



CCS methodology development in the CCS+ Initiative

METI-JOGMEC-IETA joint workshop

CCS+
initiative

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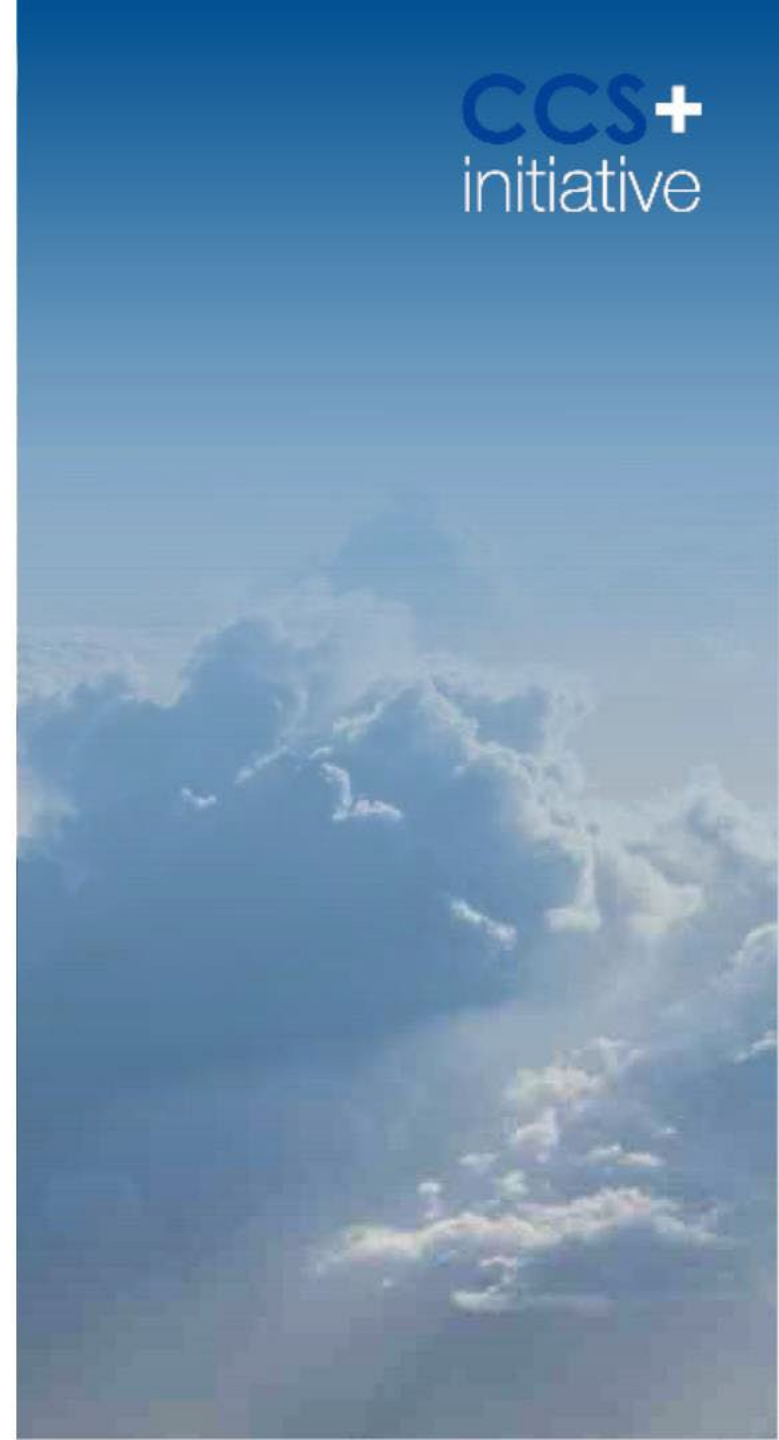
Tokyo, 26th January 2023

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A low-angle photograph of an industrial facility, likely a power plant or refinery, featuring large, dark, curved pipes and complex metal structures against a clear blue sky. The image is partially obscured by a white horizontal band in the upper half.

