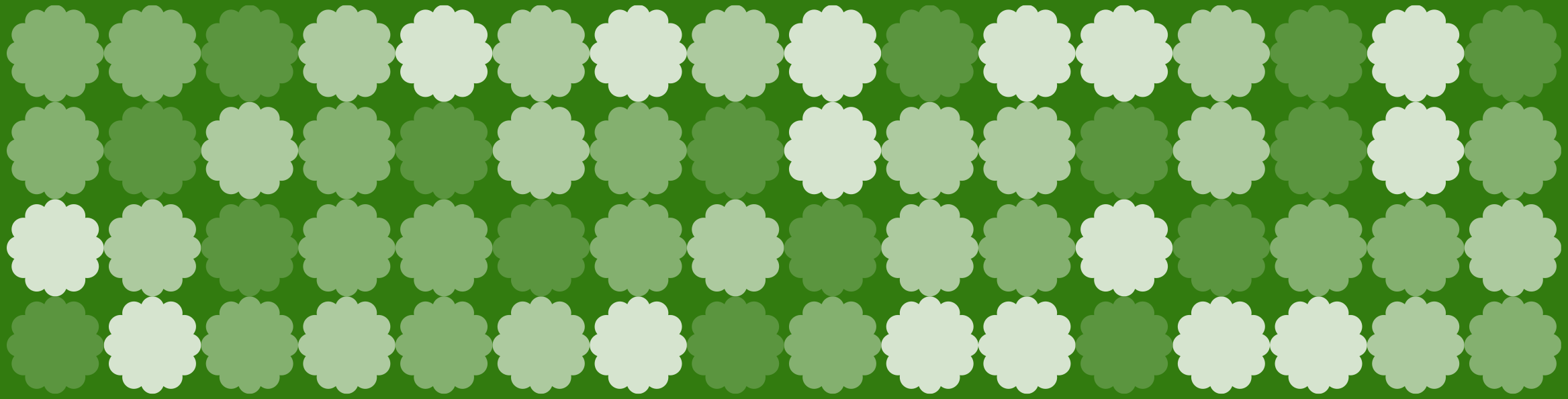
GREATER MANCHESTER

DOING THINGS DIFFERENTLY FOR THE ENVIRONMENT

ITEM 10

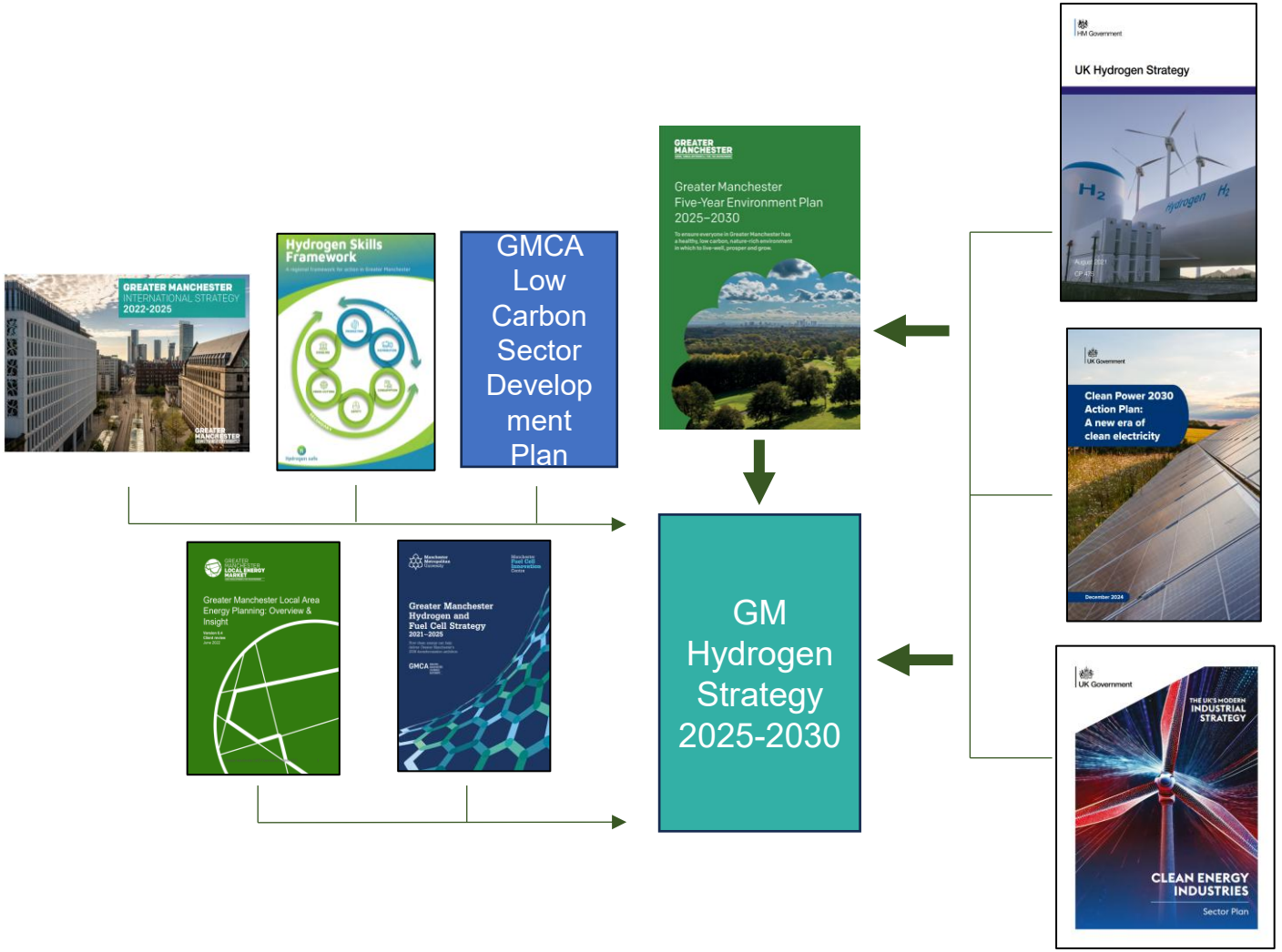
GM Hydrogen Strategy 2025-2030

Progress Update

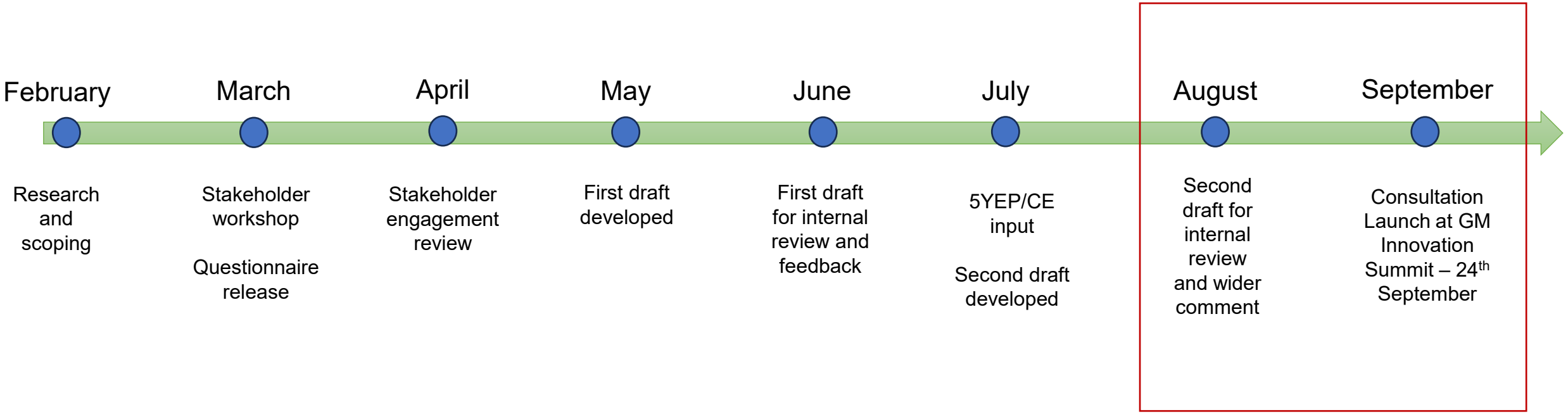


Rationale for Refresh

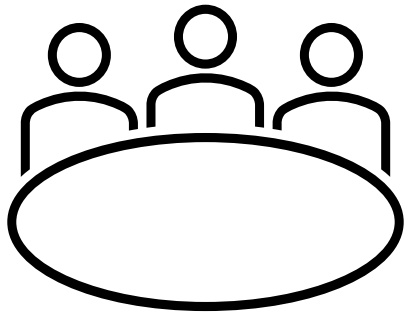
- The previous Hydrogen and Fuel Cell Strategy was for the period 2021-2025
- Since then, there have been advancements in hydrogen technology and changing local, national, and international policy landscapes
  - GM Five-Year Environment Plan 2025-2030
  - Emerging business models from UK Government
  - Recommitment in 2025 Industrial Strategy and Clean Power Plan
- Only regional hydrogen strategy



Timeline


February
March
April
May
June
July
August
September
Research and scoping
Stakeholder workshop
Questionnaire release
Stakeholder engagement review
First draft developed
First draft for internal review and feedback
5YEP/CE input
Second draft developed
Second draft for internal review and wider comment
Consultation Launch at GM Innovation Summit – 24th September

Stakeholder Engagement Process



Greater Manchester Hydrogen Strategy 2025-2030
Consultation Questionnaire

Closes: 6/4/25

