

# SCR:NZ Programme

7<sup>th</sup> October 2020

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PREPARED FOR

**Sheffield**  
**City Region**

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# Background to the NZ Programme

# SCR Net Zero Journey

- All SY Local Authorities and the MCA declared a climate emergency in 2019.
- LA Net Zero dates ranging from 2030-2045. MCA set its Net Zero date as 2040.
- Published NZ Climate Emergency Response Framework in January 2020.
- Held inaugural NZ Partnership Meeting in February 2020.
- Publication of SCR Energy Strategy in July 2020.

## Aims

1. Develop a programme around the Climate Emergency Response Framework:
  - Understand the barriers and obstacles to delivery.
  - Develop an action plan of projects
  - Start the journey to becoming Net Zero by 2040.
2. Prioritise actions using:
  - A framework which can be applied to future projects.
  - The input of SCR, NZP and other stakeholders.

# Presentation Contents

Stakeholder engagement



1. Barriers &  
Challenges

2. Projects

3. Prioritisation

4. Next Steps

# Barriers & Challenges

# 1. Barriers & Challenges

SCR Net Zero  
Partnership

- Four SY Local Authorities
- Sheffield Universities
- Sheffield City Region

Wider community &  
organisations

- Large companies and SMEs
- Sheffield Climate Alliance
- National Energy Action



# 1. Barriers & Challenges

## ① Barriers within partner organisations

- Capacity: staff resource to deliver climate change programmes
- Finance: resource constraints and payback period requirements
- Knowledge: lack of technical data to inform decision making, and technical knowledge to deliver
- Capability: uncertainty that partners have the right delivery skill set
- Institutional: investing in carbon reduction is not always a priority or in line with procurement procedures.

## ② Regional infrastructure

- Gaps in enabling infrastructure acting as a barrier to change
  - E.g. businesses keen to capture and re-use waste heat if heat networks were accessible.
  - E.g. reducing travel demand through more home working needs better universal high-speed broadband.
- High-energy industry and inefficient homes are the biggest challenges across the region as a whole



# 1. Barriers & Challenges

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## Strategic

- Line of sight: different starting points and understanding of the size of and dimension of the challenge makes finding consensus on purpose and ambition harder to achieve
- Fragmentation: perception of work being done in silos, contributing to duplication of effort, inconsistency, and sub-scale responses
- Under-utilisation of local assets and expertise: heat generating opportunities, academic and business expertise, and supply chain capabilities
- Evidence & data: no clear or detailed understanding of the carbon emissions baseline at regional, local authority or individual site level