I. Introduction to CCS+

The CCS+ Initiative aims to scale cutting edge climate technologies by developing a robust carbon accounting infrastructure that promotes environmental integrity

Aligning on the basic principles of CCS is mission critical

...this includes standardization and carbon accounting

Lack of agreed-upon definitions, principles and standards on CCS – its scope, process, accounting, durability of CO₂ storage - hampers scale-up.

Robust and transparent CO₂ accounting infrastructure needed for independent verification and certification of projects, and guarantee the durability of storage over time.

Standards develop accounting methodologies to help **keep track of the carbon molecule's origin and storage** across all CCS use cases.

Objective

What we want to achieve

CCS+ seeks to limit catastrophic climate change and **reach net zero emissions** by unlocking the potential of certified CO2 capture, utilization, removal and storage solutions around the world.

Goal

How we plan to get there

By developing robust carbon accounting methodologies, with a solutions-focused modular approach, CCS+ enables the **measurement and monetization** of reduced emissions and removed carbon.

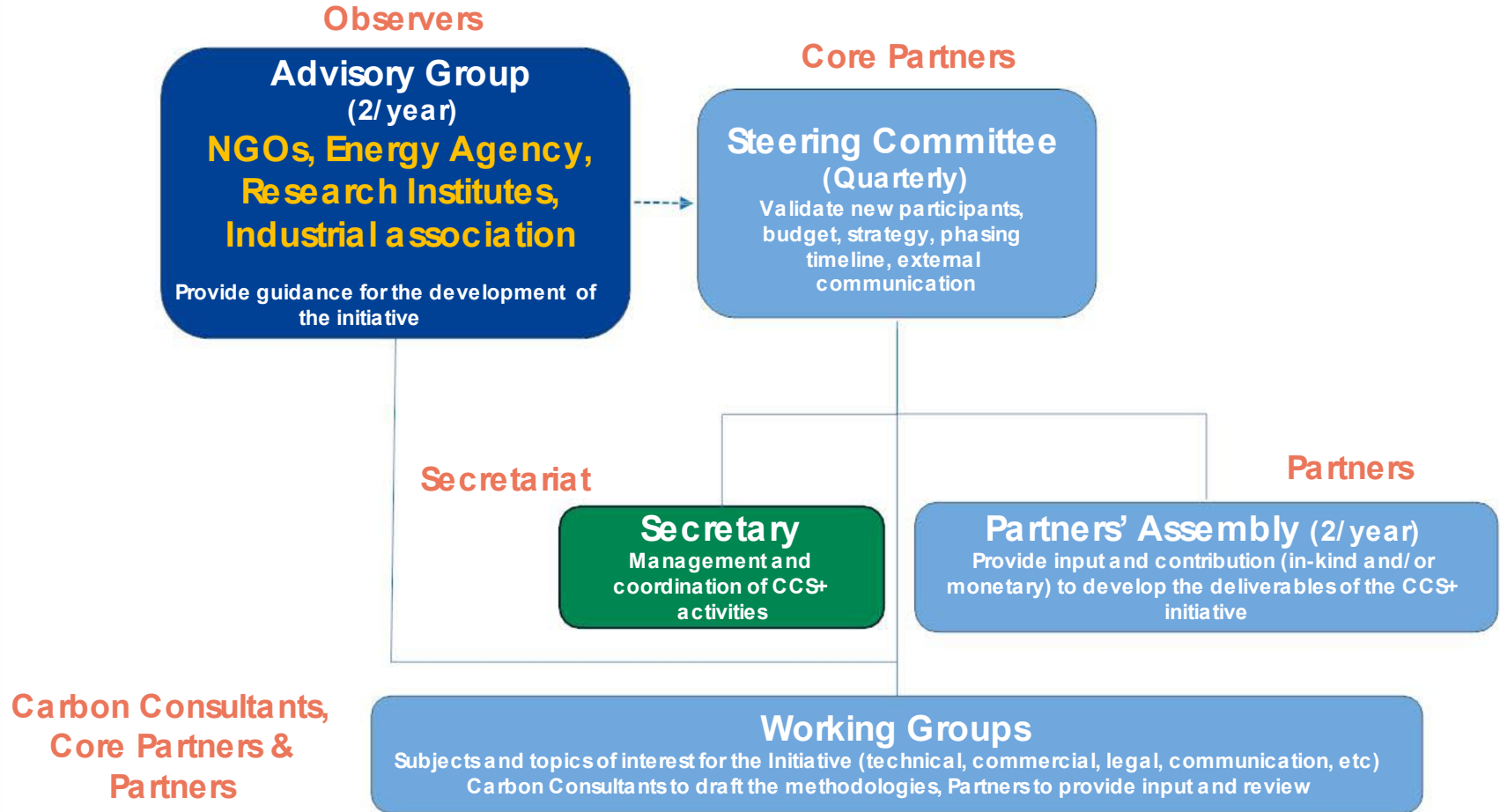
Innovation

Why we trust our approach

CCS+ takes a collaborative approach, grounded in industry expertise and scrutinized by an Advisory Group, to create a **public good** that adheres to the highest levels of environmental integrity.

