

CO2 Transport and Storage

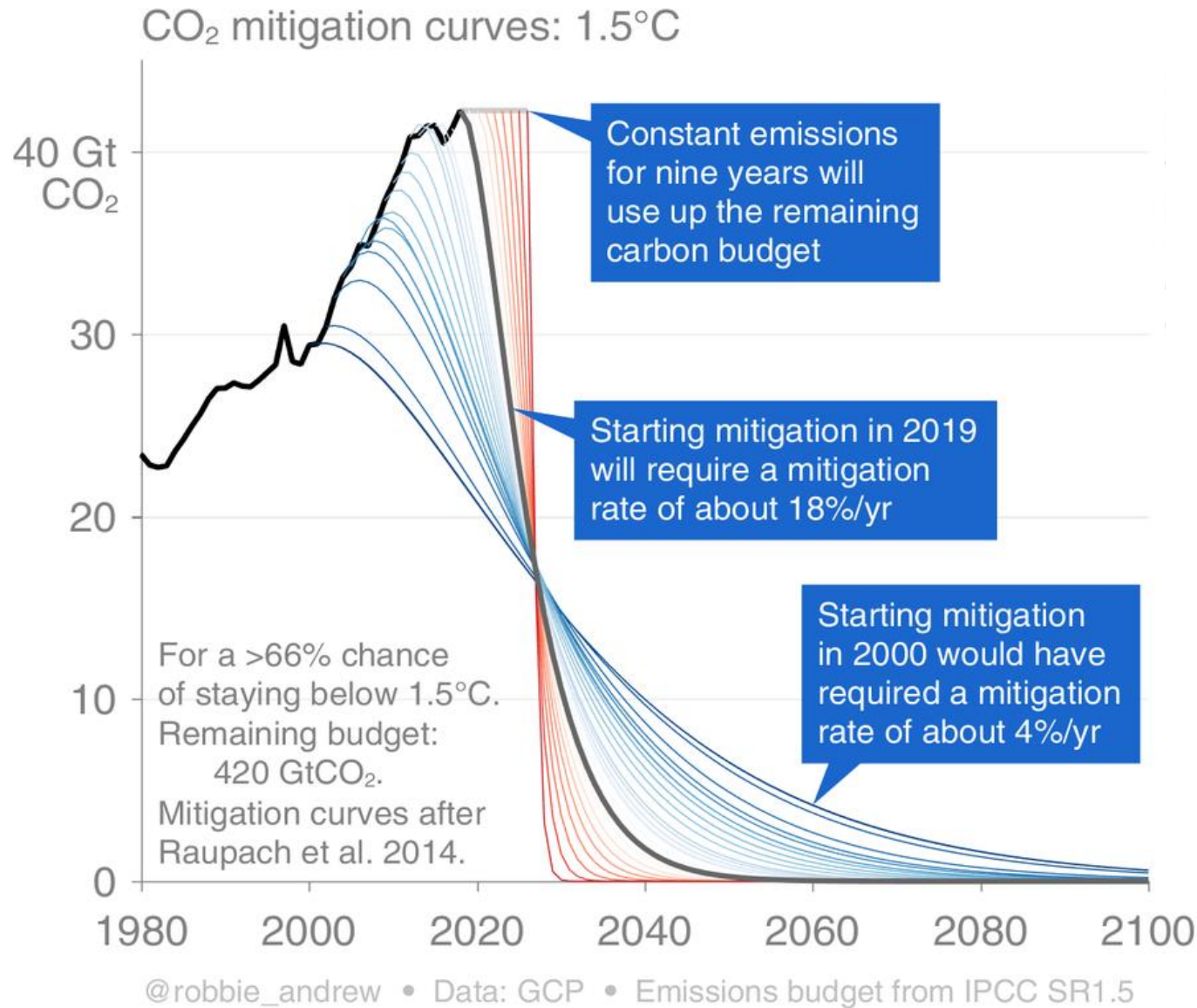
A Flexible Low Carbon Infrastructure



