How to execute a carbon capture project at the lowest cost

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CAPTIMISE

Who we are

Since 2018 we have

- **Delivered more than 20 Carbon Capture and Storage studies**
- **Design and commissioning of 3 pilot plants**
- **Third party reviews of feasibility studies**
- **Applications to the European Innovation Fund**
- **Technical advisors in FEED studies**

stockholm exergi

"Captimise contributed crucial knowledge and experience in the design of the research plant for the capture of biogenic CO2 from the combined heat and power plant KVV8 in Stockholm 2019, as well in the ongoing carbon capture research programs"

– Erik Dahlén, Research Manager, Stockholm Exergi

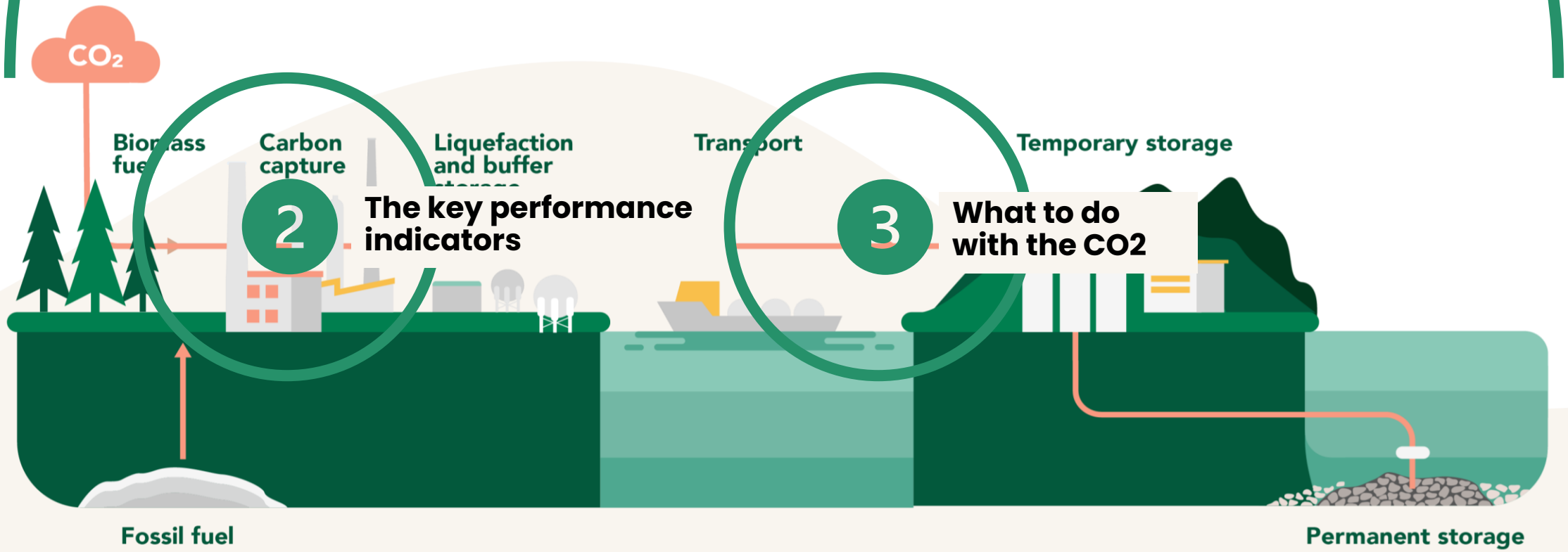
The Captimiser helps to **prove the analysis** before final investment decision

An independent demonstration unit for;
Amines, Potassium Carbonate and Chilled Ammonia

