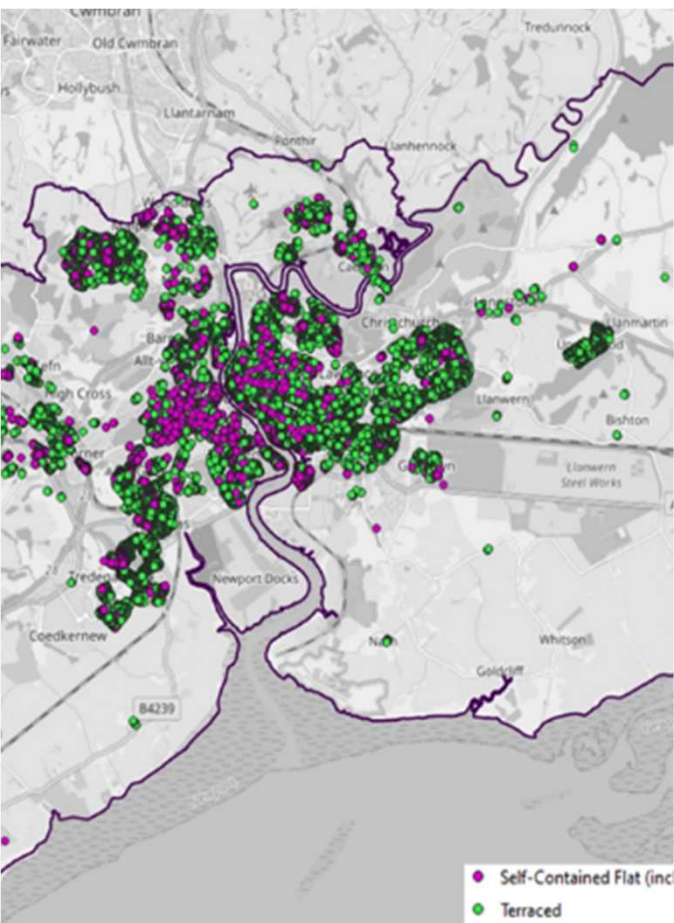
- Air Quality Management Areas
- Conservation Areas
- Council Owned Assets
- Clean Transit Data / Cycle Lanes
- Smart and Innovation Districts
- Port District
- Flood Risk Data
- LPR and Property Assets
- Listed Buildings
- Local Plan Data
- Deprivation Areas
- Smart District Sites/Projects



