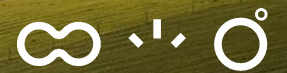


Shaping the hydrogen and carbon infrastructure for Belgium



Info Session

January 26th, 2021



shaping together
a bright energy
future

Our agenda this afternoon

Shaping together
a bright energy future

Key technical
considerations

Enabling
the transition

A step-wise
development
approach

Our commercial
proposal





Shaping together a bright energy future

Transformation into a hybrid energy system with carbon-neutral energy carriers

Our target:

**2050 carbon-neutral
reliable & affordable
energy system**

Efficiency
50% green electrons
50% green molecules
+ CCUS
Hydrogen economy

**EU & BE
Recovery Plan**

**An investment driver
to be seized to ensure
the energy transition
and make our industry
future proof**

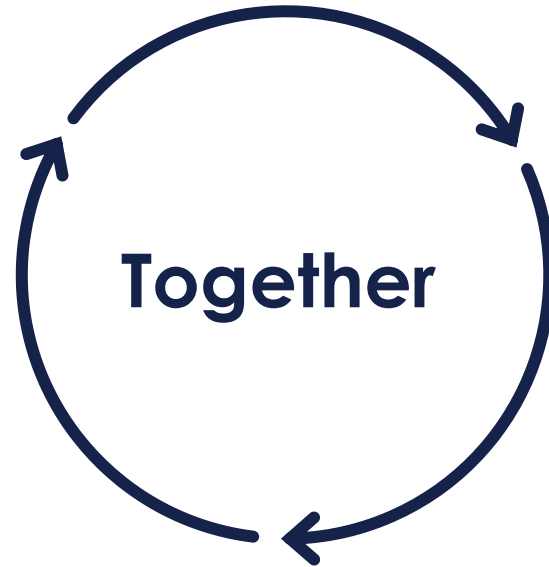




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future



Consumers/Shippers
DSO's ...



