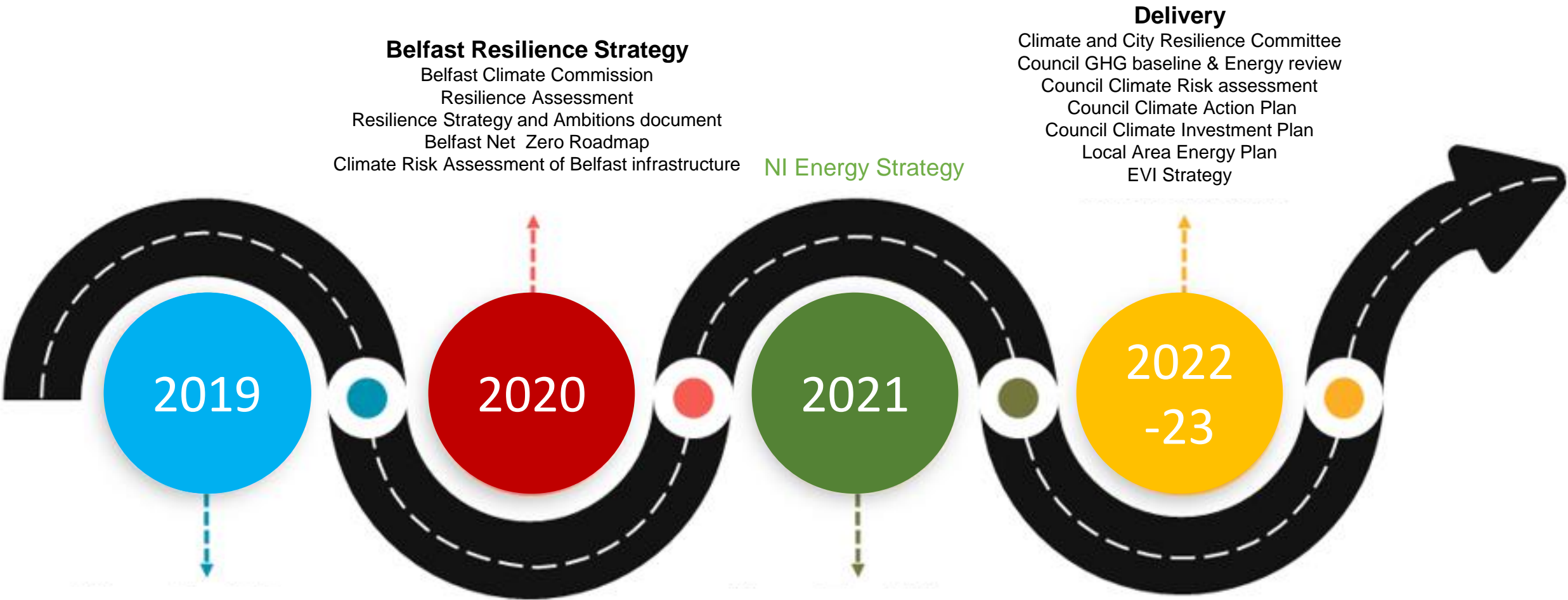




Supporting the transition to an inclusive, net zero-emissions, climate- resilient economy in Belfast

Debbie Caldwell, Climate Commissioner, Belfast City Council



Belfast Resilience Strategy
 Belfast Climate Commission
 Resilience Assessment
 Resilience Strategy and Ambitions document
 Belfast Net Zero Roadmap
 Climate Risk Assessment of Belfast infrastructure

NI Energy Strategy

Delivery
 Climate and City Resilience Committee
 Council GHG baseline & Energy review
 Council Climate Risk assessment
 Council Climate Action Plan
 Council Climate Investment Plan
 Local Area Energy Plan
 EVI Strategy

2019

2020

2021

2022
-23

Belfast declared a climate emergency
 Resilience and Sustainability Board

COP26
 Living With Water in Belfast
 Carbon Disclosure Project, RTZ and RTR
 Established a £1m Climate Fund
 Sustainable Tourism Index

NI Climate Change Act
Green Growth Strategy

Belfast's Net Zero journey

FUTURE PROOFED CITY

Our governance structure



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

City wide climate adaptation and mitigation plan

Resilience and Sustainability Board

PCAN BELFAST CLIMATE COMMISSION

Our own climate adaption and mitigation plan by 2022

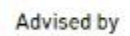
Climate and City Resilience Committee

Climate Plan Programme Board (BCC Officers)

Approval process

SP&R

Council



Keep it positive

Focus in on the opportunities

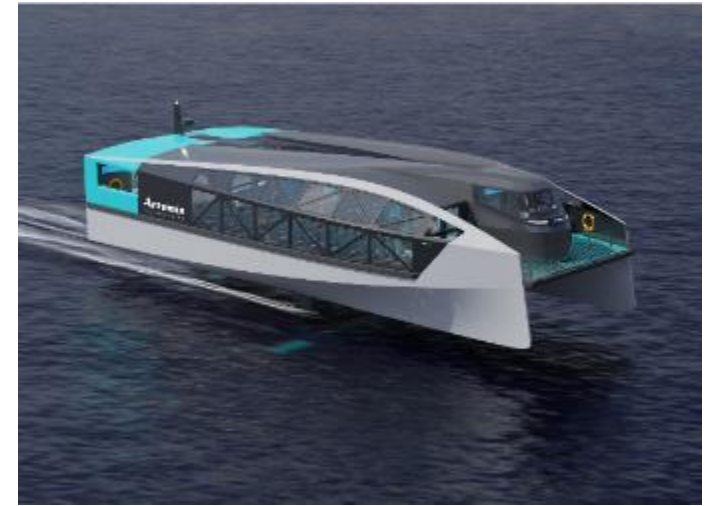
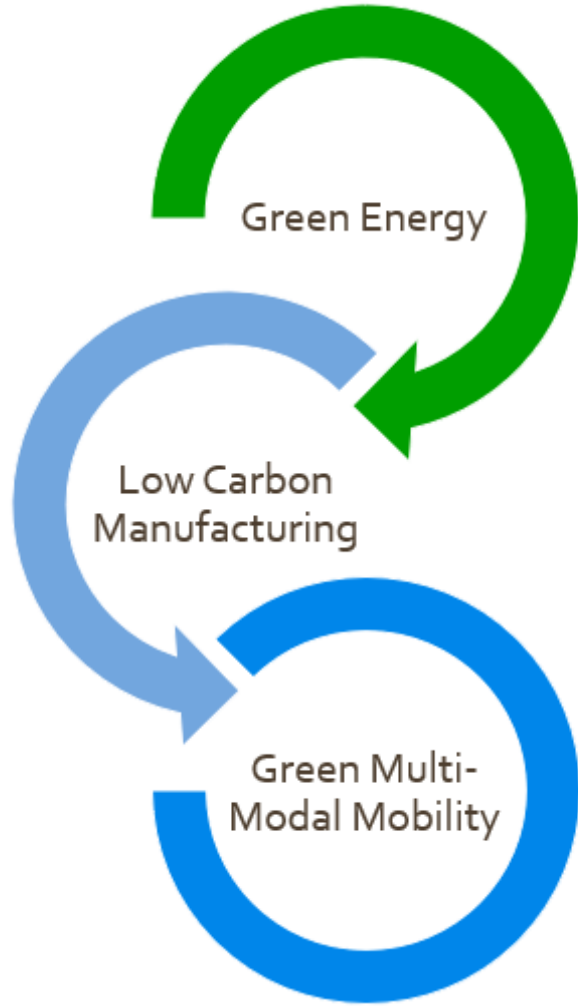
And on unlocking the economic, social and environmental benefits