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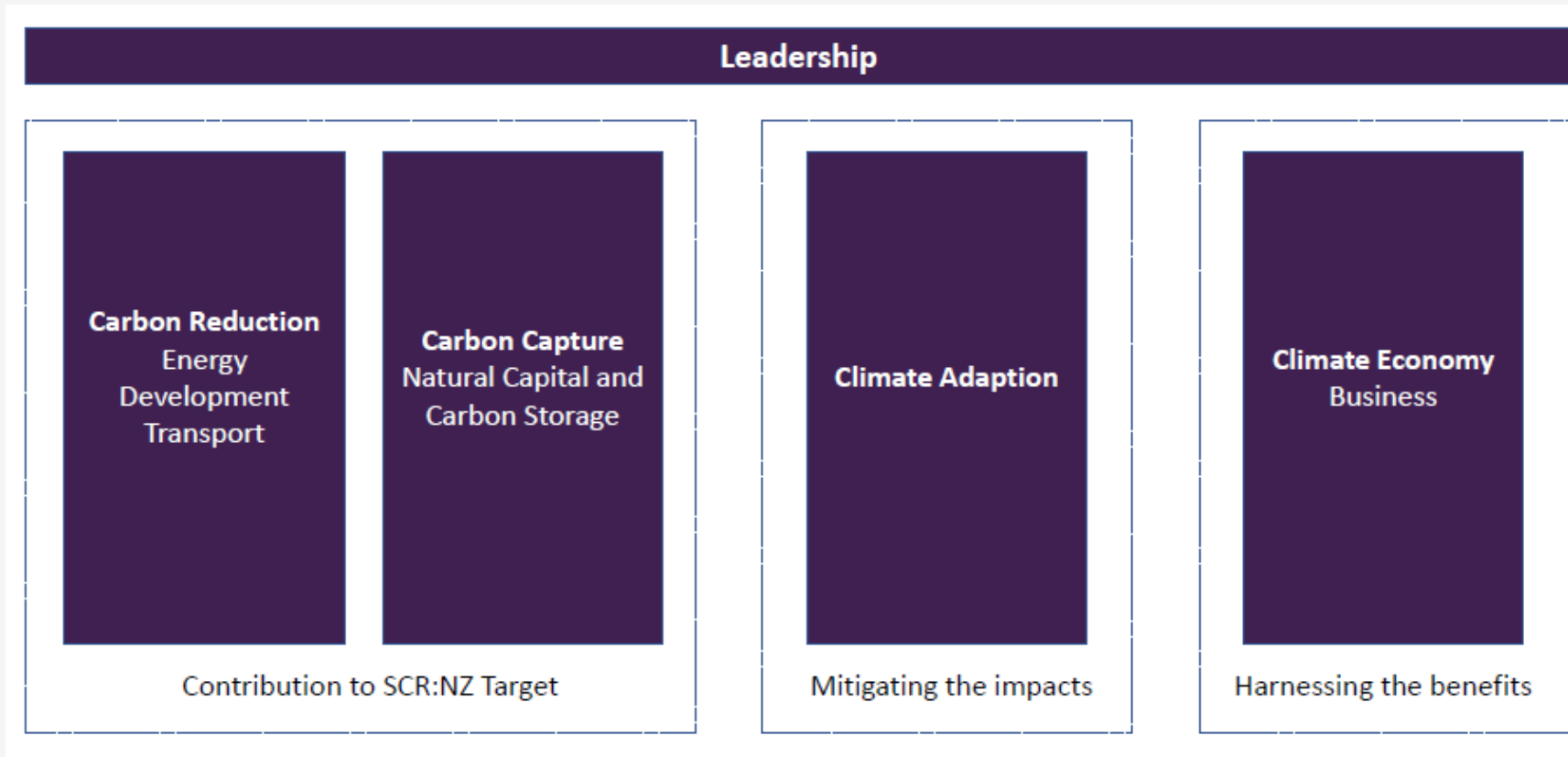
## SCR

- Mixed messaging: E.g. businesses face different targets in different LA areas, but the key message of “what they can do and what’s in it for them” is missing
- Role and responsibility: perceived disconnect between aims of SCR and what it offers LAs

# Potential Projects

## 2. Projects

### Working with stakeholders to identify projects



## 2. Projects

1

### Leadership

- NZ Partnership ‘communicating by doing’: place-based demonstration programmes for low-carbon, digital and flood-protection innovations at key growth locations and high-streets.
- Showcasing South Yorkshire on the international stage: SCR joining the Covenant of Mayors as a Coordinator to help all four Local Authorities join as Signatories.
- Supporting Local Authorities: to join UK100 and report against UN Sustainable Development Goals.
- Creating a portfolio of exemplary projects: to attract private investment or City Deal funding, which draw upon South Yorkshire’s existing strengths and assets.
- Building collaboration: more sector forums and hosting more collaborative working with Local Authority groups.
- SCR owning regional-level funding: by acting a manager of national funding awards.

## 2. Projects

### ② Carbon reduction

- Region-wide housing energy efficiency programme:
  - Supplier accreditation, upskilling of local SMEs and job creation.
  - Multi-channel engagement with communities and a focus on fuel poverty.
- Heat-network expansion and mine water heating:
  - Build on current extent of existing and proposed heat so more heat can feed into the network.
  - Incorporating mine water heating in developments like the Rockingham Colliery site from the start.
- Low carbon construction:
  - Modern methods of construction (MMC) and offsite manufacturing for new commercial, public and residential buildings.

