

# The role Industrial Clusters can play in the transition to net zero

# The World Economic Forum

**The World Economic Forum is the International Organization for Public-Private Cooperation.**

Our mission is to improve the state of the world.

Our purpose is to bring together stakeholders from all sectors of society to shape the future for the better and generate great impact through purpose-driven communities and impact-driven platforms.

Reinforced by a track record of success over five decades, we are proud to serve as your trusted platform for high-level, multistakeholder interaction.

# How we achieve change

## Building awareness and shaping the agenda

The Forum brings together leaders from business, government, international organizations, academia, civil society and youth to exchange insights and drive change globally.

## Informing decisions and guiding strategy

The Forum's strategic initiatives, including white papers, policy frameworks, flagship reports and more, help companies prepare for transformational change across industries and economies.

## Driving collective action and impact

The Forum provides a platform for partners to start new alliances and mobilize the resources needed to make the world more sustainable and inclusive.

# Platform for Shaping the Future of Energy, Materials and Infrastructure



Energy, materials and infrastructure are the foundational elements enabling economic growth.

With pressures on these sectors, how do we support their transition to enable economic and social growth without harming the environment?

**Our Platform enables businesses, governments and society to grow sustainable economies, help to halt climate change and create a more equitable world.**

“We are proud to collaborate with the World Economic Forum to make a positive difference globally; it is such a major opportunity to redefine the energy paradigm and enable an effective transition towards a more sustainable and inclusive world.”

Francesco Starace, Chief Executive Officer and General Manager, Enel





# Our priorities



## Country Transition and Benchmarking

Foster the understanding of the state and readiness for transitioning industrial and energy systems, and provide the data required to guide the transition efforts



## Net-Zero Carbon Cities

Accelerate the transformation of urban ecosystem - the centre of global energy demand and emissions - towards a net-zero future



## Industrial Transition

Drive the systemic changes required to enable and accelerate the transition of the industrial ecosystem



## Growth Markets

Mobilize efforts and investment for the energy transition in regions where the growth in demand and emissions will be the highest