The Greater Manchester Hydrogen and Fuel Cell Strategy 2019-2024 has been a key component of the region's approach to clean energy and objective of carbon neutrality by 2038, enabling investment, innovation, and providing direction as GM decarbonises.

Since the previous strategy's publication there have been advancements in hydrogen technology and changing local, national, and international policy landscapes. Notably, there was the publication of the UK Hydrogen Strategy in 2019. Additionally, a new GM Five-Year Environment Plan was also published for the period 2025-2030, containing refreshed ambitions for the use of green hydrogen in the region.

Hence the Greater Manchester Combined Authority (GMCA) and Manchester Metropolitan University (MMU) are working in collaboration to produce a refreshed Hydrogen Strategy for the period 2025-2030. The Strategy aims to highlight the activities taking place in the city-region, and provide direction to businesses, investors, government, local authorities and academic institutions.

This questionnaire is intended to capture stakeholder expertise, perspectives, and priorities for the future of hydrogen in Greater Manchester. All views will be assessed and taken into consideration in the development of the new strategy, and a consultation response will follow in April 2025.

Thank you for your contribution.

This questionnaire is by no means represents an official policy position of the GMCA, all statements are in development and subject to change as the Strategy is produced.

Workshop

- Approximately 20 participants
- Engagement was high- many interested in being involved in the delivery group

Questionnaire

- Shared via LinkedIn, internal networks, and industry channels

Ad hoc meetings

- Those who were unable to attend the workshop
- Where clarifications from workshop and questionnaire were needed
- Discussed at 5YEP/CE & PDE forums

Scope of Strategy

In scope:	Out of scope:
• Given where infrastructure and national decisions are, focus will be on addressing industry emissions, heavier transport, and targeted heating zones • To present a regionally tailored approach to support local deployment, translating the high-level ambitions of the 5YEP into a more detailed and actionable delivery framework • Coordinating efforts and fostering robust multi-stakeholder collaboration • Attracting potential investors • To serve as a tool for tracking progress and ensuring accountability, alongside delivery group	• Technical explanations of hydrogen technologies • Associated risks and regulatory frameworks