4th December 2019, Madrid

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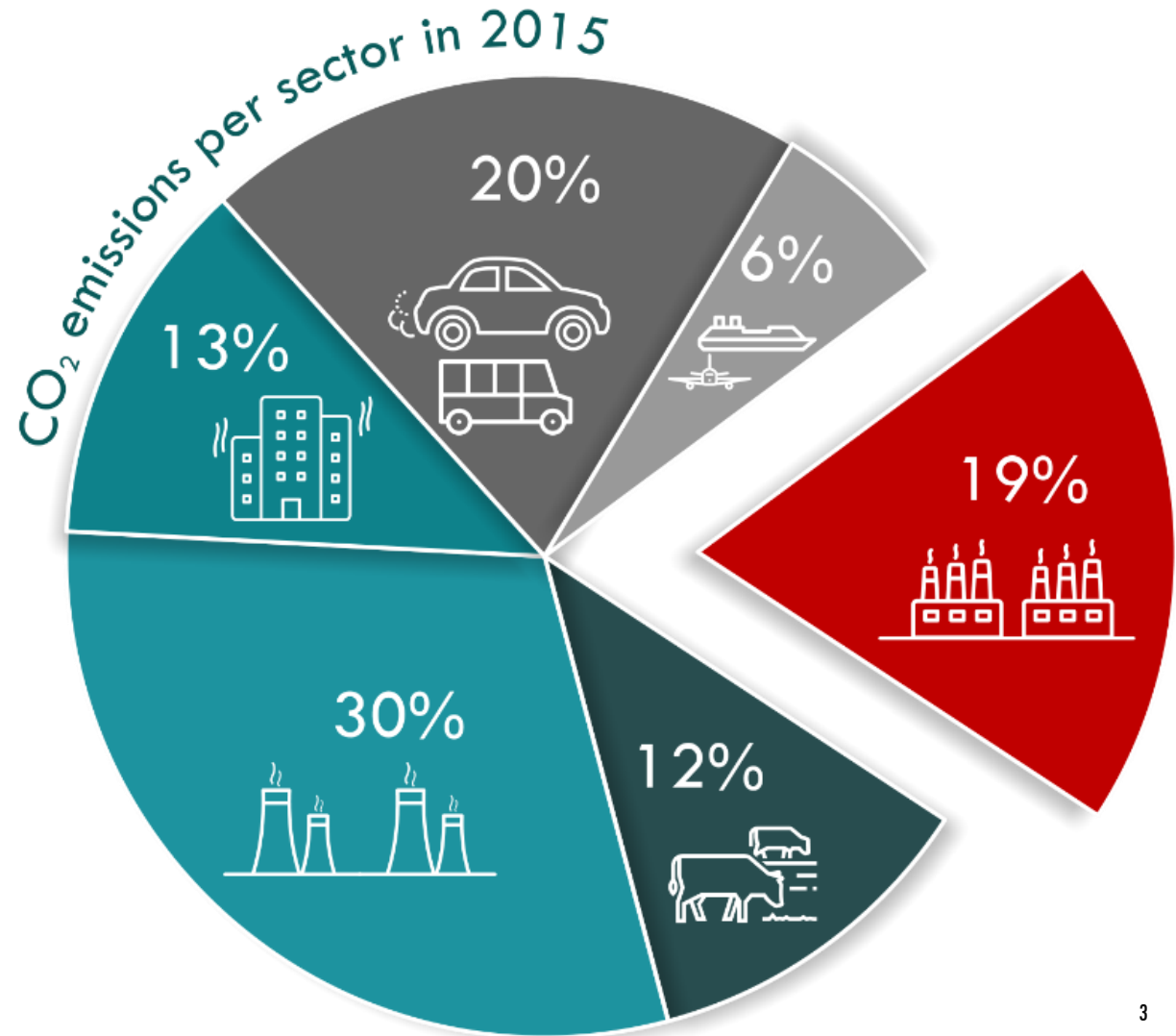


