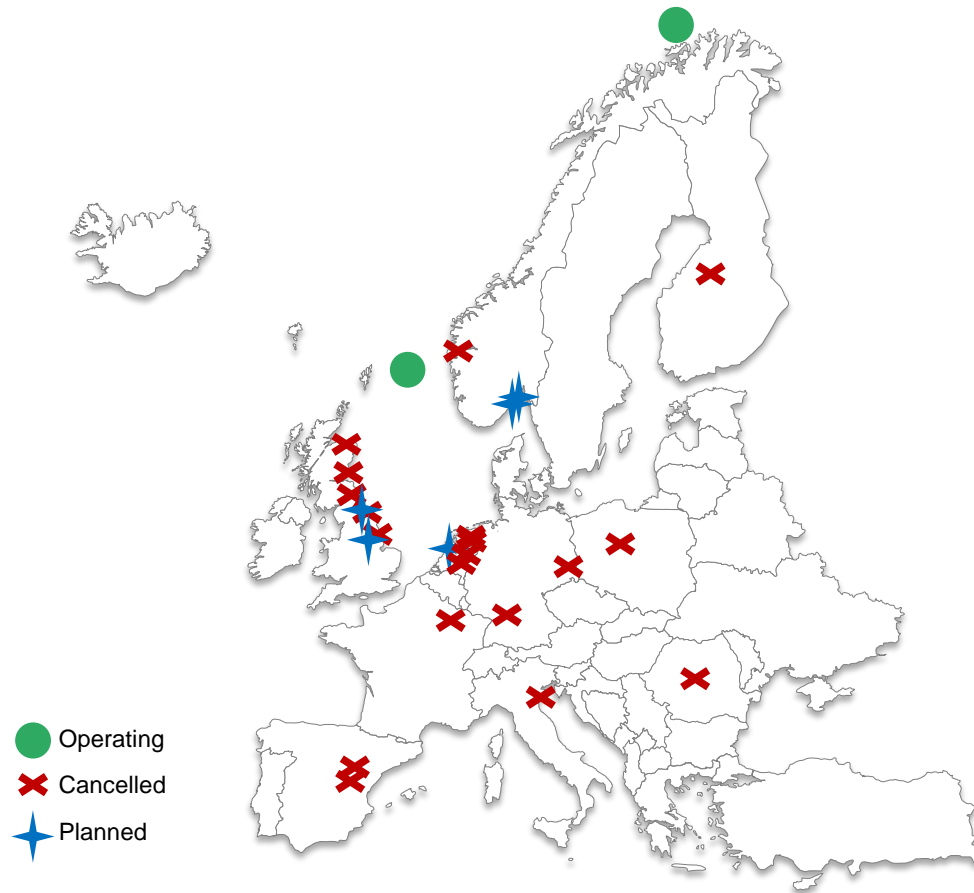


Communicating the Value of CCUS

Trondheim CCS Conference

June 19th, 2019

CCS in Europe: a Complicated Journey



- Operating
- ✕ Cancelled
- ★ Planned

Not exact locations. Illustrative only

Source : Cauchois Consulting analysis

Reasons for cancellation:



Regulations



Lack of funding despite NER300 and EEPR at the European level (CO₂ price level in the ETS). In UK withdrawal of funding



Lack of national support



Public opposition



However, some existing studies in the countries where projects were planned are publicly available.

The Social Lens



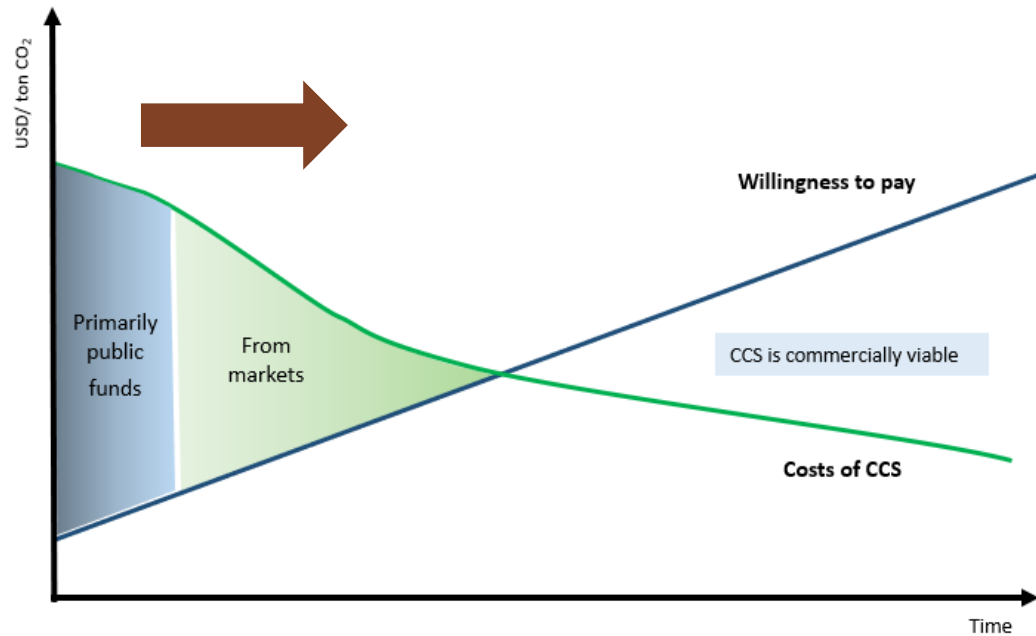
Social license is a key issue for large-scale deployment