Create a value proposition for Belfast as a green city



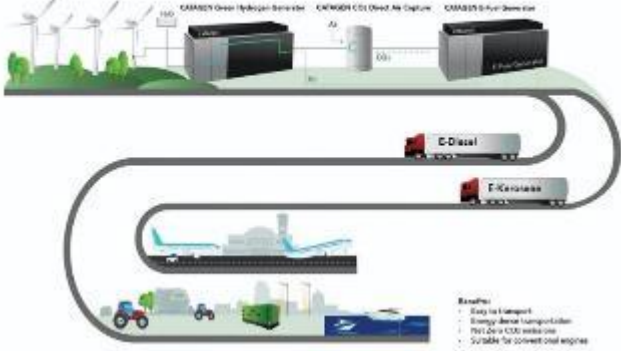


**INNOVATING
TO NET ZERO**



CATAGEN E-Fuel
Energy Vector

CATAGEN



Keeping climate at the top of the agenda



Measuring, monitoring and reporting



1.5C

The level of rise where we trigger dangerous climate change

14m

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

1.5m

Tonnes of carbon per year emitted by Belfast

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

18%

13%



39%

50%



20%

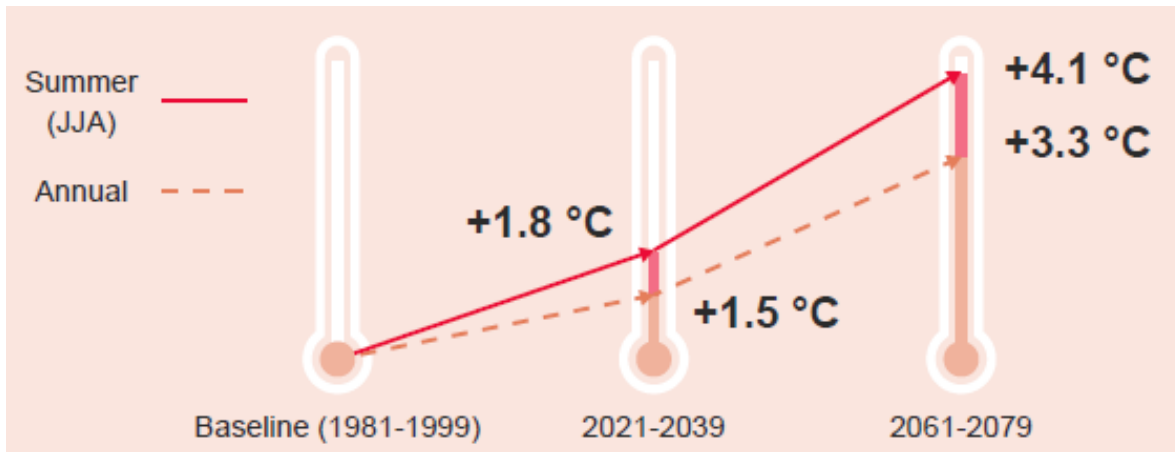
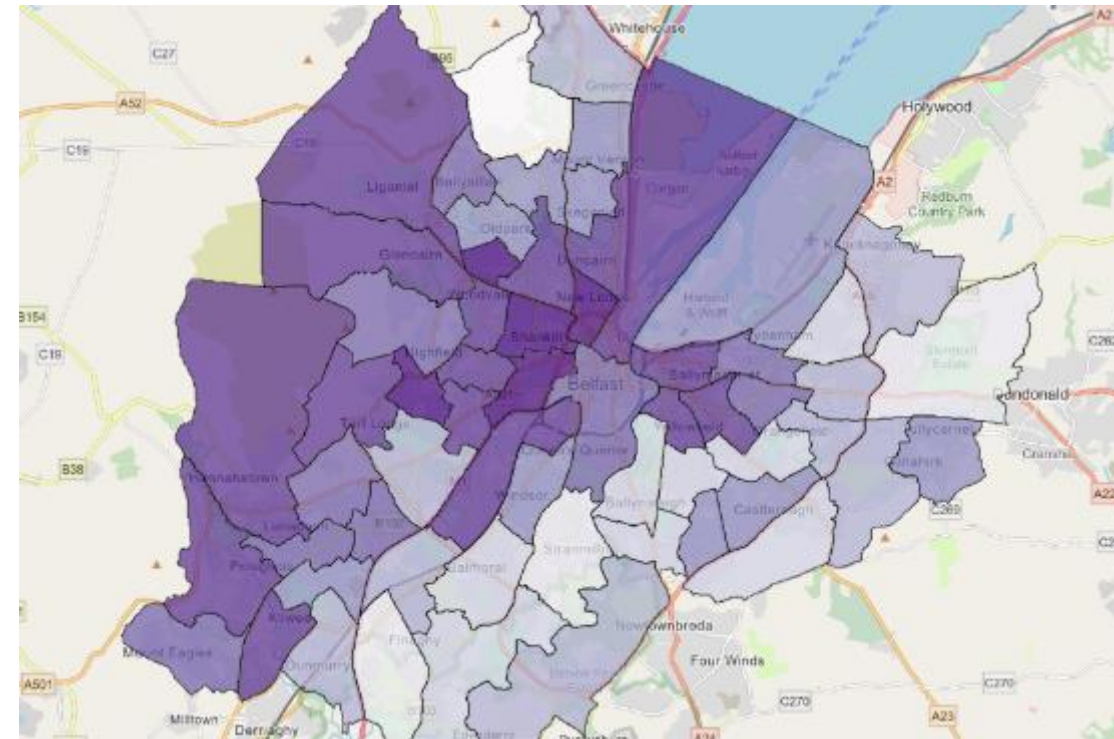
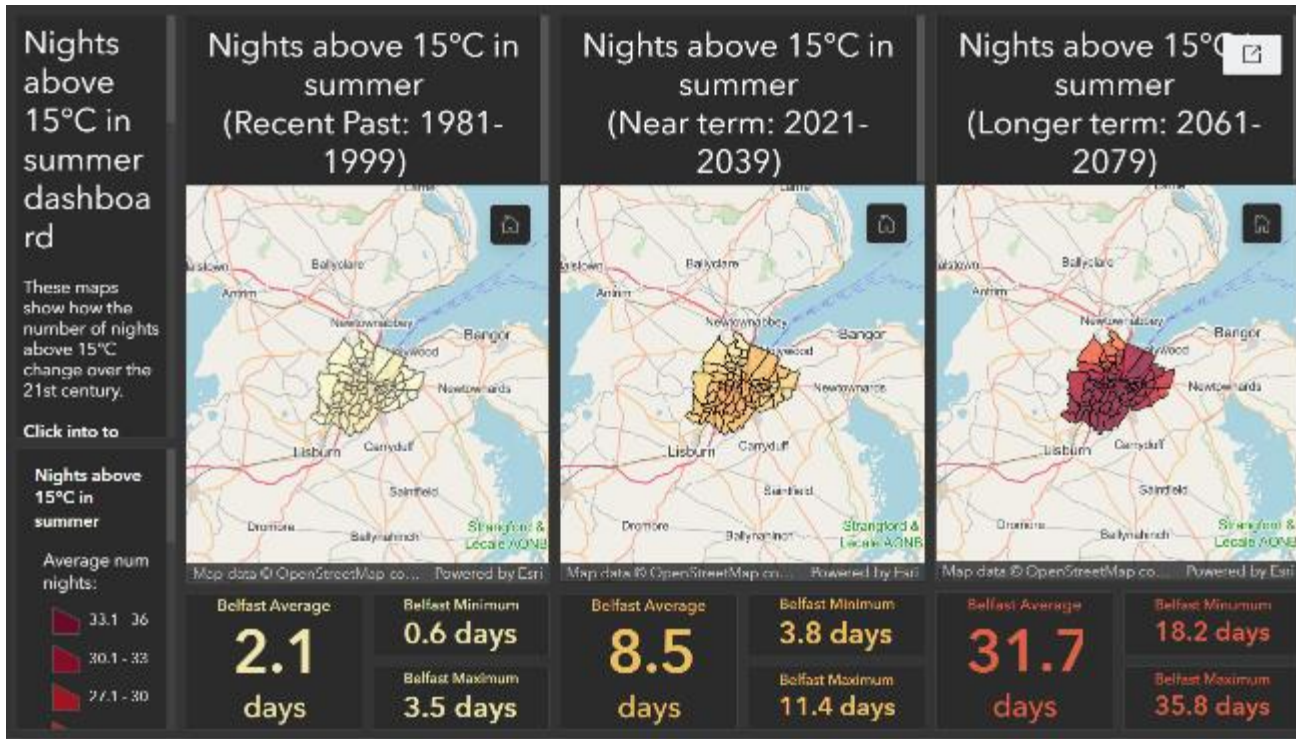
19%