**Rapid Emissions
Reductions required**

**Carbon Dioxide
Removal (CDR) is
limited. Cutting
emissions is a must –
CDR is no substitute
for mitigation**

INDUSTRIAL EMISSIONS REQUIRE DEEP REDUCTIONS

Cement
Steel
Chemicals
Fertilisers
Waste Incineration



ACTION NOW REQUIRES INFRASTRUCTURE

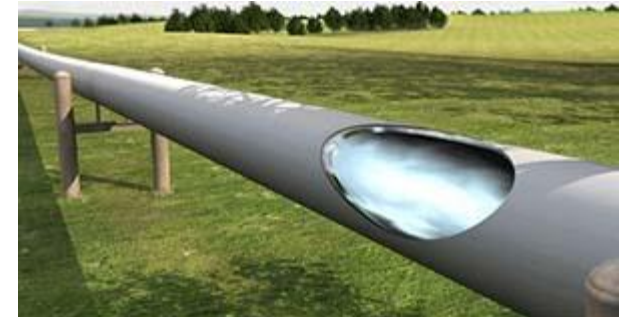
Renewables Grids



Hydrogen Networks



CO₂ Transport and Storage Networks



A SHARED CO₂ SHIPPING NETWORK FOR NORWAY & SCANDINAVIA



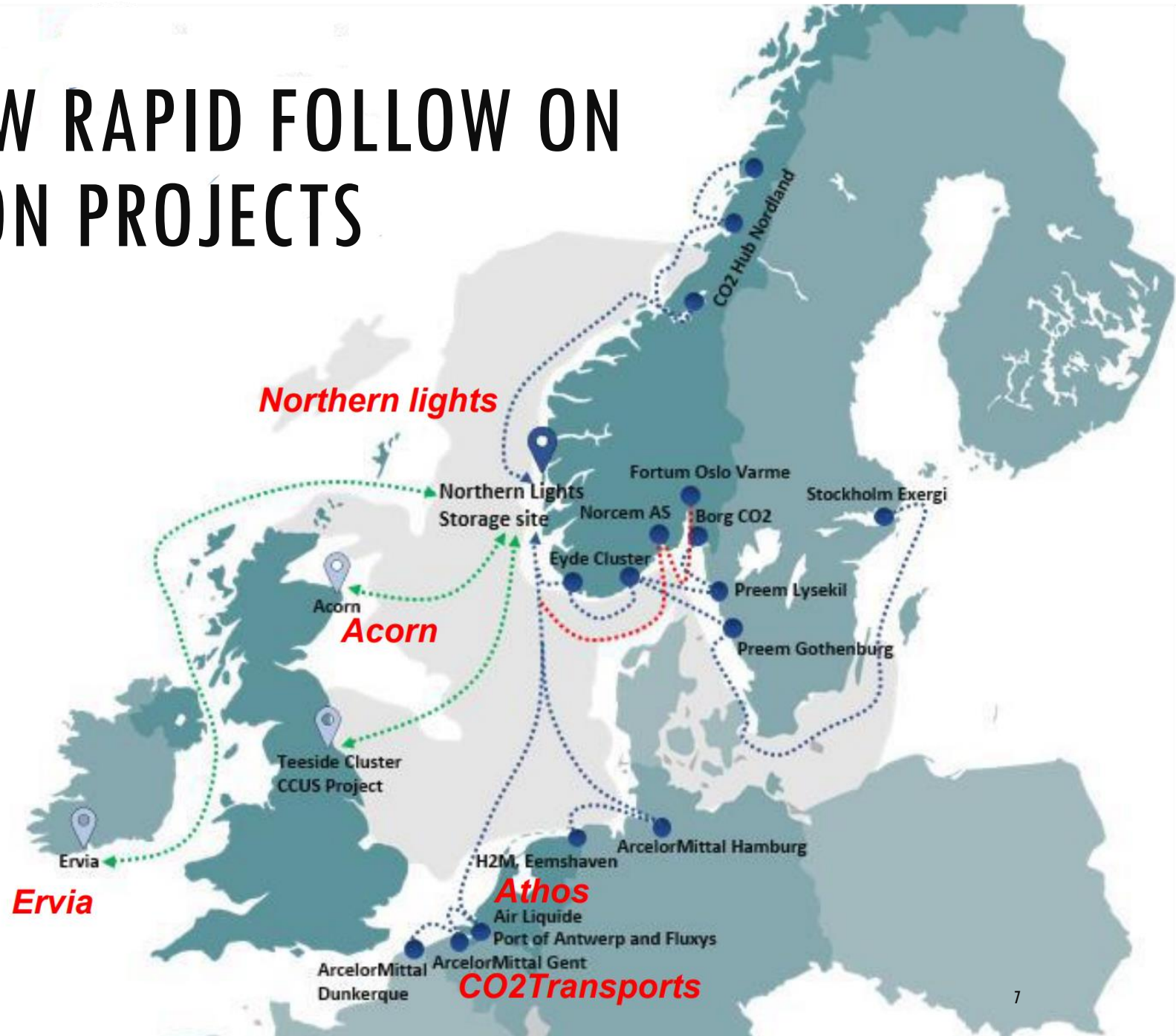
ROTTERDAM SHARED CO2 PIPELINE



NETWORKS ALLOW RAPID FOLLOW ON DECARBONISATION PROJECTS

New Cities and Industrial regions link up to existing CO2 transport and storage networks

Increased speed of decarbonisation



CO₂ NETWORK AS A PUBLIC GOOD

*In the early 19th century, London planned to expand its sewage system, yet faced widespread public opposition. Particularly wealthier people, living uphill, did not see why a general sewage system was needed and hence did not want to pay to improve the property of private individuals 'downhill'. In fact, **sewage was not seen as a public good**, and so the government initially considered it improper to use public money. **It took several cholera epidemics, thousands of deaths, and the 'Great Stink' of 1858 for London to finally modernize and upgrade its sewage system, at last stopping the unchecked dumping of human waste into the city and the river Thames.***