WHAT WE DO

We provide independent technology comparisons from capture to storage

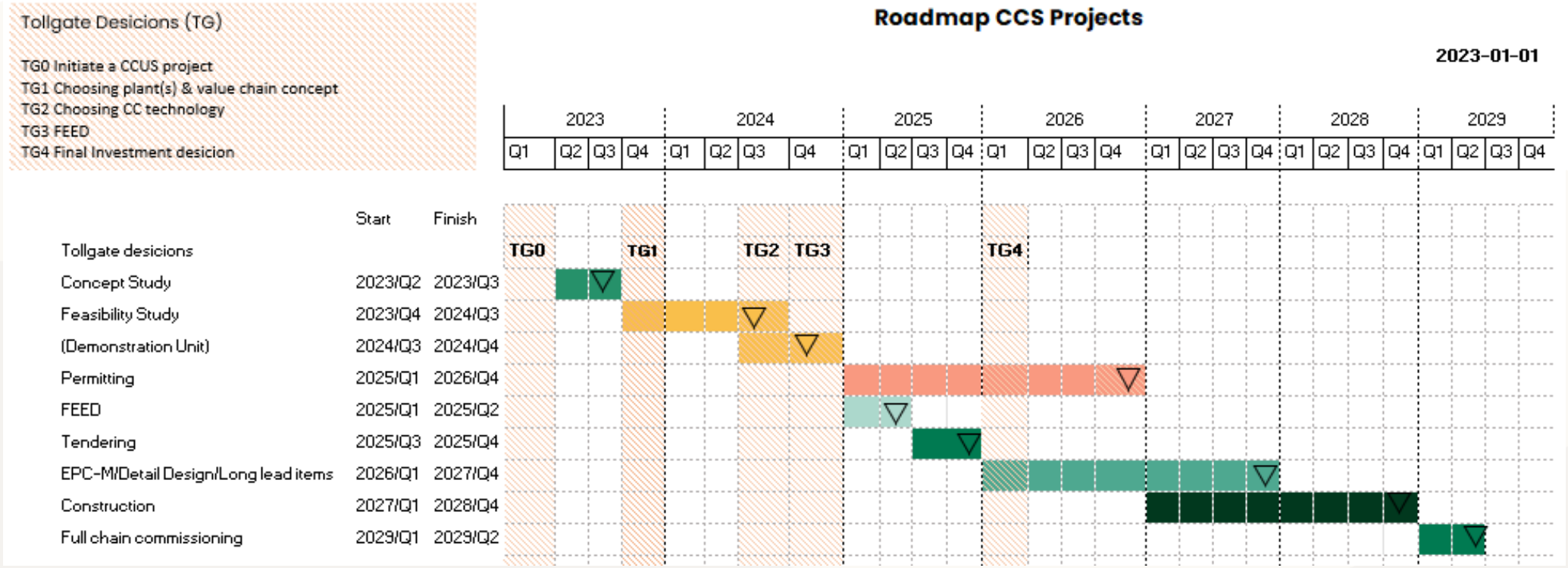
1 The CCUS concept and project scope



1 The CCUS concept and project scope

Tollgate Desicions (TG)

TG0 Initiate a CCUS project
TG1 Choosing plant(s) & value chain concept
TG2 Choosing CC technology
TG3 FEED
TG4 Final Investment desicion



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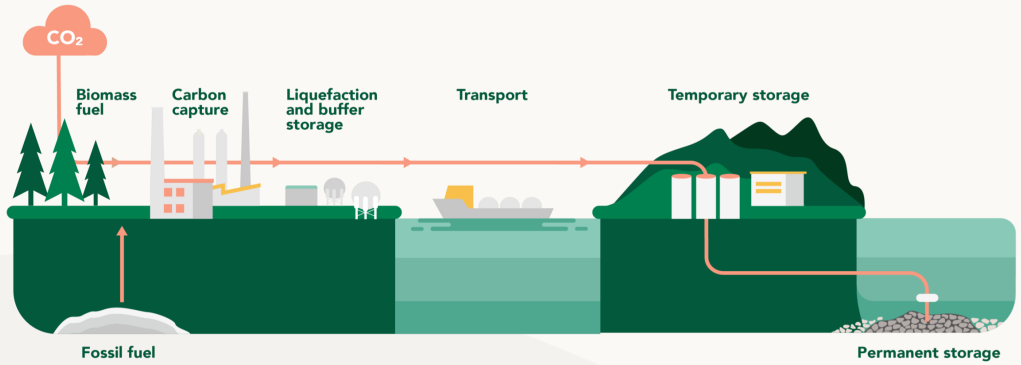