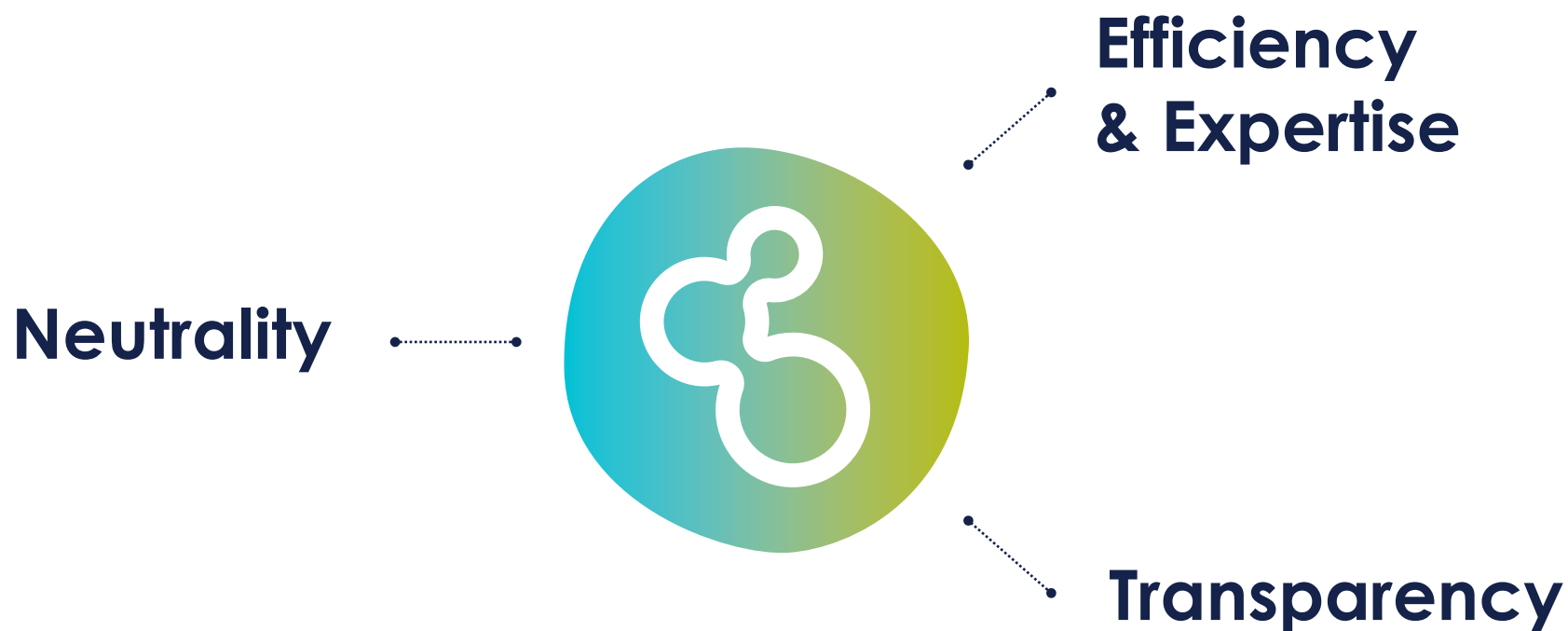
Government

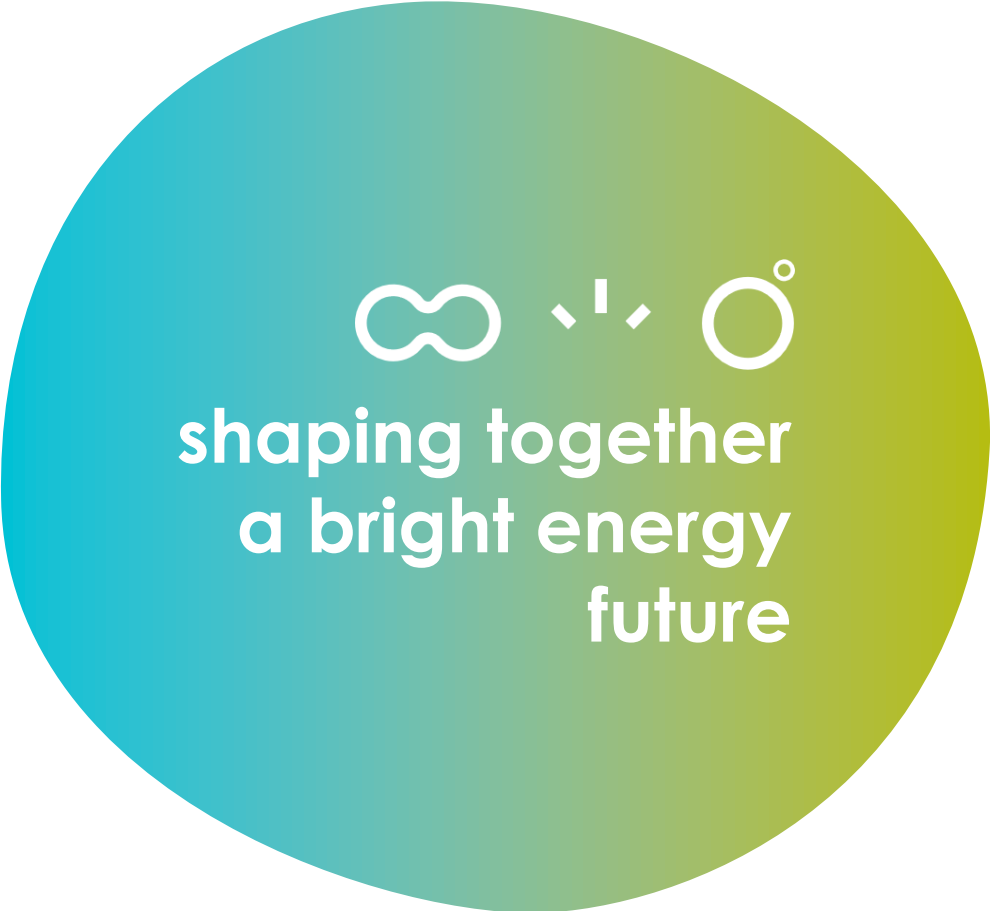


Fluxys



Fluxys, your partner for