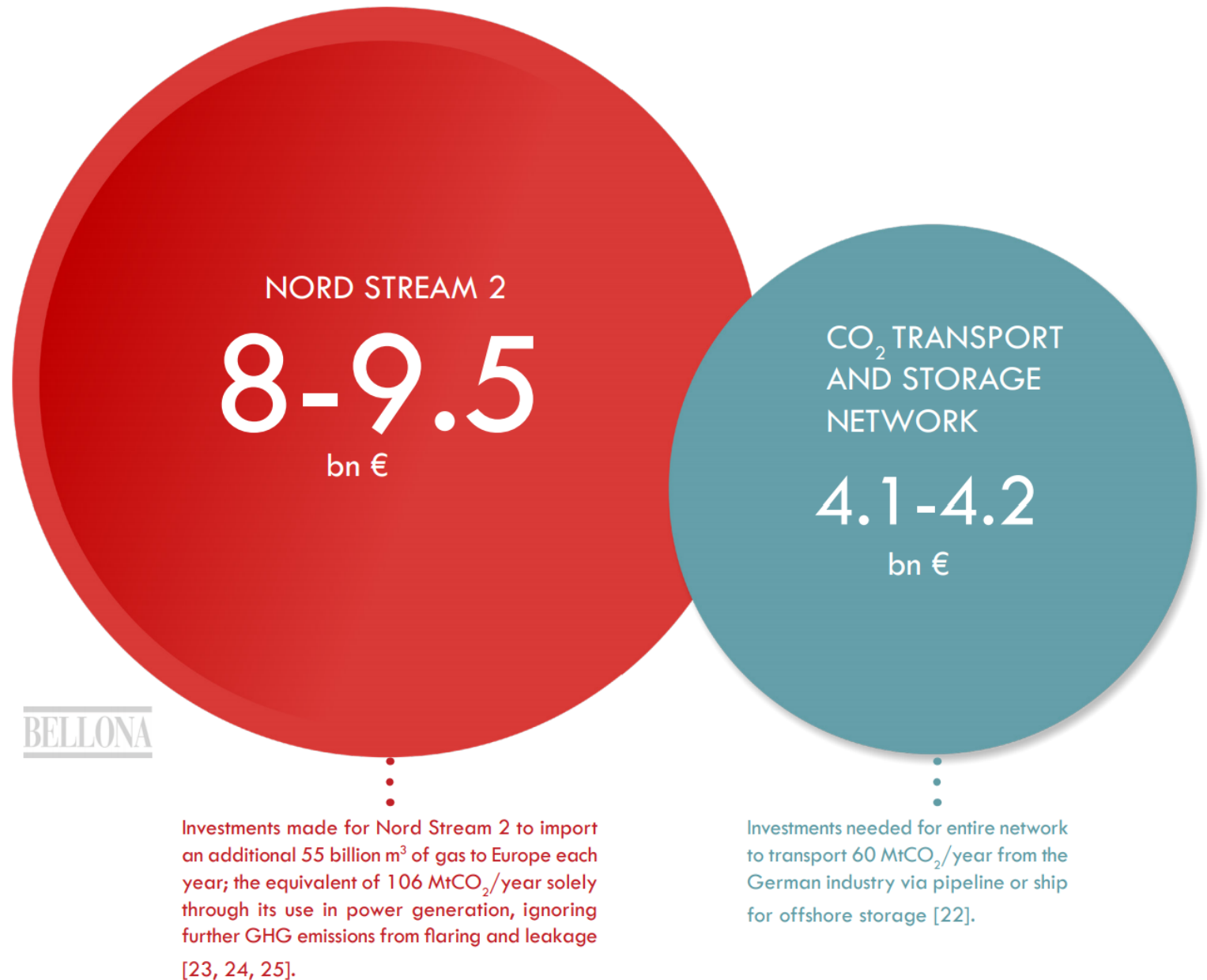


“[The principle] was of diverting the cause of the mischief to a locality where it can do no mischief.”

Sir Joseph Bazalgette, Civil Engineer

SHARING MEANS SAVING MONEY

- Shared CO₂ networks reduce costs
- Increase participation
- Reduce complexity for new projects
- Network can be expanded to more industries



INDUSTRIAL REGIONS REQUIRE CO2 NETWORKS

Provides a path for *industry* to ***deeply decarbonise***, protects investments and existing assets.

Is as a corner stone of a *Just Transition* for industry, ***labour unions*** ensure that jobs remain in Europe. It safeguards the welfare of Europe's workers.

Allows ***governments*** at a local and national level to fulfil their obligations under binding international targets and towards their constituents by protecting their health, their jobs, and the environment and climate.

Helps ***civil society*** to ensure that no industry emissions are '***unavoidable***' and forces industry to deeply decarbonise. With no excuses left, industry decarbonisation will not be delayed further.

FIRST PROJECTS TO PUT IN PLACE EXPANDABLE CO2 INFRASTRUCTURE

A CO2 network will not simply appear, we need PROJECTS & FINANCE

Cooperation

- Among Industry partners, Unions, Policy-Makers (local, national, regional)

Develop and Deploy Projects

- Industry-scale demo projects need clear, detailed plans (location, size, costs)

Think Strategic

- Develop Projects where they can set you up for the long term

Fair pricing & access

- Develop commercial regulations for CO2 transport and storage «Regulated Asset»

INDUSTRY IN A CHANGING CLIMATE



**WE HAVE
A PROBLEM**

**A DIVERSITY
OF OPTIONS,
A LACK OF
SOLUTIONS**

**THE DAWN
OF A NEW
INDUSTRY**

**A FAREWELL
TO INACTION**

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