Format

Section 1:

- 1.1 - The role of hydrogen in meeting carbon neutrality
- 1.2 – Context and Opportunity
- 1.3 - What has been achieved since the last strategy
- 1.4 - High level strategic vision

Section 2: Opportunity Areas

- 2.1 – Skills and Supply Chain
- 2.2 – Research and Innovation
- 2.3 – Production, Distribution and Usage

Section 3: Delivery

- 3.1 - Action Plan
- 3.2 - Tracking our progress

Skills and Supply Chain

Current Position

- Relationships between CA, LAs, local supply chains, labour markets, skills providers, and innovation ecosystems
- Regional focus on four frontier sectors:
  - GM hosts one of the UK's largest **Low Carbon** clusters in terms of business activity, employment, and economic output.
  - Highly skilled **manufacturing** workforce and clusters of graphene and **advanced material** manufacturers - crucial for hydrogen infrastructure development.
  - GM's **digital** capabilities support the growth of the hydrogen economy, especially in developing control and monitoring systems.
- The region's high population density and status as a top travel-to-work area create a supportive environment for industry growth

Growth Opportunities

- Adaptable skills base for hydrogen industries, some reskilling/upskilling needed in areas like facilities management, fleet management, and finance.
  - Opportunity to utilise MBacc and T-level networks
- Utilising connections for a communications programme and better employer-educator coordination for uptake in training courses
  - Clear, consistent messaging from local and national government is needed to reassure businesses and learners.

Research and Innovation

Current Position

- GM is emerging as a leading centre for hydrogen innovation, with strong academic, industrial, and strategic partnerships.
- GM Universities are a key recourse
- Additional Resources:
  - Greater Manchester Electrochemical Hydrogen Cluster (GMEHC)
  - Graphene Institute, supporting hydrogen innovation through advanced materials research and device development.
  - Hydrogen Innovation Challenge (led by Sustainable Ventures and CPI), accelerates hydrogen startups in the North West.

Growth Opportunities

- Plans are underway to establish a Hydrogen Centre of Excellence (HYTECH), led by MMU
  - HYTECH will enable more demonstrator projects,
- Stakeholder engagement highlights the need for innovative financial mechanisms to grow the hydrogen market.
- Utilise networks to connect businesses with academic institutions, for access to talent and innovation