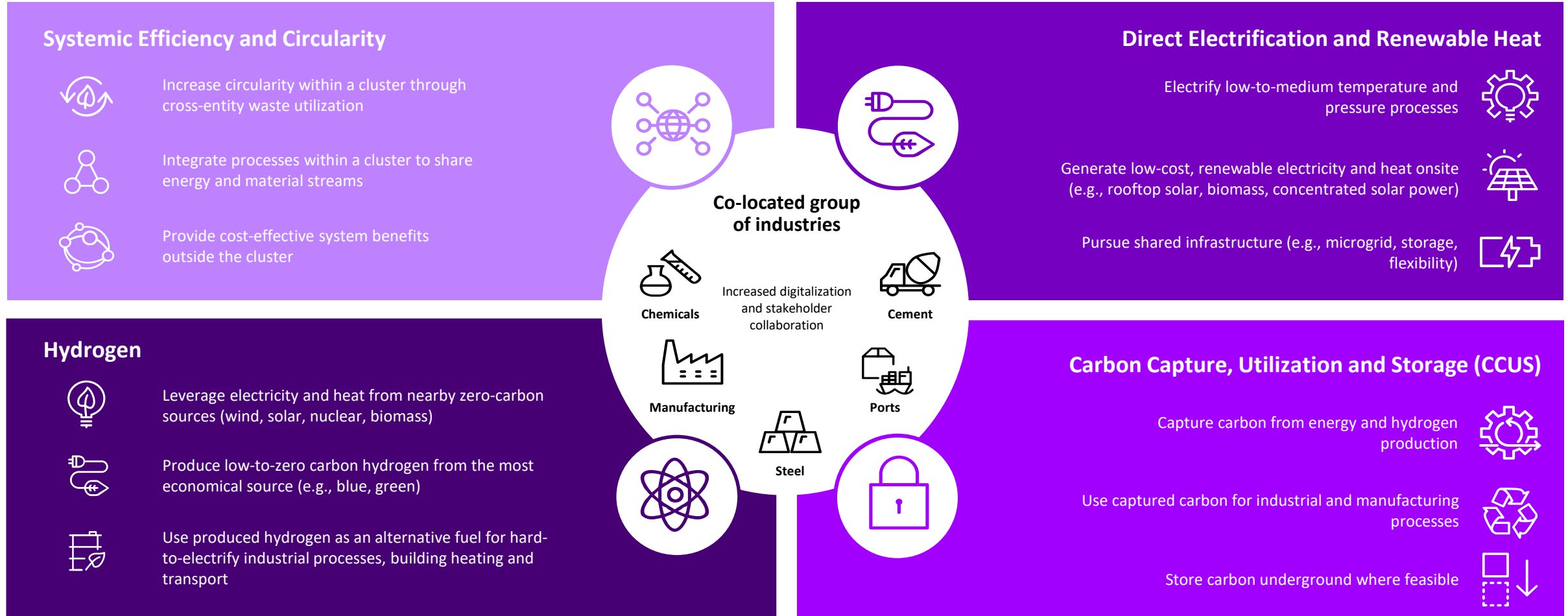


***Focus on:***

# **Transitioning industrial clusters to net-zero**

# Net-zero Solutions for Industrial Clusters

There is a menu of abatement opportunities, and a holistic approach to industrial clusters is required to optimize emissions solutions and create an integrated energy system that maximizes system value outcomes.



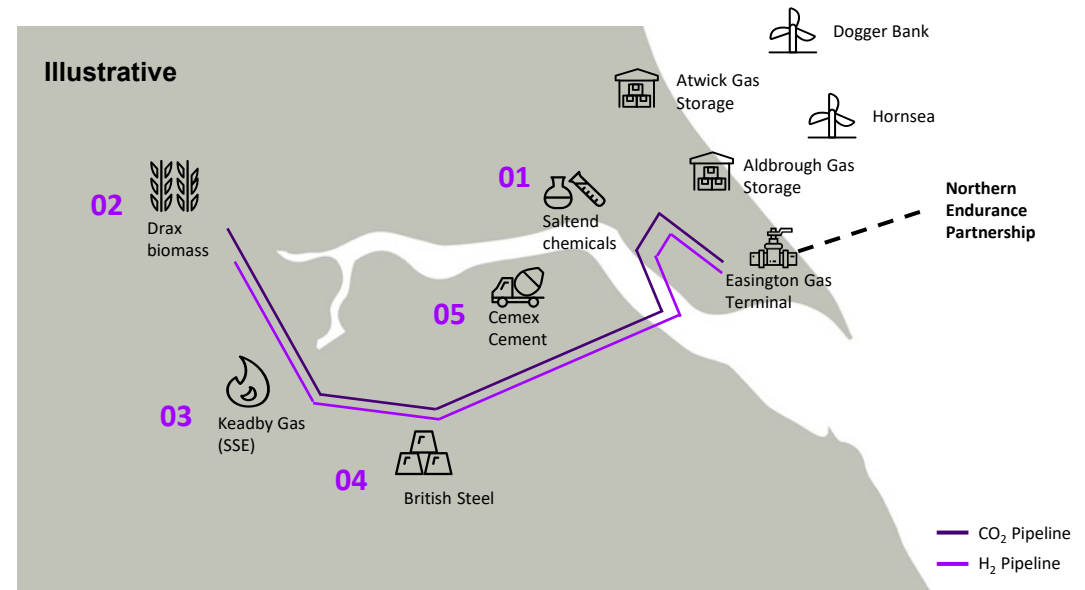
# Zero Carbon Humber

Zero Carbon Humber is a coalition of 12 entities collaborating on joint CCS and hydrogen infrastructure projects.

## Zero Carbon Humber (ZCH) Overview

- ZCH is aiming to establish the **world's first net-zero industrial cluster by 2040** via creation of CCS infrastructure and production of blue and green hydrogen.
- H2H Saltend will be a **first mover** in utilizing the **shared CO<sub>2</sub> and hydrogen transport and storage infrastructure**. This will eventually enable multiple carbon abatement projects (e.g., SSE Thermal, British Steel, Drax BECCS) in the region to scale quickly to achieve net-zero targets for the cluster and the UK.
- Industrial users will be able to reduce emissions by capturing carbon and transporting it via shared pipelines for offshore storage as part of the **Northern Endurance Partnership** – the offshore component and sister project to ZCH.
- **Access to shared hydrogen infrastructure will spur demand** for use as feedstock in industrial processes and enable potential for further use outside the cluster.
- The coalition recently applied for **£75 million in private and public sector funding** to advance Phase 2 operations, with the first infrastructure expected to go online by 2026.
- **There will be three major areas of project work:**
  1. Develop a carbon-capture usage and storage network.
  2. Produce low-carbon hydrogen and create shared hydrogen infrastructure.
  3. In the longer term, produce green hydrogen using offshore wind electrolysis.

## Map of Planned Operations



## Zero Carbon Humber Partners

Associated British Ports  
British Steel  
Centrica  
Drax  
Equinor  
Mitsubishi Power

PX  
National Grid Ventures  
SSE Thermal  
Triton Power  
Uniper  
University of Sheffield – AMRC



# Thank you!

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