CCS+ Initiative

Governance set up



CCS+ Initiative Membership

Advisory Group



Carbon Consultants



Core Partners



Partners



Technology Partners



Standard Setting Body

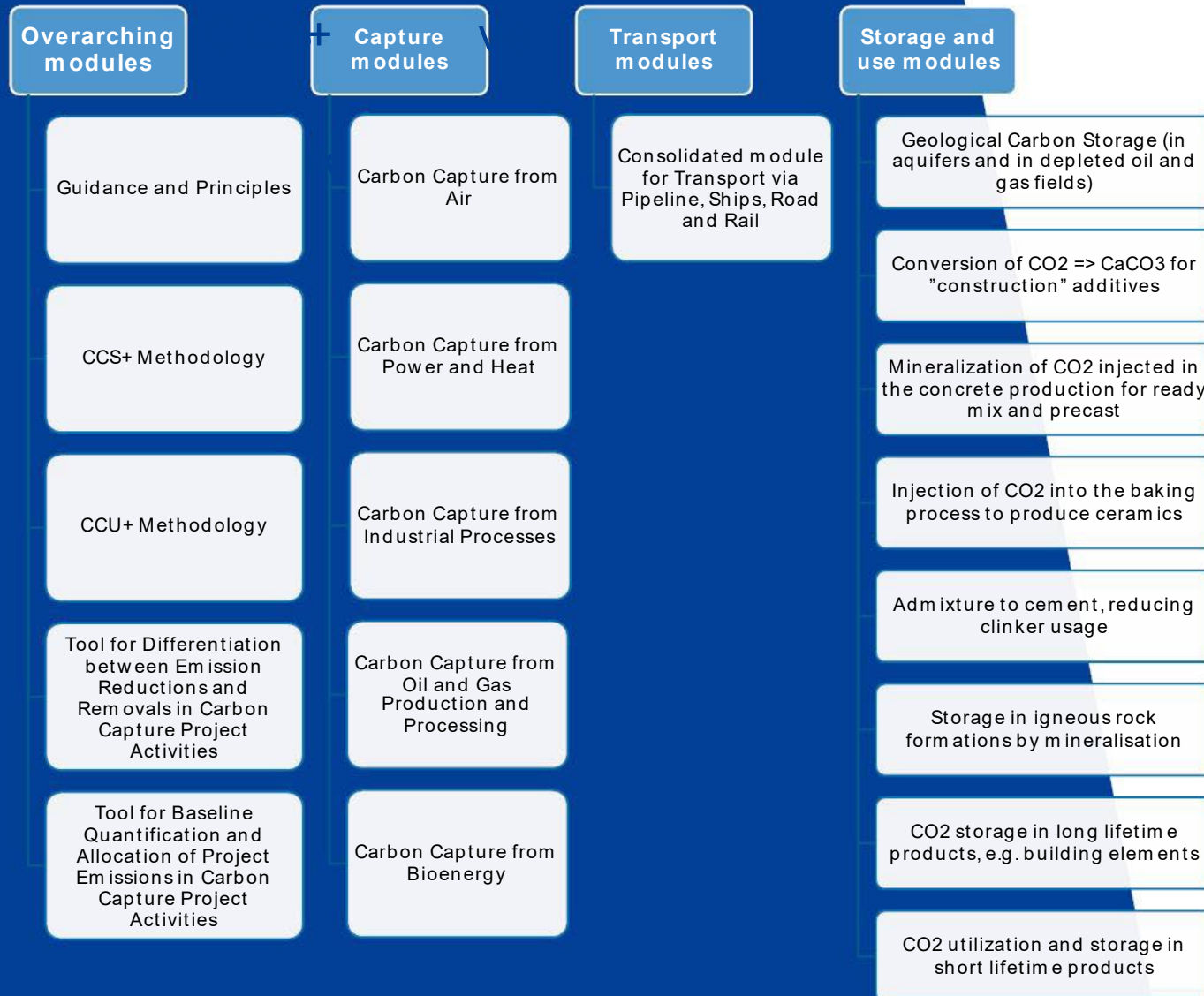




II. Technical work plan

CCS+ Initiative

Overview and approach



- **Modules** grouped along CCS and CCU value chain, i.e. in capture or removal, transport, utilization and storage modules.
- **Staggered approach:** Methodology and tool development is phased, starting with the most mature and impactful use cases.
- **Additional modules** can be added by the Steering Committee.

CCS+ Methodology framework

CCS+ Methodology

CCS+ Storage modules

- Saline aquifer (WP1a)
- Depleted oil/gas fields (WP1a)
- Mineralization in basaltic rock (WP2)

CCS+ Tools

- Additionality

CCS+/CCU+ Capture modules