Production, Distribution and Usage

Current Position

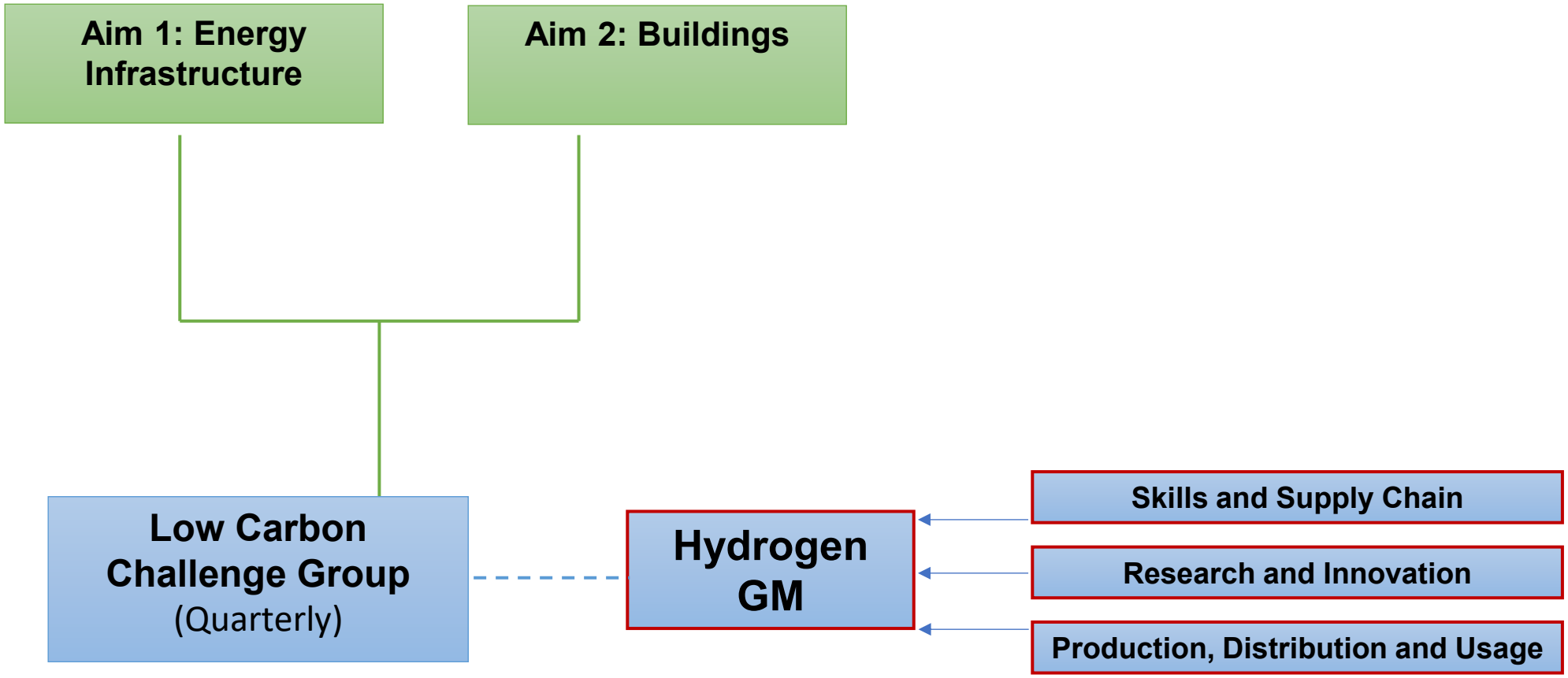
- A growing portfolio of hydrogen and clean energy projects supports both regional and North West ambitions:
  - **Trafford Green Hydrogen -** Up to 200MW capacity, first phase operational by 2027,
  - **HyNet**:- Approved by UK Government in April 2025; construction begins in 2028, Phase 2 pipeline reaches Carrington by 2030; Phase 3 extends into Manchester, Preston, and North Wales by mid-2030s.

+ wider NW projects

Growth Opportunities

- An initial **spatial pathway** is being developed, modelling anticipated hydrogen production sites, expected pipeline arrival points, likely clusters of off-takers (e.g., large industrial firms)
- Targeted communication with businesses to:
  - Prepare off-takers for hydrogen integration.
  - Support infrastructure development.
  - Promote hydrogen-ready energy systems

Delivery Group – Hydrogen GM



Rethinking the GM Target

- Provisional target in the GM 5YEP 2025-2030: 800GWh of Hydrogen Power by 2030
- Need to revise this target in the Hydrogen Strategy as existing hydrogen production facilities in GM have not yet secured the funding required to expand as envisioned.
- Hydrogen GM delivery Group will take responsibility for confirming a new target,
- Basis for new target is included in Strategy, drawing upon: national projections, the Climate Change Committee's seventh carbon budget, and further local insight from the Cadent Gas.
- Alternative targets could look to cover:
  - Readiness of the gas network for hydrogen (e.g. Plasticisation rate of gas network).
  - Reduction in industrial gas demand across the city-region.
  - Increase in (industrial) hydrogen demand across the city-region

Consultation Process:

Next Steps:

- Align with National Strategy
- Internal and wider network circulation
- Gather consultation responses until 21st November
- Delivery Group communications

RECOMMENDATIONS

The partnership is recommended to:

- Note the presentation
- Promote the consultation