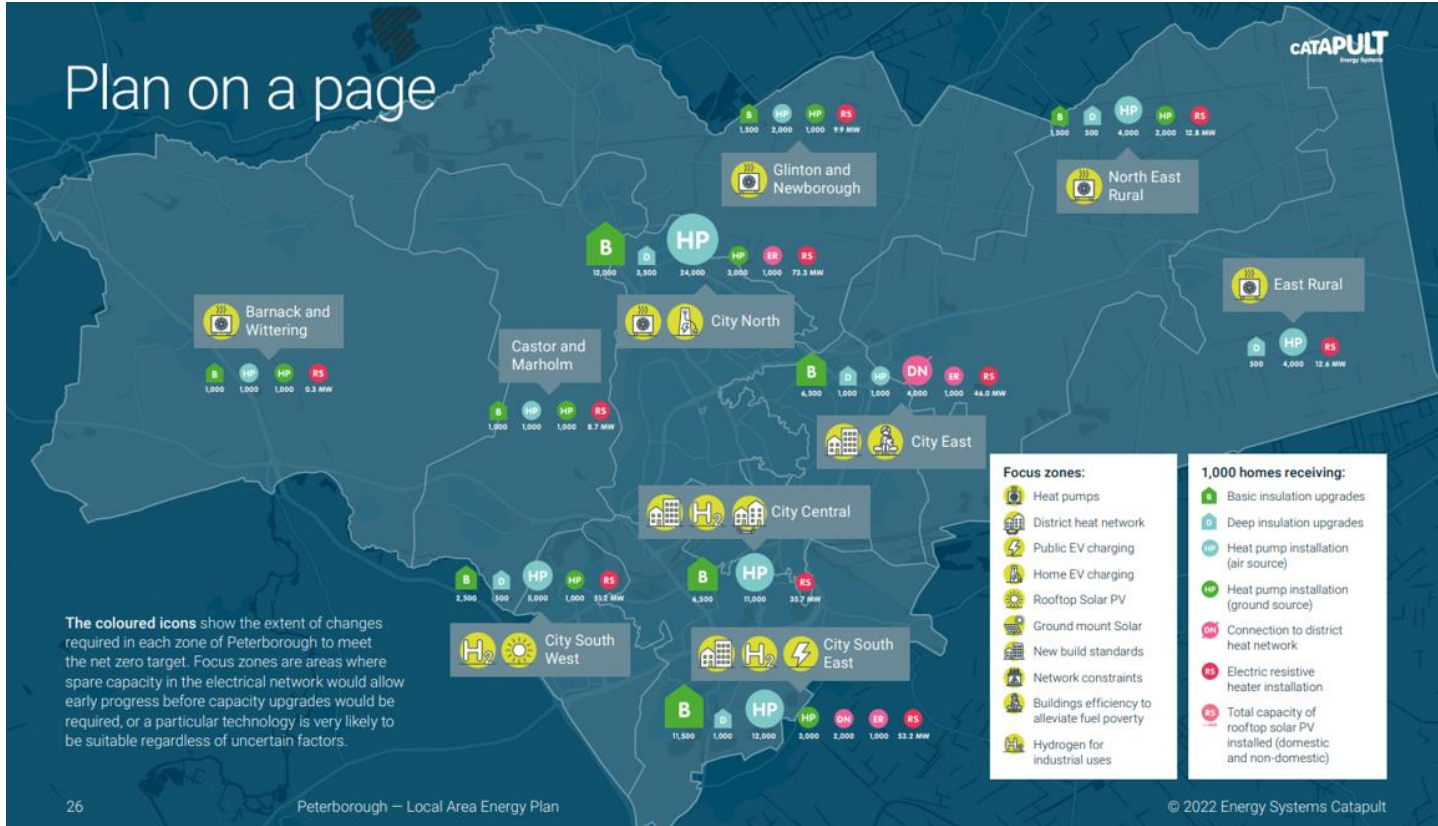
24%

18%





Heat maps for Belfast



Hydrogen opportunity area



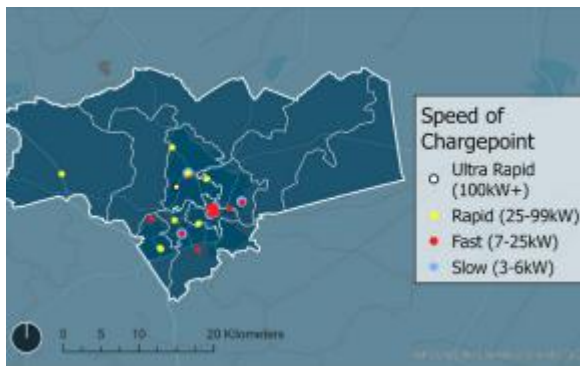
Domestic rooftop PV focus zone



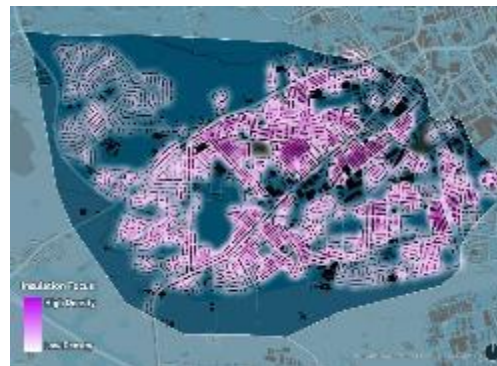
Domestic heat pump focus zone



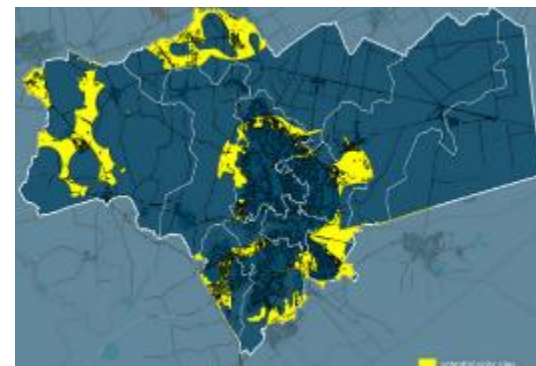
Heat network focus zone



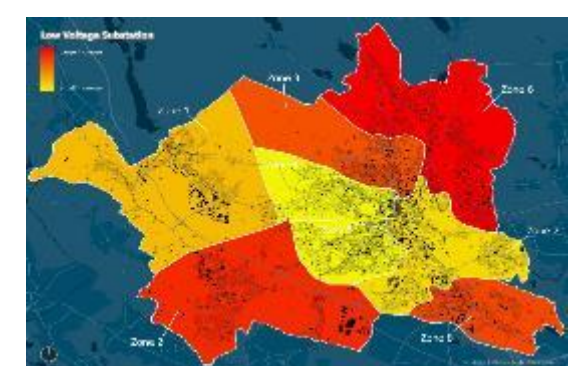
Public EV charging hubs



Fabric retrofit focus zone



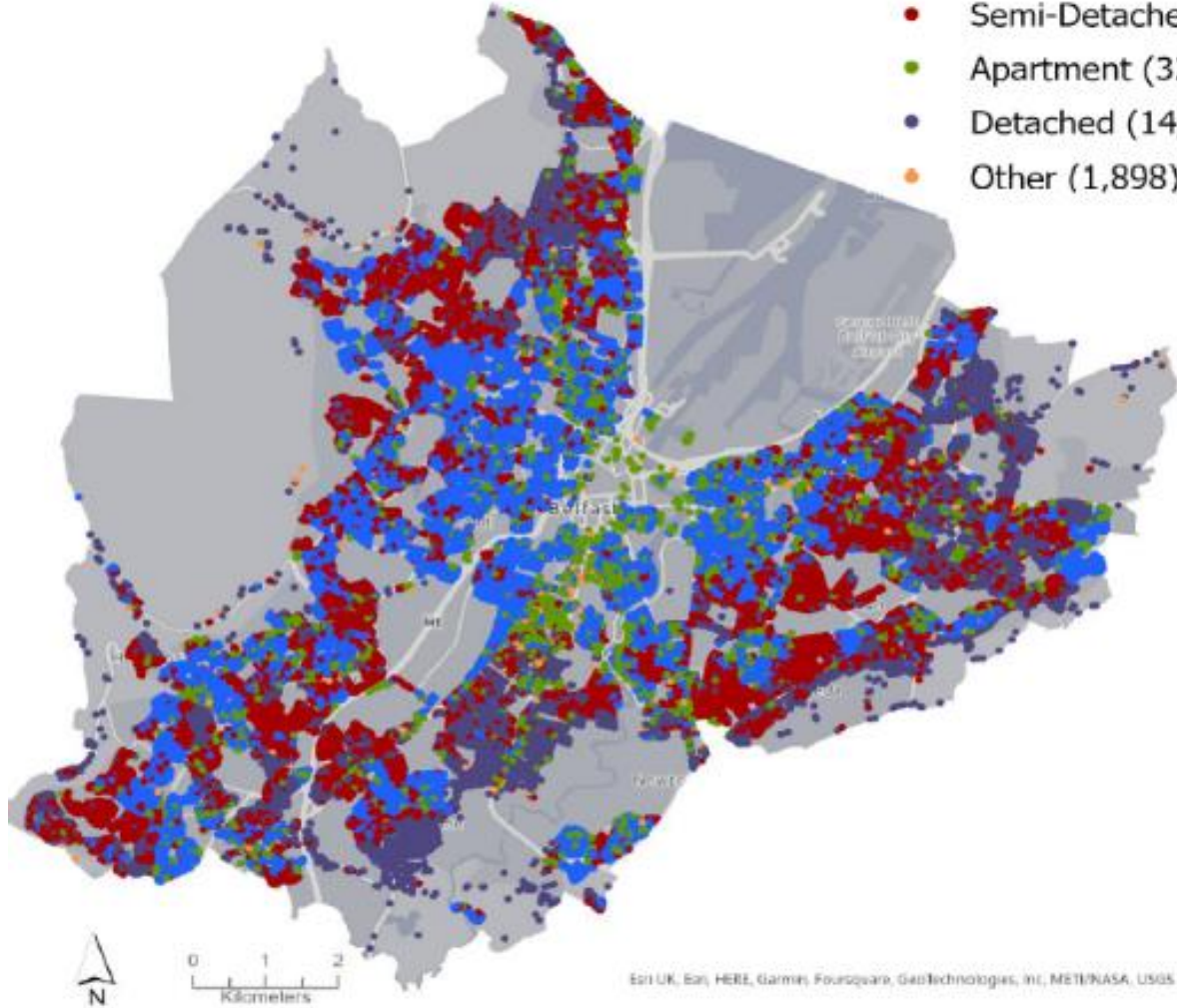
Large scale renewables opportunity areas