the transport of green molecules & CO2



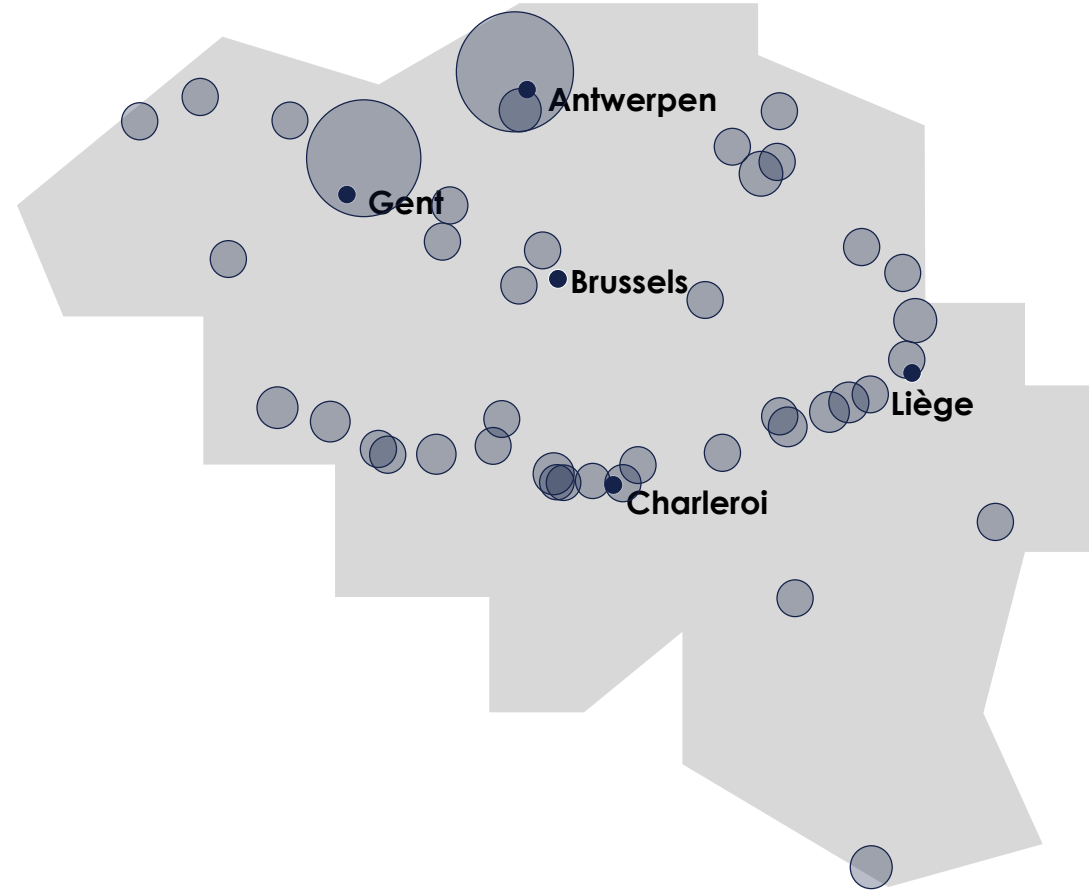
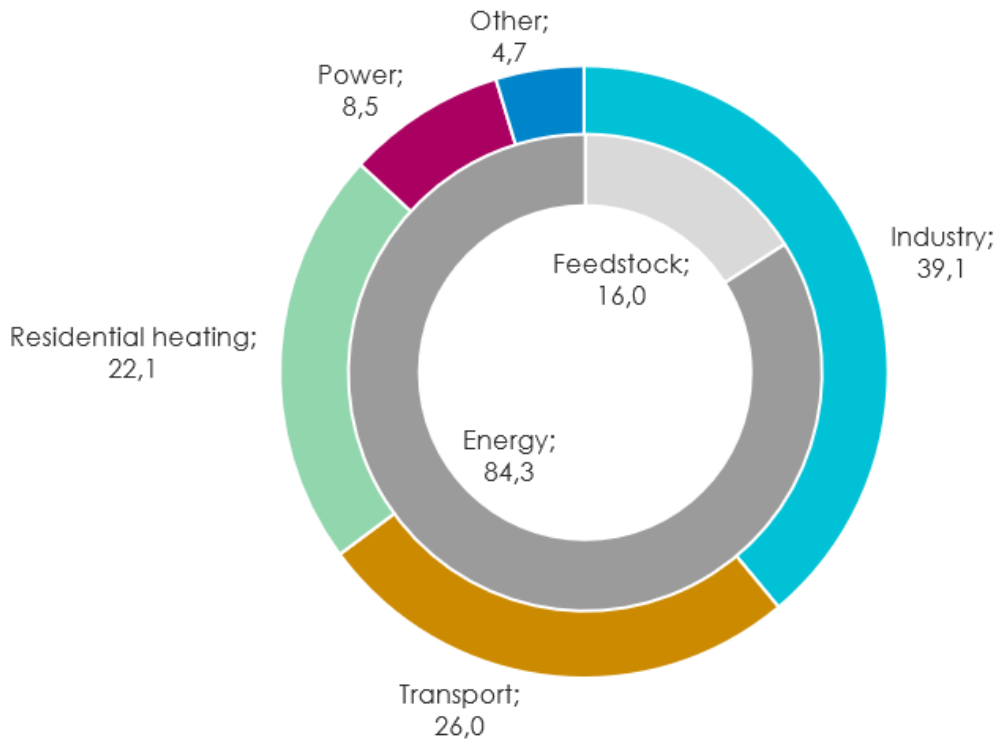