- Look at all possible options for the whole value chain
- Anchor the project within the organisation
- Spend more time in concept phase
- Avoid miss-match between level of detail and knowledge
- Don’t go into details too early
- Holistic approach including the entire value chain

The key performance indicators

2

1. Capture rate

- Cost/Capture not necessarily linear
- Optimal capture rate not 95%
- Aim for a range approx. 85-95%

2. Generic energy requirement GJ/ton CO2

- An indicator but no more
- Depends on flue gas
- Heat recovery possibilities

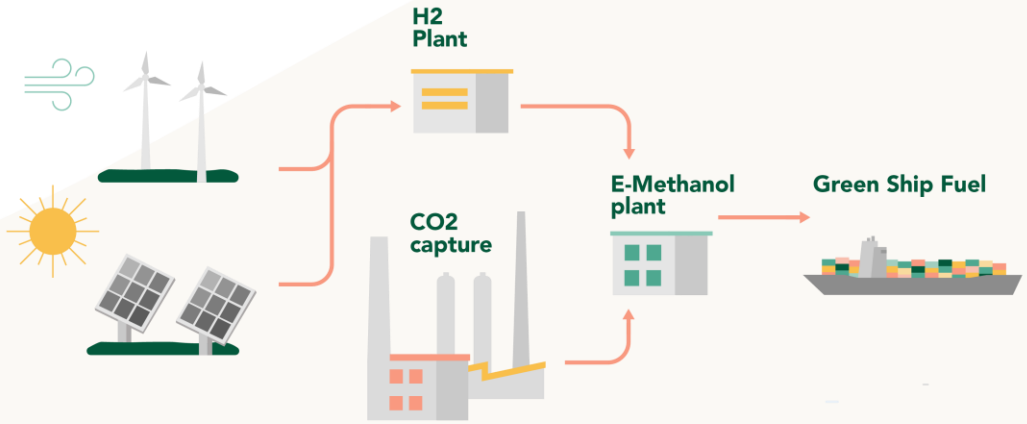
The key performance indicators

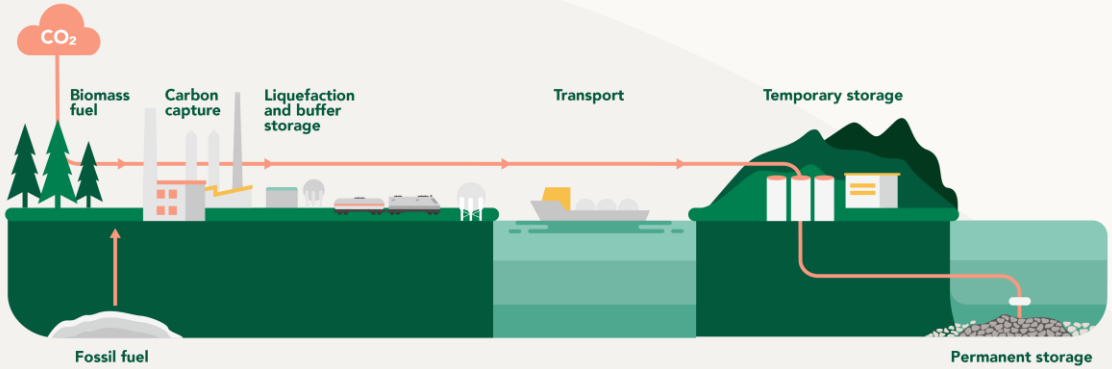
2

- CC unit will significant impact current operations
- Establish KPIs to distinguish capture technologies
- Don’t disregard technologies before KPI evaluation
- Prove the analysis