## 2. Projects

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### Carbon reduction

- Zero carbon electricity generation:
  - Solar PV in rural areas and on urban rooftops.
  - Wind power, including low-cost vertical axis rooftop turbines.
  - Utilising regional expertise and suppliers for Small Nuclear Reactors.
- Residential EV charging:
  - innovative ways for providing domestic EV charging infrastructure for houses which do not have off-street parking.
  - On-street charging technology trials across all four LAs, or utilising LA owned assets like disused garage blocks at end of terraced rows.
- Last/first-mile transport: electric bikes/scooters and Mobility as a Service.
- Public transport: hydrogen and electric infrastructure for buses.
- Active travel: 'Dutch-style roundabout' opportunities in Doncaster

## 2. Projects

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### Carbon capture

- Carbon sequestration in rural areas: Using non-farmed or set-aside land in rural areas for carbon sequestration.
- Tree Planting: A collaboration between the SCR and the South Yorkshire Local Nature Partnership to plant trees across cities, towns and villages.
- Feasibility and impact of using mine water for carbon capture: sites like the AMP could use mines for carbon capture, if using mine water for heating is unviable.
- **Urban food production:** bringing disused space and rooftops into use for urban food production. Sheffield University are already funding pilot projects. This can be enhanced by urban composting, utilising captured CO<sub>2</sub>, using waste heat and nutrients.

## 2. Projects

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### Climate adaptation

- Data collection: using urban IoT and sensors to understand the impact of climate change across SCR and to help plan for flood mitigation.
- Green infrastructure to manage flooding:
  - minimum standards in new developments to embed green infrastructure
  - adapting urban spaces to replace impermeable hard surfaces with green infrastructure at key locations to manage flooding.



## 2. Projects

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### Climate economy

- Region-wide SME energy reduction initiative:
  - Energy audits, showing the financial benefits energy and carbon reduction
  - Mayor's award programme and communication of benefits.
- Targeted skills and employment via local colleges:
  - Upskilling local businesses to meet supply chain standards and accreditation (e.g. housing efficiency or offshore wind)
  - Create the specific engineering skills base needed for low carbon heat and energy infrastructure and Modern Methods of Construction
- Challenge-based innovation:
  - Set challenges in a range of sectors (e.g. small-scale solar or roof-top wind, EV charging, or urban food production) with funding to trial solutions from SMEs in South Yorkshire.