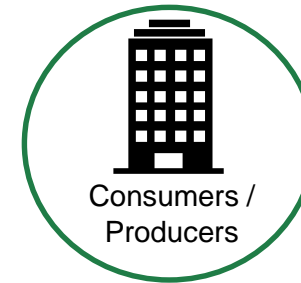
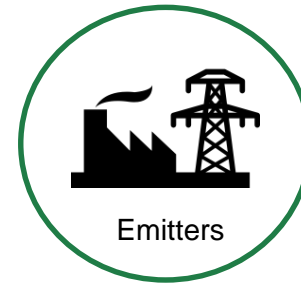
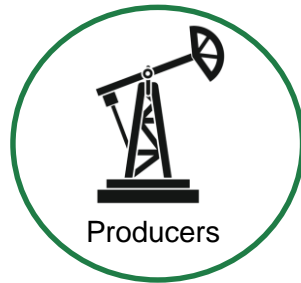
The social aspect under project approvals and access to financing



The Challenge of CCS Large-scale Deployment

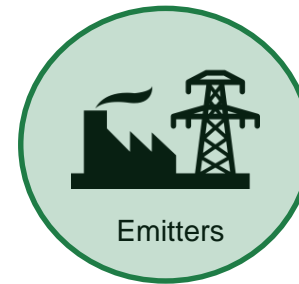
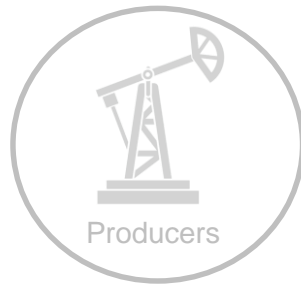


Putting a value to CCS: CCS certificates should be exchanged between the various stakeholders



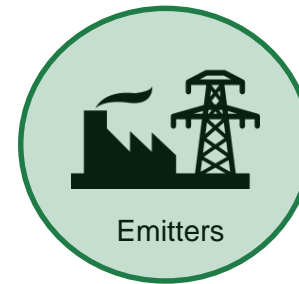
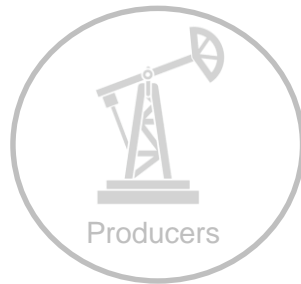
Putting a value to CCS: traditionally the financial instruments were not particularly targeting CCS