– strategy

Area Site Technology Model

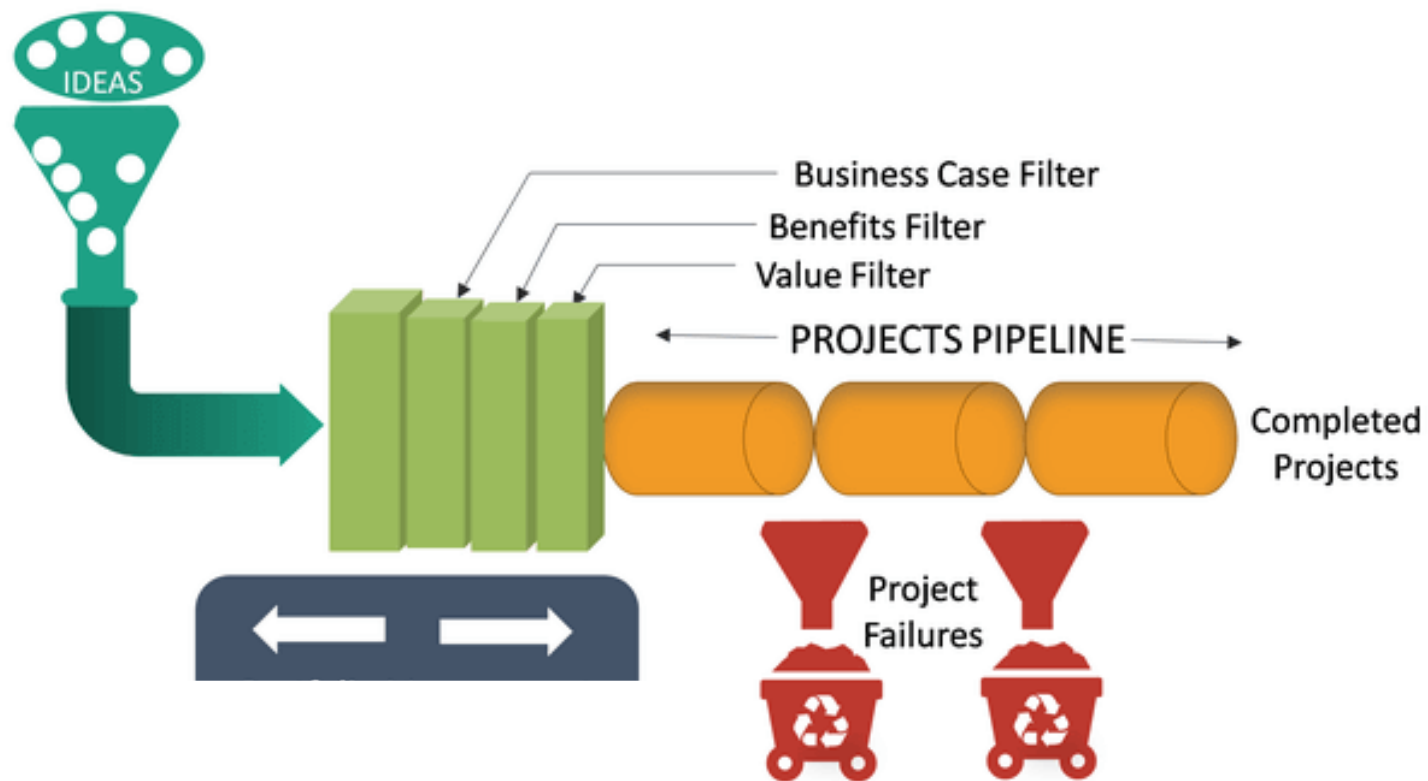
Site



Technology

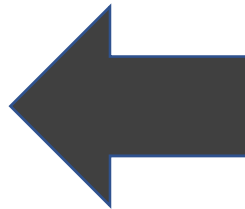


Build a pipeline of projects





£17.7m
Benefits per year







GLASGOW
FOOD AND CLIMATE
DECLARATION



**BELFAST
CLIMATE
COMMISSION**



The Belfast Agenda

continuing the