# Prioritisation

## 3. Prioritisation - Projects

### The headline message

- Cut carbon emissions
- Reduce energy bills
- Create jobs

# 3. Prioritisation - Projects

Two key questions

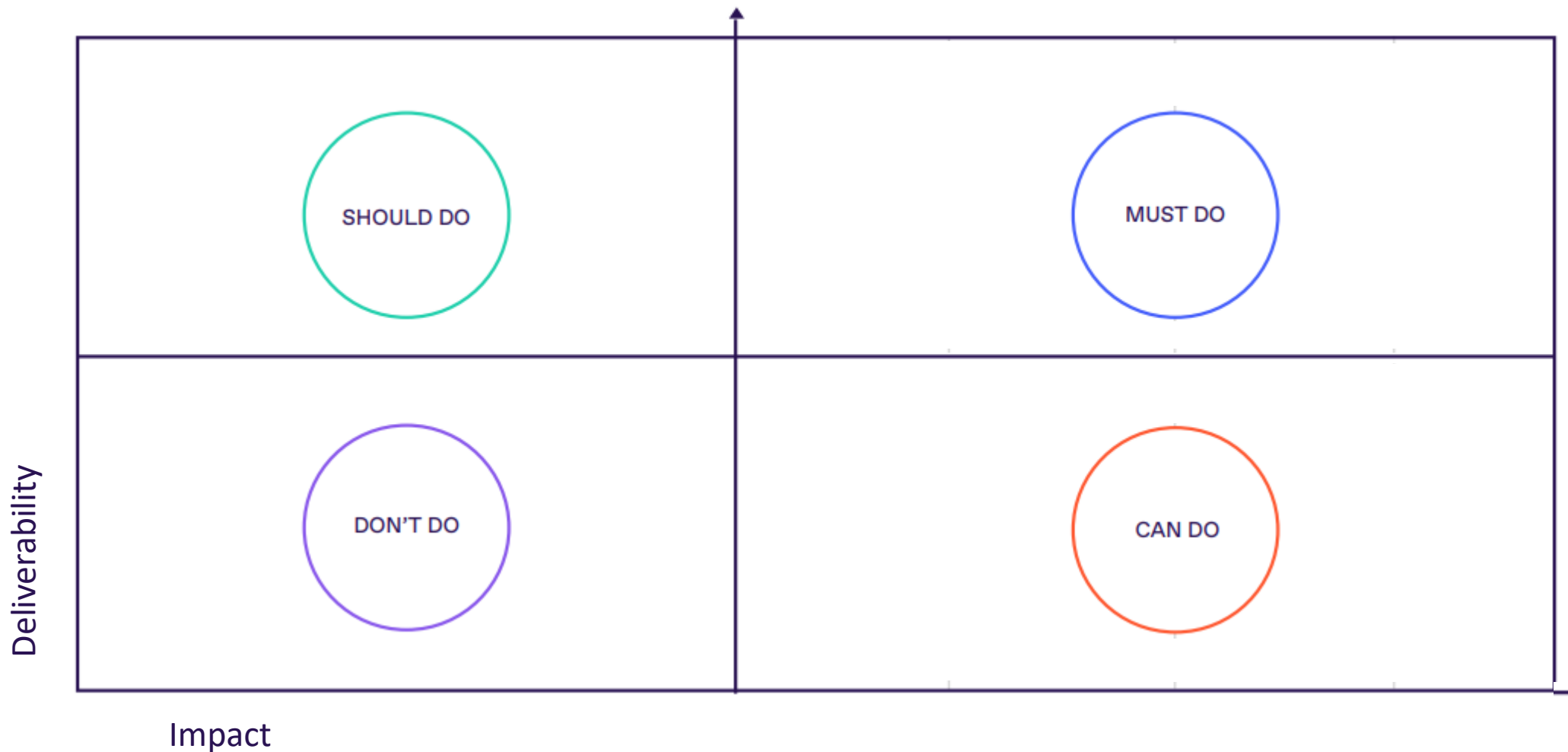
1. How we decide whether a project is viable?
2. Does a project meet our criteria for investment?

Our approach has 18 criteria:

- Design principles
- SCR priorities
- What matters to partners



# 3. Prioritisation



# 3. Prioritisation - Programme

Two key questions when designing the programme

1. Which order should 'must do' projects be delivered in?
  2. What interdependencies or external factors affect the order of projects?
- Tackle the biggest challenges before it becomes too difficult to do so:
    - Large reductions are needed in gas fuelled energy and fossil-fuelled transport.
    - Delays to action will make the task harder and more expensive in the run-up to the 2040 deadline.
  - Strategic and enabling actions:
    - Developments delivered in the short-term should avoid locking-in carbon emissions for the future.
    - Infrastructure needs to be in place to enable citizens and businesses to reduce their emissions.

# Next Steps

# 4. Next Steps - NZ Programme Development

1 **Your feedback today**

Developing the final programme of projects taking on board your thoughts.

2 **Shortlisting and prioritisation**

Refine the long-list of projects and assess the short-list using the prioritisation criteria to create 15-20 recommendations.

3 **Final engagement with NZP and stakeholders**

Review recommended action plan of projects and the prioritisation assessment.

4 **Final deliverable: end of October**

Work programme and roadmap, recommendations for future actions, and prioritisation framework.