A step-wise development approach

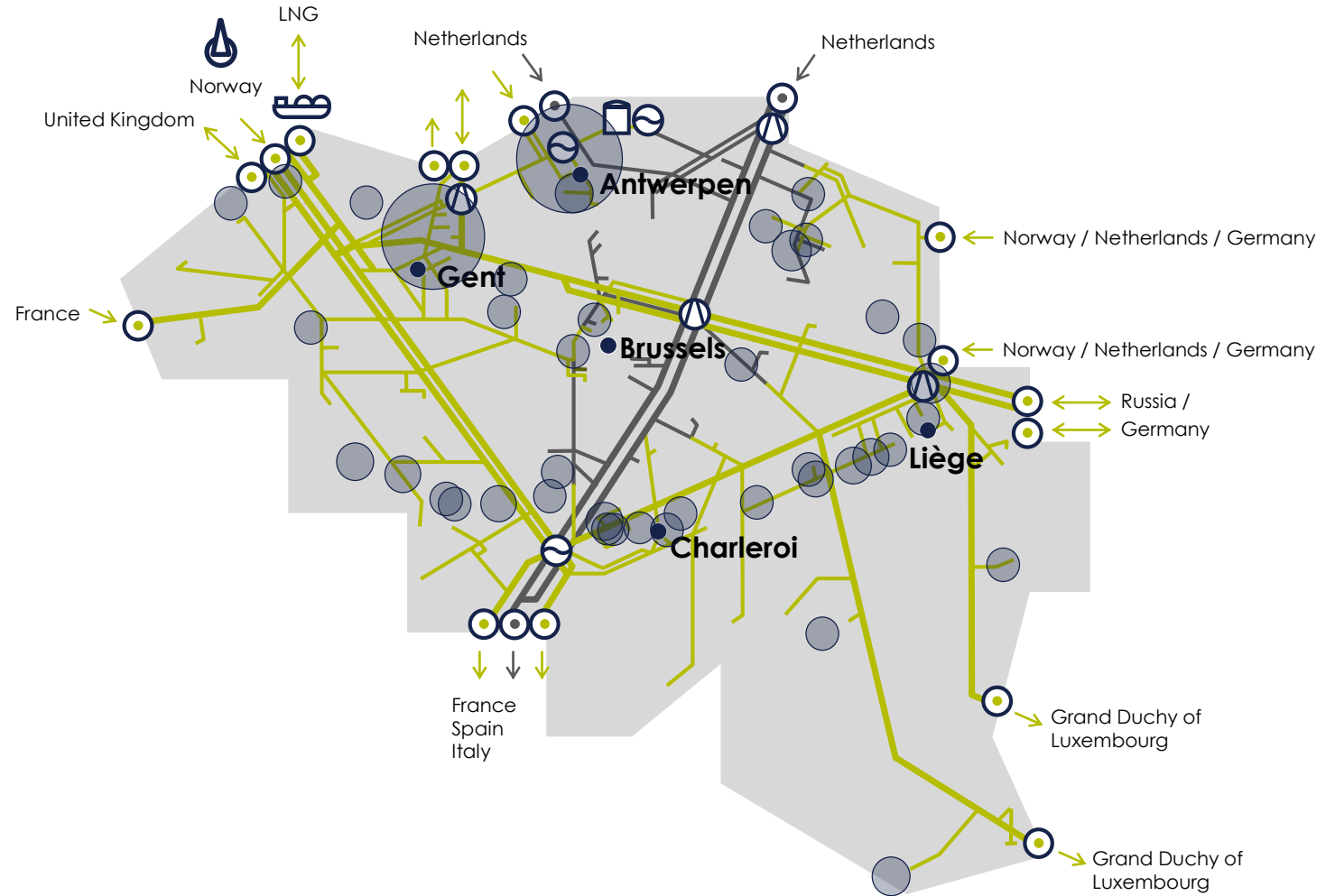
Decarbonization is a massive challenge...