conversation



Belfast Sustainable Food Partnership



Joined up
approach



Active food
citizenship



Food justice &
diet related ill
health



Connecting local
growers and
suppliers



Leadership in
public
procurement

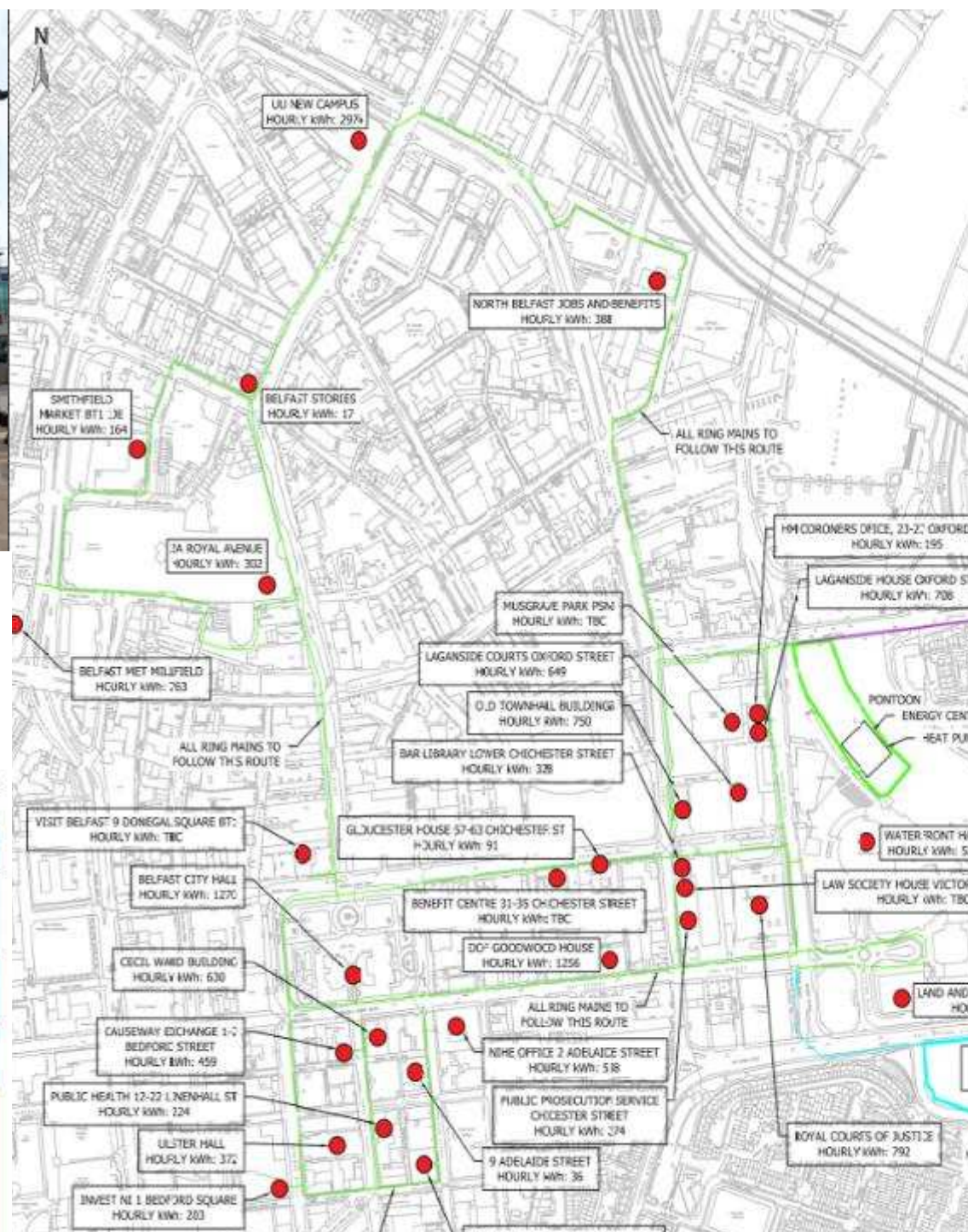
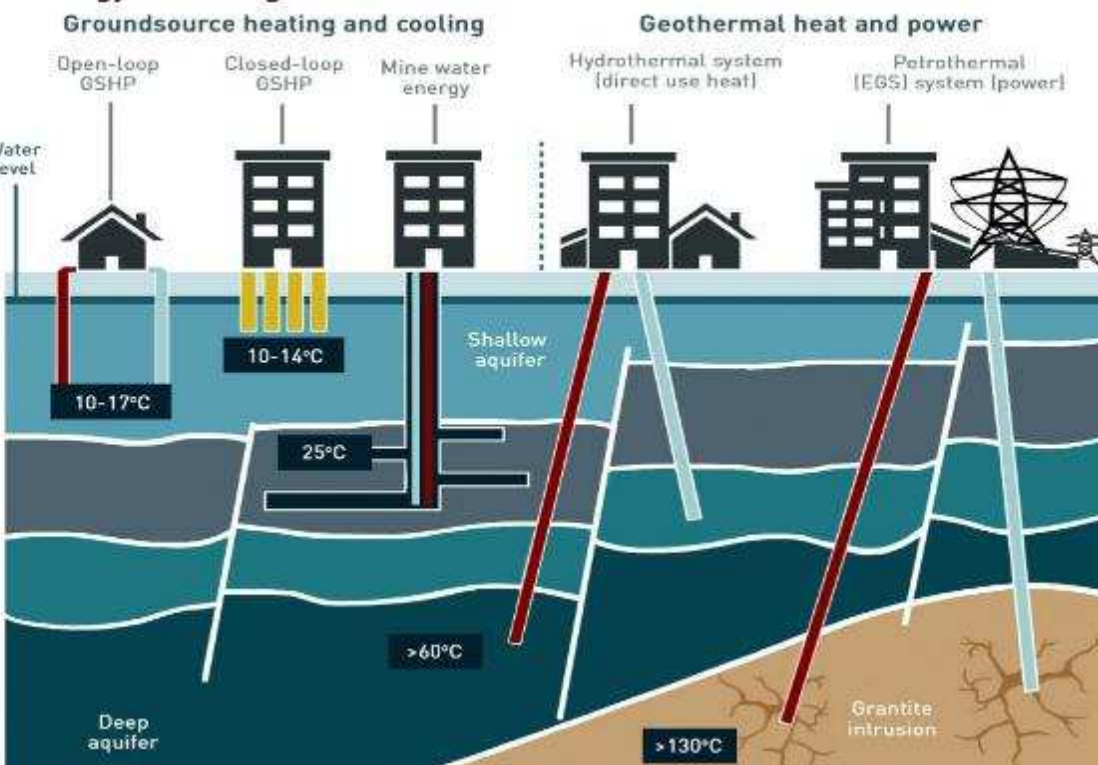