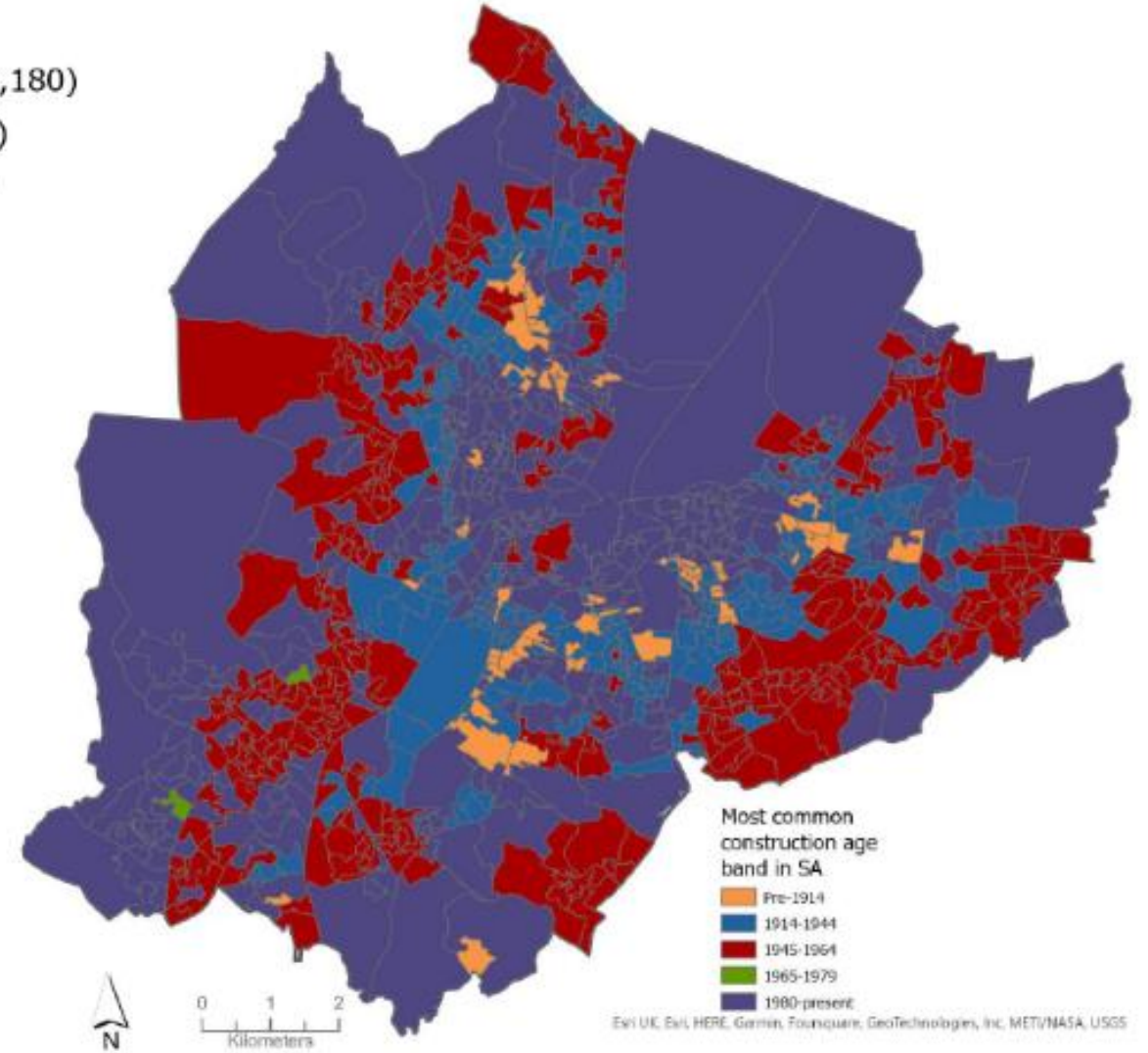
Energy network impact

Domestic Buildings

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

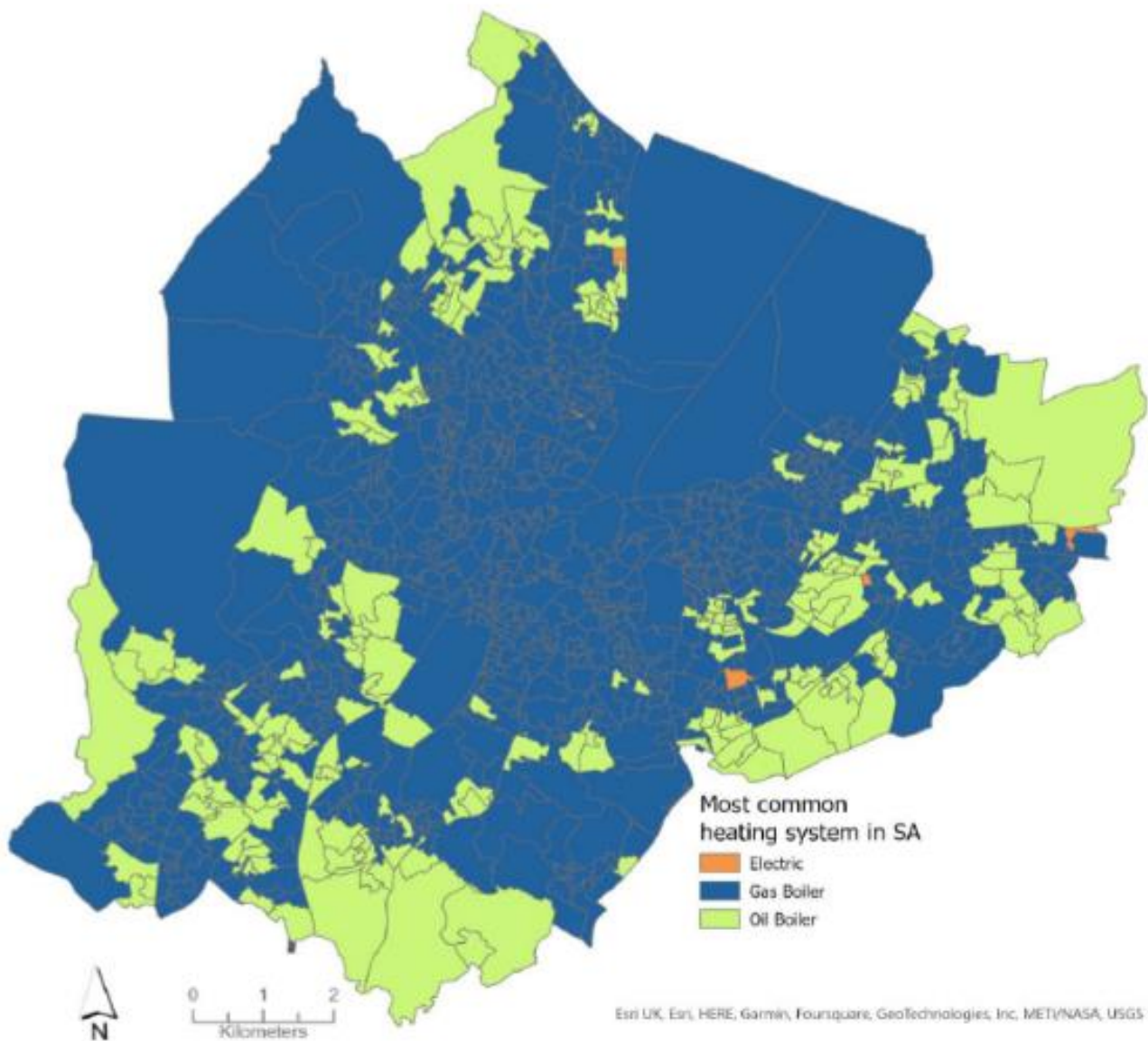


Esri UK, Esri, HERE, Garmin, FourSquare, GeoTechnologies, Inc, MET/NASA, USGS



Esri UK, Esri, HERE, Garmin, FourSquare, GeoTechnologies, Inc, MET/NASA, USGS