- DACC (WP1a)
- Power & Heat (post-combustion, WP1a)
- Industrial processes (WP1a)
- Oil & Gas (WP1a)
- BECCS (WP1a)

- Pre-combustion / Oxyfuel (WP2)
- #### CCS+/CCU+ Transport modules
- Consolidated transport module (WP1a)

CCS+/CCU+ Tools

- Non-VCS-CO2 (WP1a)
- Reductions vs. Removals (WP1a)

CCU+ Methodology framework

CCU+ Methodology

CCU+ Utilization modules

- Aggregates (WP1b)
- Cement admixtures (WP1b)
- Concrete (WP1b)
- Ceramics (WP1b)

CCU+ Tools

- Additionality
- tbc

Work Package 1a - Staggered approach

Batch 1:

- 01_CCS+ Methodology
- 02_CCSModule-2.1_DACC
- 15_CCSModule-3.X_Consolidated Transport
- 09_CCSModule-4.1_Aquifers

Batch 2:

- 06_CCSModule-2.5_BECC
- 10_CCSModule-4.2_Depleted OG reservoirs
- 11_CCS-Tool01_Removals-Reductions
- 12_CCS-Tool02_non_VCS

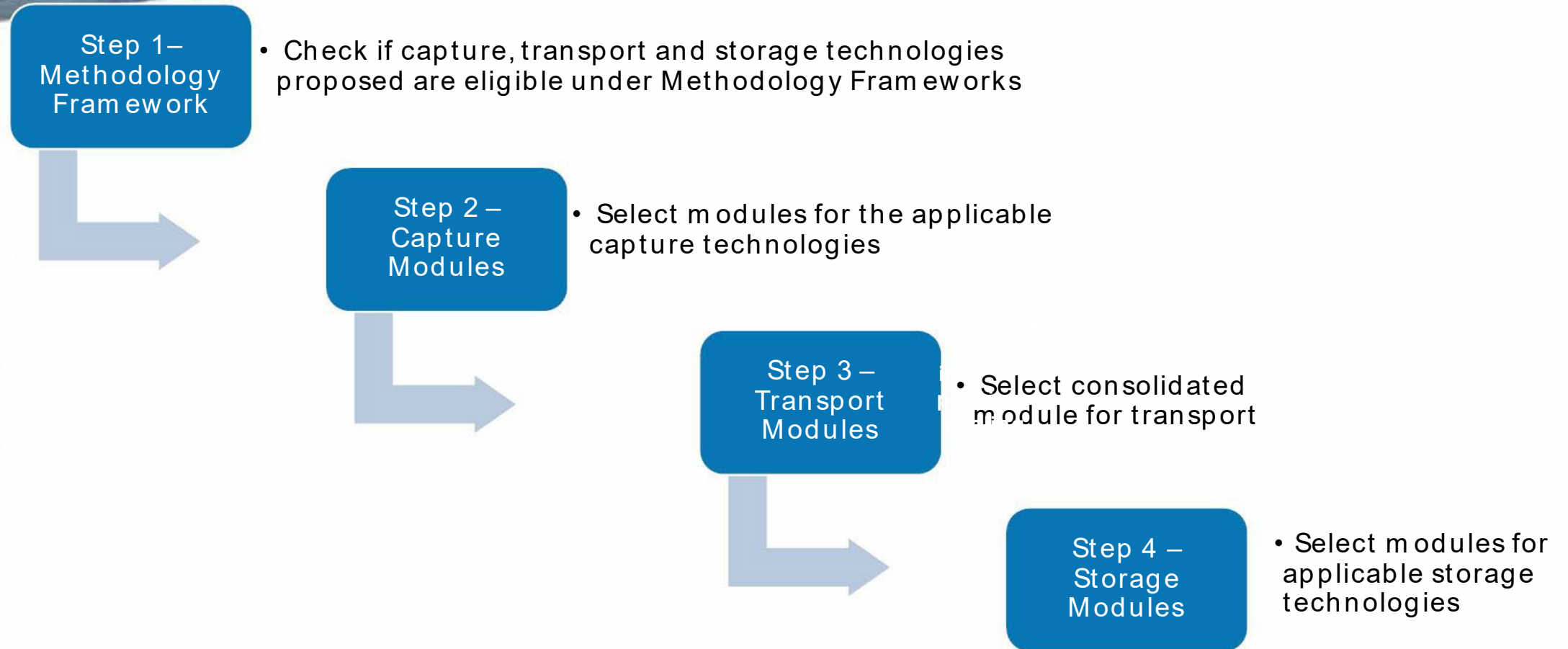
Batch 3:

- 03_CCSModule-2.2_Power&Heat
- 04_CCSModule-2.3_Industrial_Process
- 05_CCSModule-2.4_Oil_Gas

Batch 4:

- Capture with pre-combustion
- Capture with Oxy(fuel)-combustion

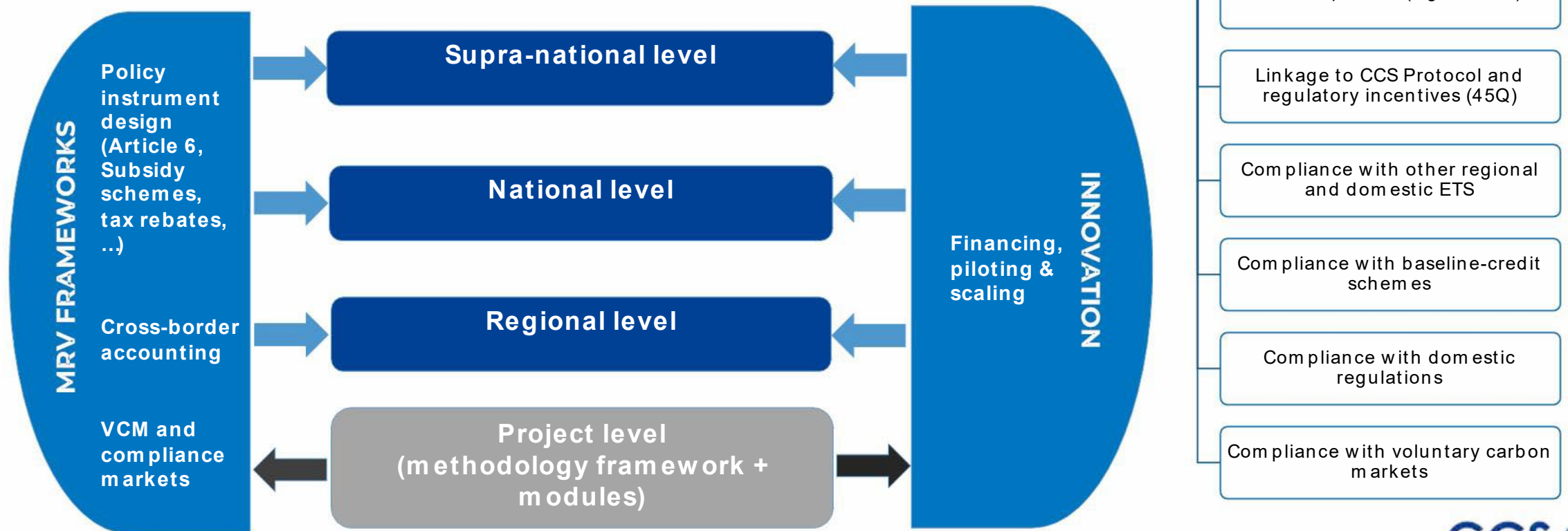
Application to project activity

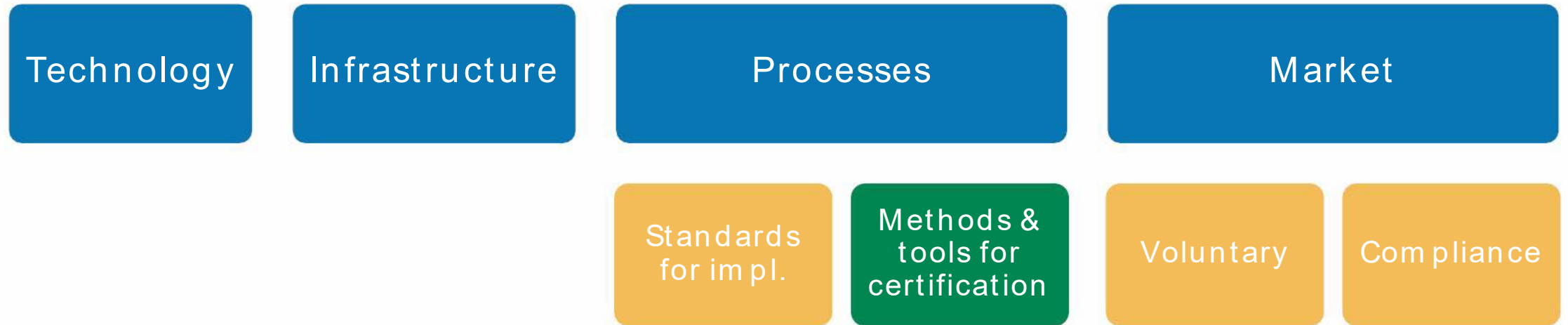




III. Policy work plan

Development of **Guidance Notes** for various regulatory schemes:





- 1 Identify opportunities and challenges between EU instruments and the CCS+ Initiative methods and tools (our focus)**
- 2 Identify EU instruments incentives along CCS+ value chain (not our focus)**