The Traditional Approach



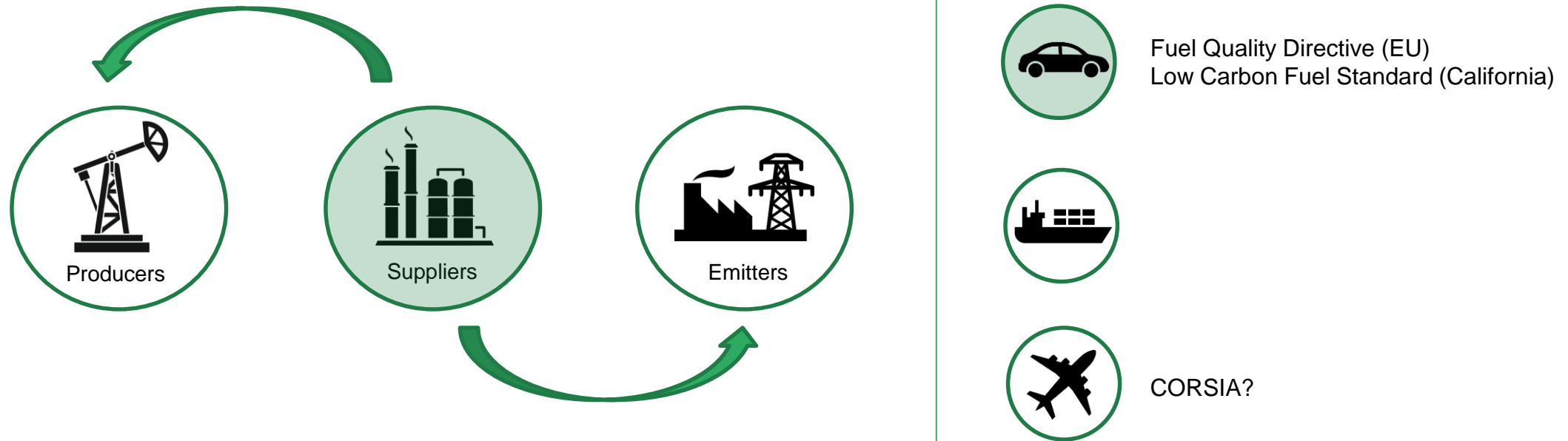
Carbon Tax
Emissions Trading System

Putting a value to CCS: more recently some mechanisms have specifically targeted CCS / CO₂ EOR

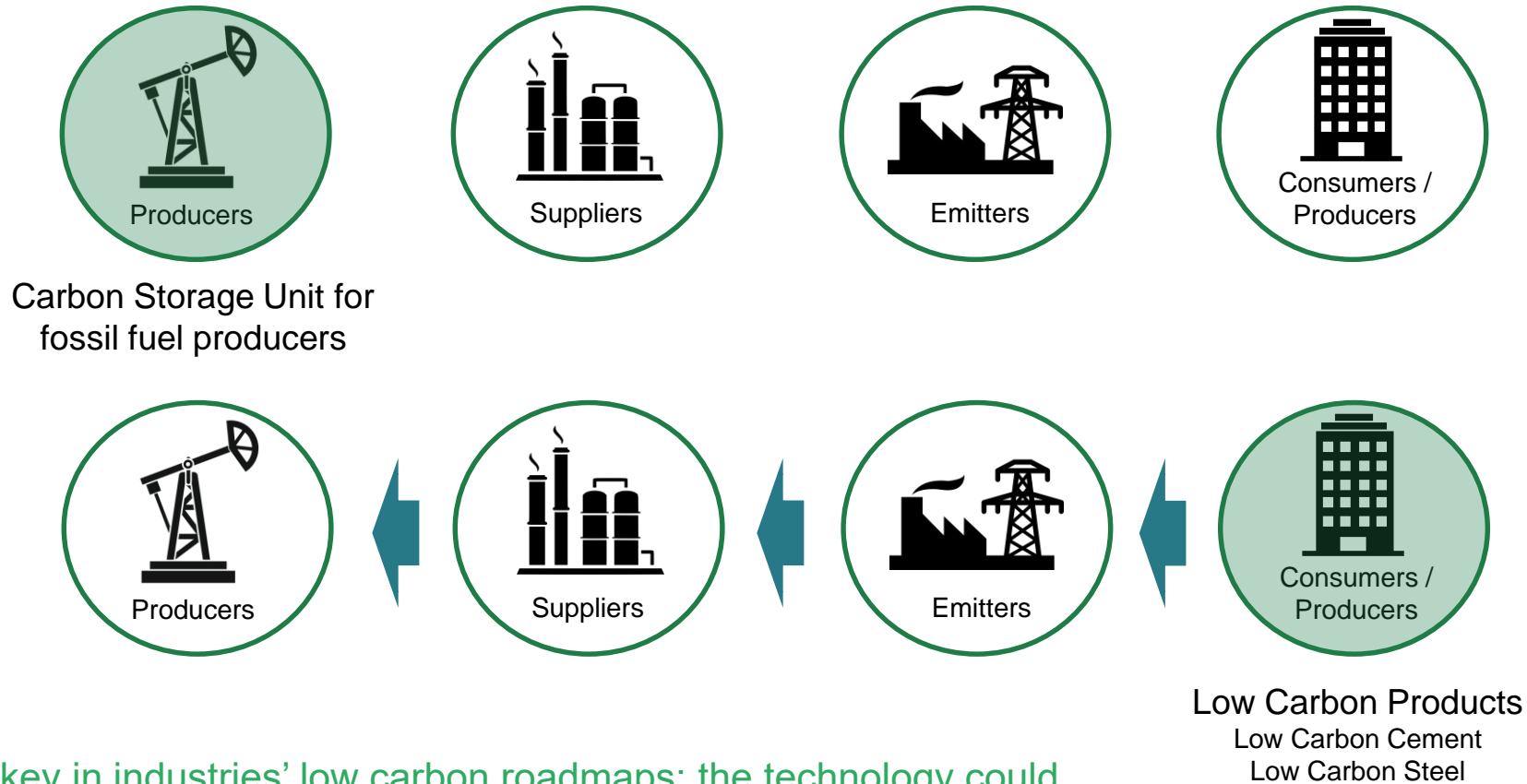


Tax credits (45Q)