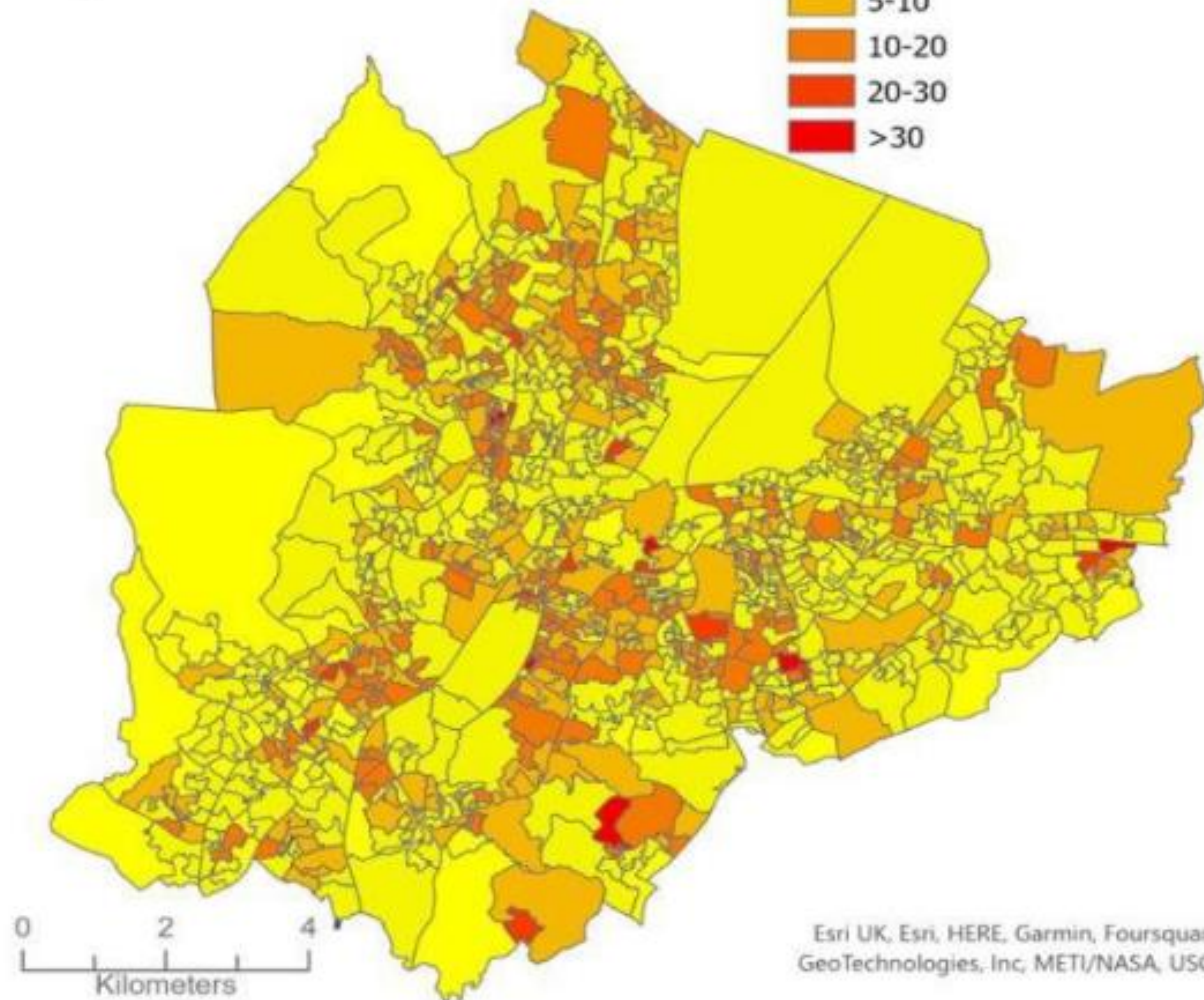
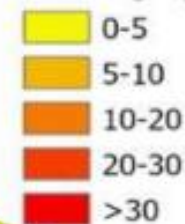
Retrofit potential



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



Percentage of domestic buildings with single glazing



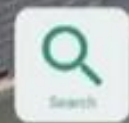
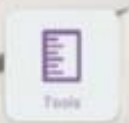
Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS



Flat Roofs (Sq. M)