Reducing our
impact

There's enough heat in the Lagan to heat entire City of Belfast



Geothermal energy technologies



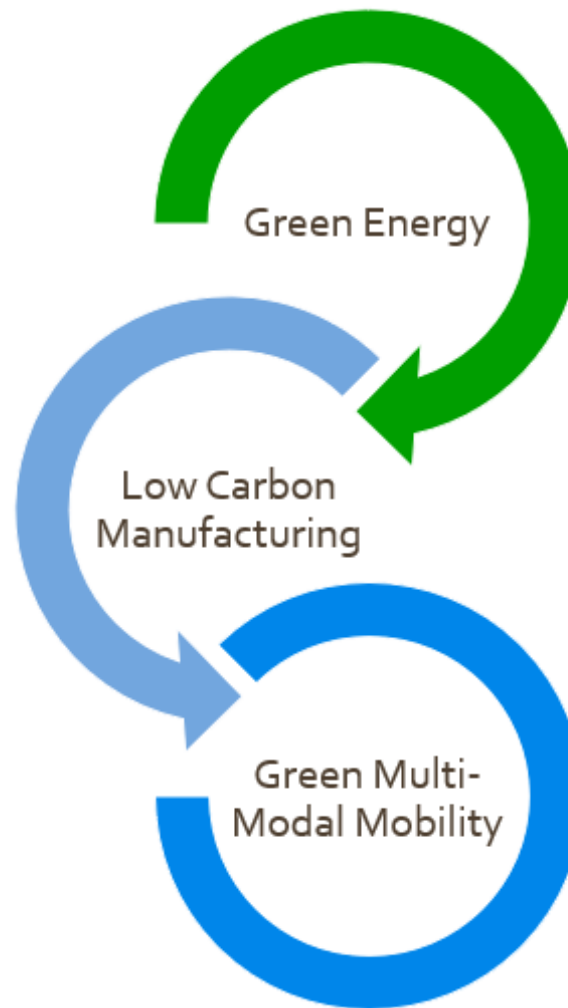
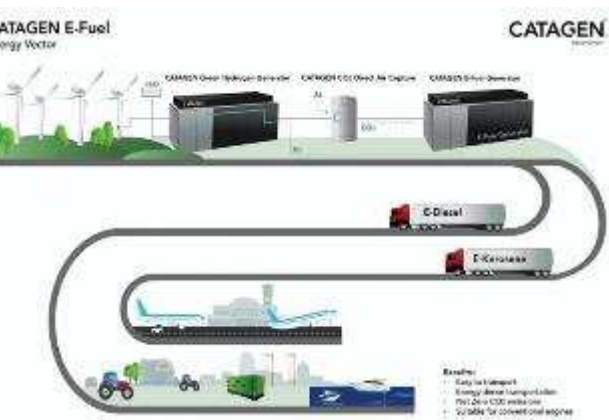
City centre heat network



Issue No heat network support scheme for NI and no planning requirement for new builds to connect to heat networks if available



INNOVATING
TO NET ZERO



Place

Building on existing and planned capabilities in Belfast
Innovation District to develop the green hydrogen economy

Belfast Innovation District

Belfast City Council – coordination, citizen engagement
Hydrogen - use cases e-fuels, compression technology
Maritime - use cases, marine vessels

3 AMIC – regulatory standards embodied emissions
Supply chain support (skills and training)
Queen's University – safety / storage, energy systems
Belfast Met – skills, apprenticeships, industry
Collaboration
Aerosystems - use cases
Harbour - land
Alliance – scaling low carbon manufacturing
Place-based finance

Delivery partner(s)
Energy Systems Catapult

Interventions

Develop a hydrogen
safety regulatory and
test capability

Develop guidance and
standards for carbon
accounting

Build an attractive
green investment
proposition for the
region

Develop knowledge
and skills through
delivery of new training
content

Support the
development of a
hydrogen Governance
Body

Barriers

New data

Regulatory

Standards

Finance

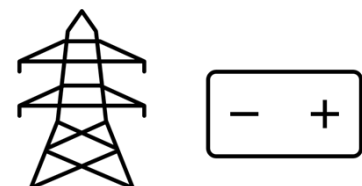
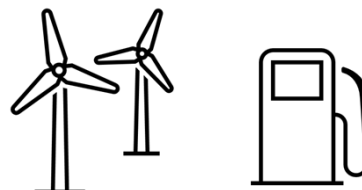
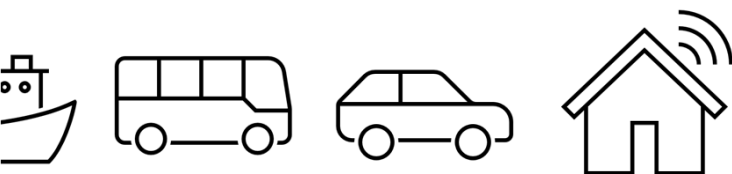
Skills

Governance

Net Zero Belfast

Whole systems
approach

Power
Heat
Mobility
Product manufacture
Usage



Strengthen coordination, collaboration, outreach





Belfast retrofit hub

Belfast retrofit hub







1. Grants for retrofit and heat networks
2. Seed funding for project development
3. Behavioural change
4. Capacity to engage across multiple sectors
ensure a whole system approach

It can be done