Summarize scope of instruments

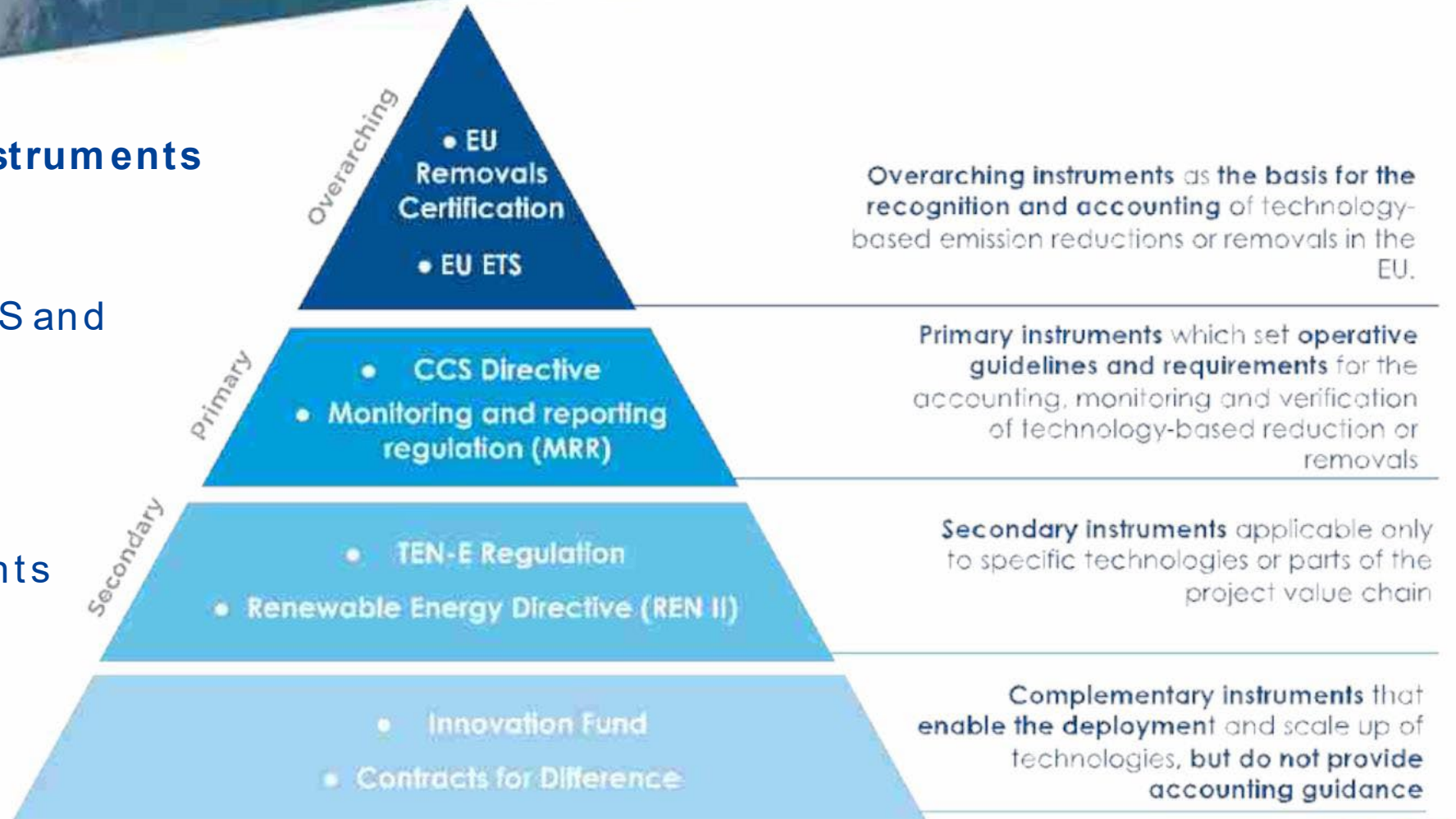
Provide overview of EU instruments and main implications across CCUS and CDR modules

Classify by influence

Identify and prioritize most relevant Instruments

Assess interactions

Potential interactions among instruments



Map gaps with CCS+ Initiative

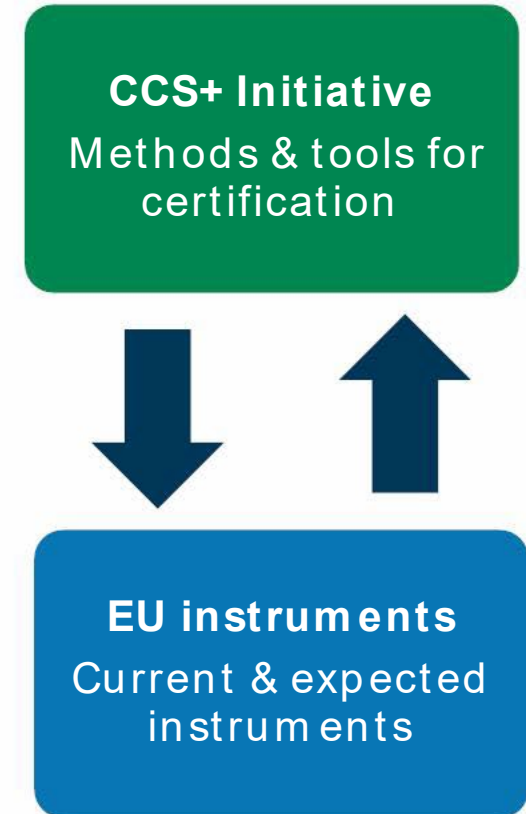
Assess how EU instruments tackle CCS+ principles

Identify opportunities and challenges

Which CCS+ methodologies and tools can help improve accounting of emissions reductions and removals in the EU?
How could EU instruments limit the application of CCS+ methodologies and tools?

Recommendations

How can we leverage the CCS+ Initiative work to improve the accounting of emissions reductions and removals in the EU?
How can we overcome barriers limiting the application sound CCS+ accounting methods?



Thank you

Do not hesitate to contact us for further information



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Thank you

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