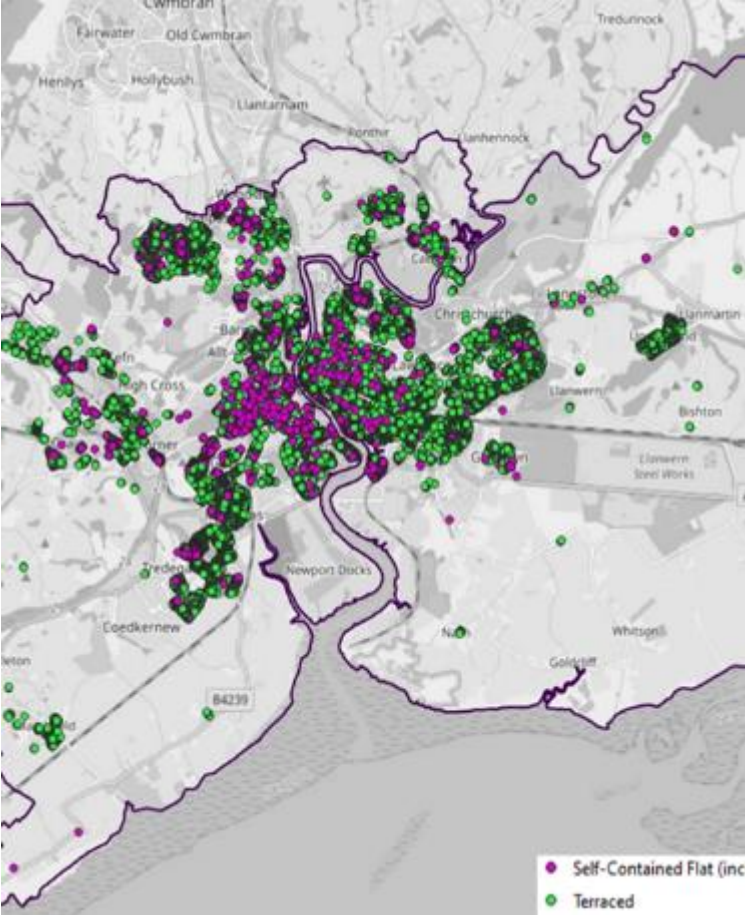
Colouring London	10 - 20
Conservation Areas	20 - 30
Crime Data	30 - 40
Environmental	40 - 50
EPC	50 - 60
EPIMS	60 - 70
Flat Roof Sample Data	70 - 80
glc VSC	80 - 90
Industrial Land	90 - 100
Land Registry Query	100+
LLDC Density Map	