Putting a value to CCS: constraints on the transport sectors requiring low carbon fuels can incentivize CCS use upstream and downstream

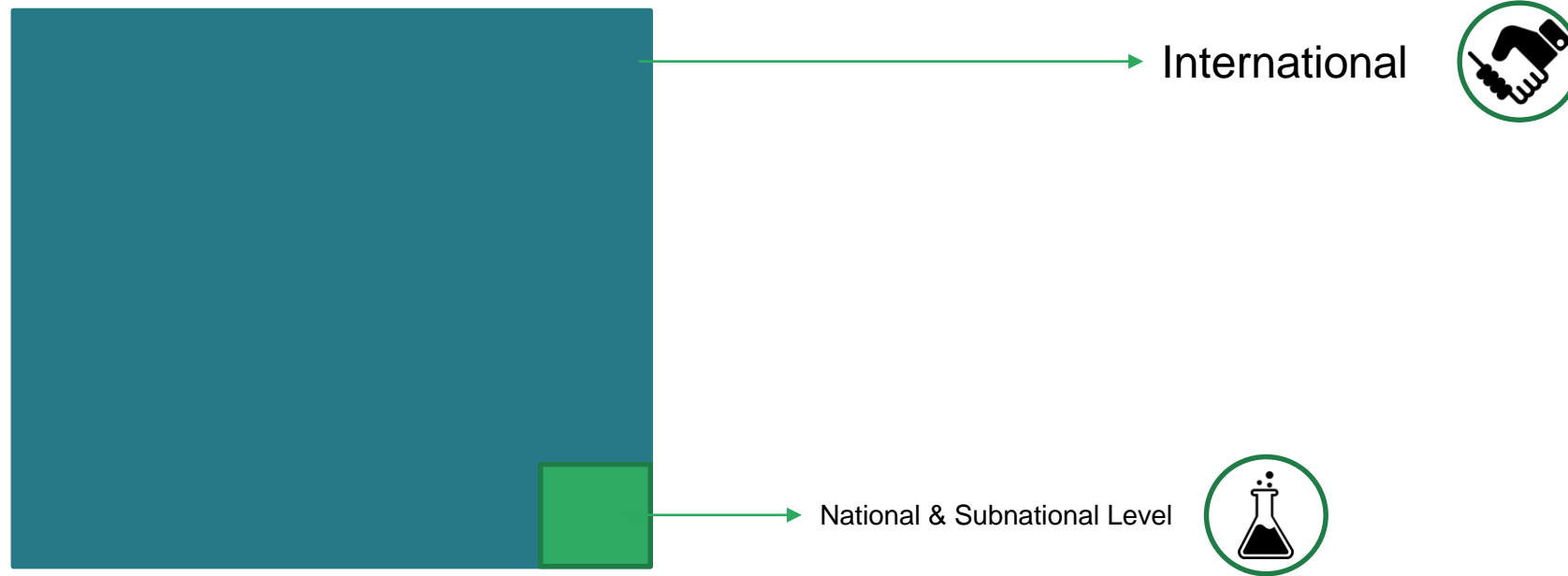


Putting a value to CCS: other types of mechanisms are also envisaged to incentivize CCS



CCS is key in industries' low carbon roadmaps: the technology could represent 17% to 50% of their emissions reduction by 2050

Going Beyond Public Funds Support & National / Sub-national Level instruments



Creating international cooperative mechanisms is possible under the Paris Agreement

Article 6 (Cooperative Mechanisms)

- 6.1 Going beyond current NDCs, Additional commitments?
- 6.2 Bilateral Cooperation: Internationally Transferred Mitigation Outcomes (ITMOs)
 - Metrics: Could other metrics besides CO_{2e} be used?
- 6.4 Business to Business (CDM like mechanisms) Centralized crediting mechanism

Article 13 (Transparency and Reporting)



Overcoming the Challenges for CCS Large-scale Deployment

What are we missing today to make CCS socially accepted?

CCS is part of the solution to meet climate goals ✓

Risk mitigation: CCS is a safe technology ✓

Cost-efficiency ✗



How can we make CCS a cost-efficient and competitive technology?

Commercial scale: Economy of scale

Private Driven Finance: Business Case?

International Cooperation: Agreements

Demand for low-carbon products: bottom-up approach

The cost of inaction



Thank you!

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