What to do with the CO2

3

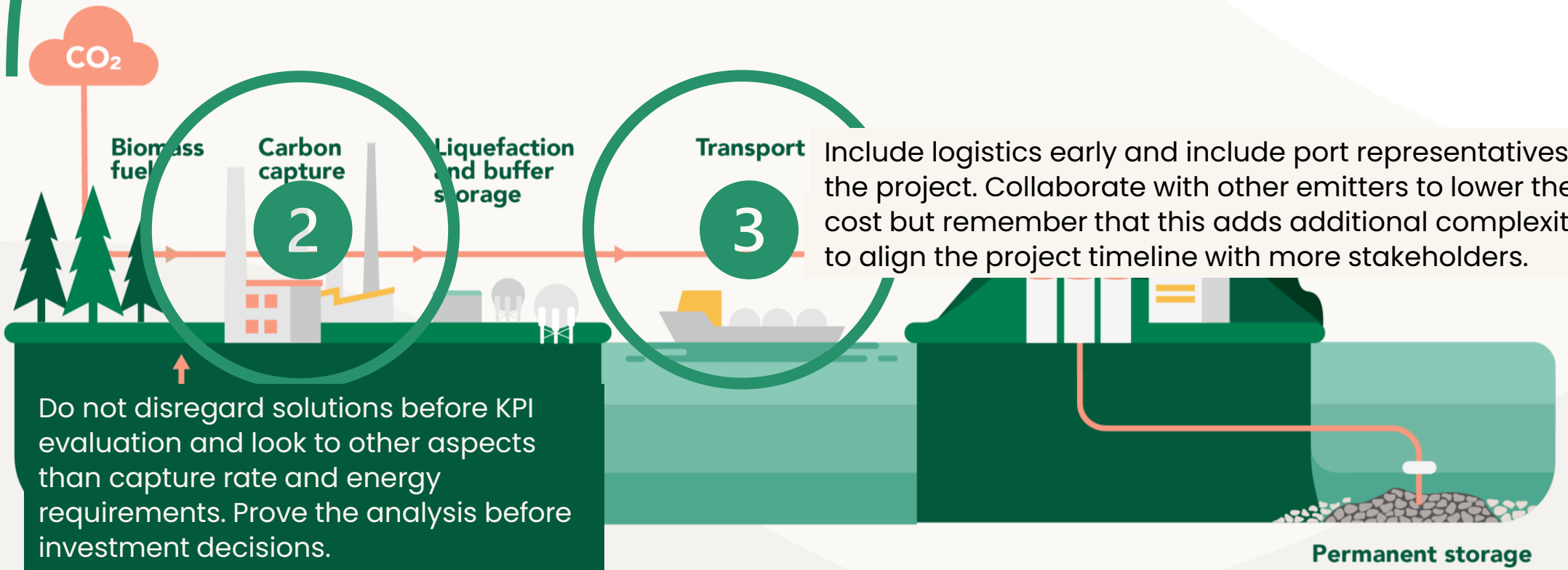




- Add to the business case
- Transport will be needed regardless of storage/utilization
- The bigger the better for CCS
- CCU requires large amount of energy
- Collaboration with other emitters to create clusters
- Include port perspective early
- Safety considerations

1

Start on a high-level and get to know your CCUS concept. Evaluate all possible options based on your project timeline and plant conditions and then disregard option by option.



Include logistics early and include port representatives in the project. Collaborate with other emitters to lower the cost but remember that this adds additional complexity to align the project timeline with more stakeholders.

Do not disregard solutions before KPI evaluation and look to other aspects than capture rate and energy requirements. Prove the analysis before investment decisions.

Thank you!

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