Sample created from VICITY Model



EVI – strategy Area Site Technology Model

Area



Site

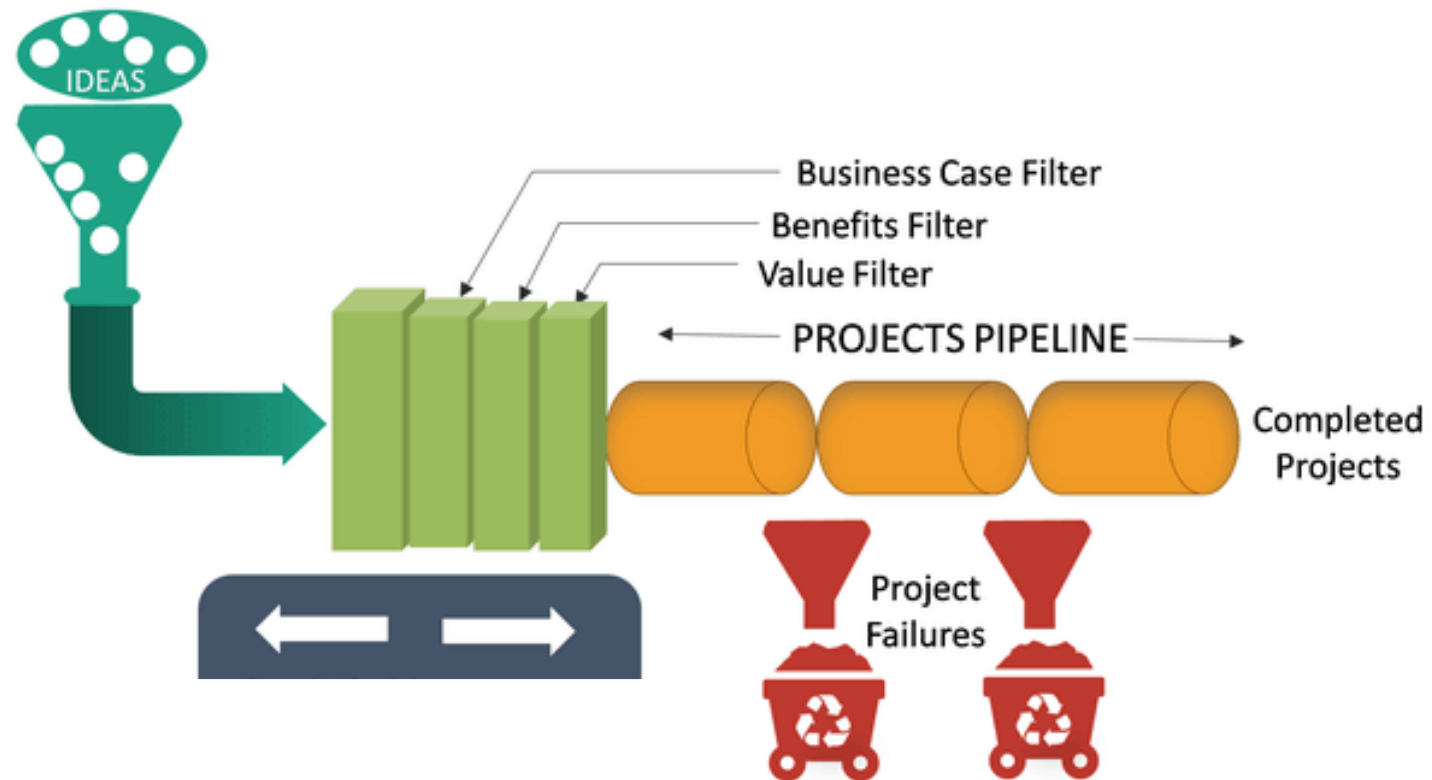


Technology



Keeping the issue at the top of the agenda

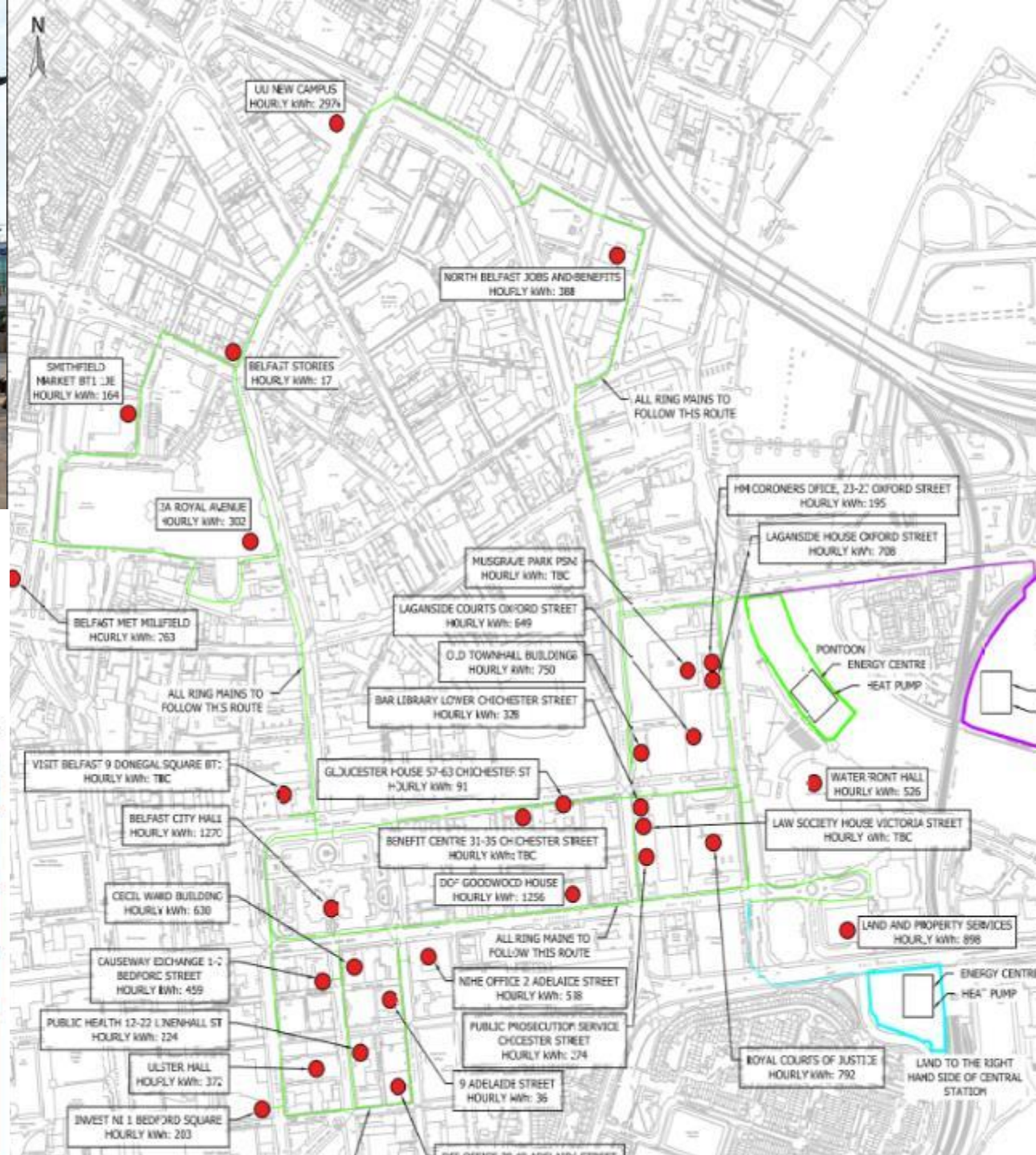
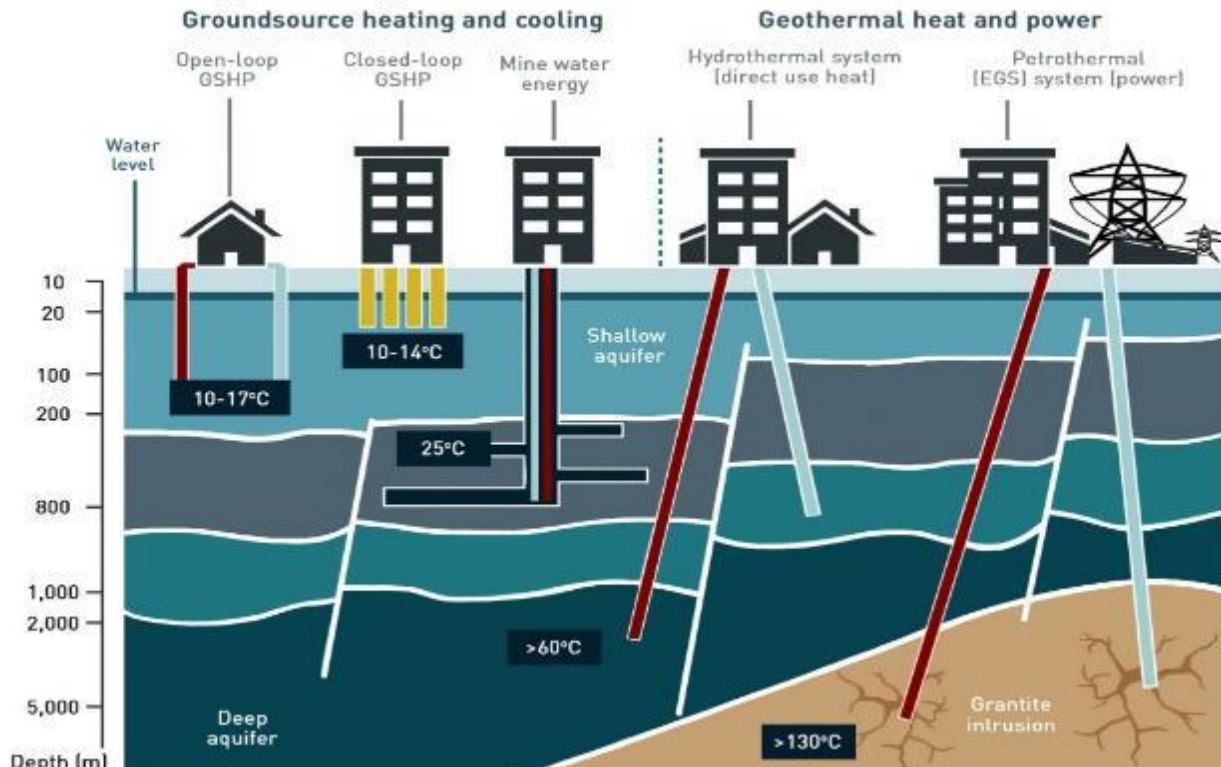
Build a pipeline of projects



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



Geothermal energy technologies



City centre heat network



Key issue

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

Keeping the issue at the top of the agenda

Strengthen coordination, collaboration, outreach





Belfast retrofit hub

Belfast retrofit hub



Construction
Leadership
Council

constructionleadershipcouncil.co.uk



Photograph: Nottingham City Homes: Energy-saving Retrofit, Helix Homes

**Greening Our
Existing Homes**
National retrofit strategy
A consultative document





Belfast retrofit hub

Retrofit Hub
meeting Sep 22

Roundtable 1
Supply Chain

Roundtable 2
Standards

Roundtable 3
Skills

Retrofit Hub
meeting Dec 22

Roundtable 4
Awareness

Roundtable 5
Learning

Roundtable 6
Skills

Retrofit Hub
meeting Mar 22

Roundtable 8
Whole house working

Roundtable 7
Place based approach

Keeping the issue at the top of the agenda

Engaging financial institutions and the investment community



£2.2bn per year to decarbonise Northern Ireland

£2.5bn to decarbonise housing and transport in Belfast





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

It can be done