Belgium:
100 Mtpa CO₂ emissions (2019)



... we can offer part of the solution

Maximum Repurposing

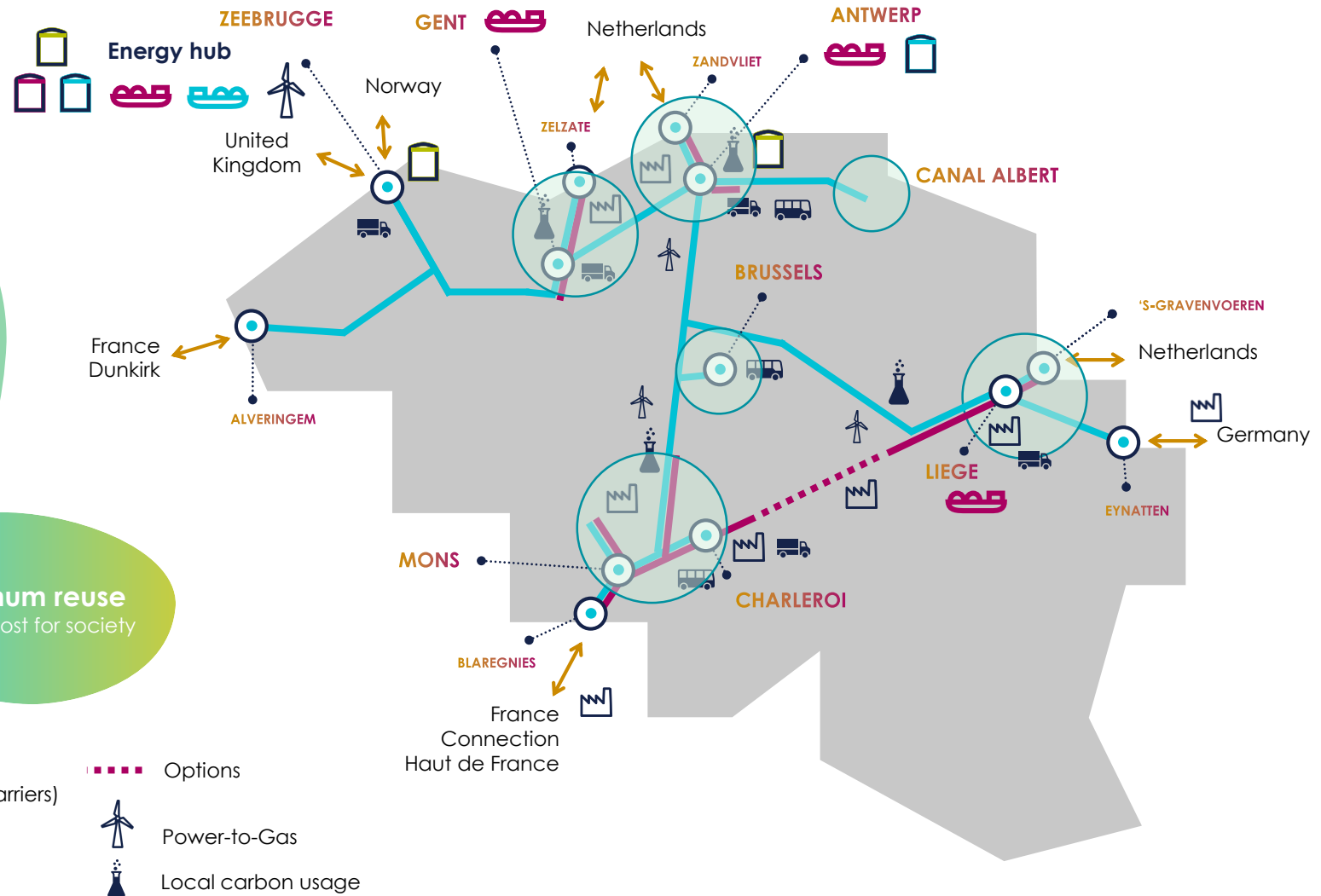


H₂ & CO₂ transmission infrastructure to be developed following a modular approach

The Belgian H₂/CO₂ backbone horizon 2030

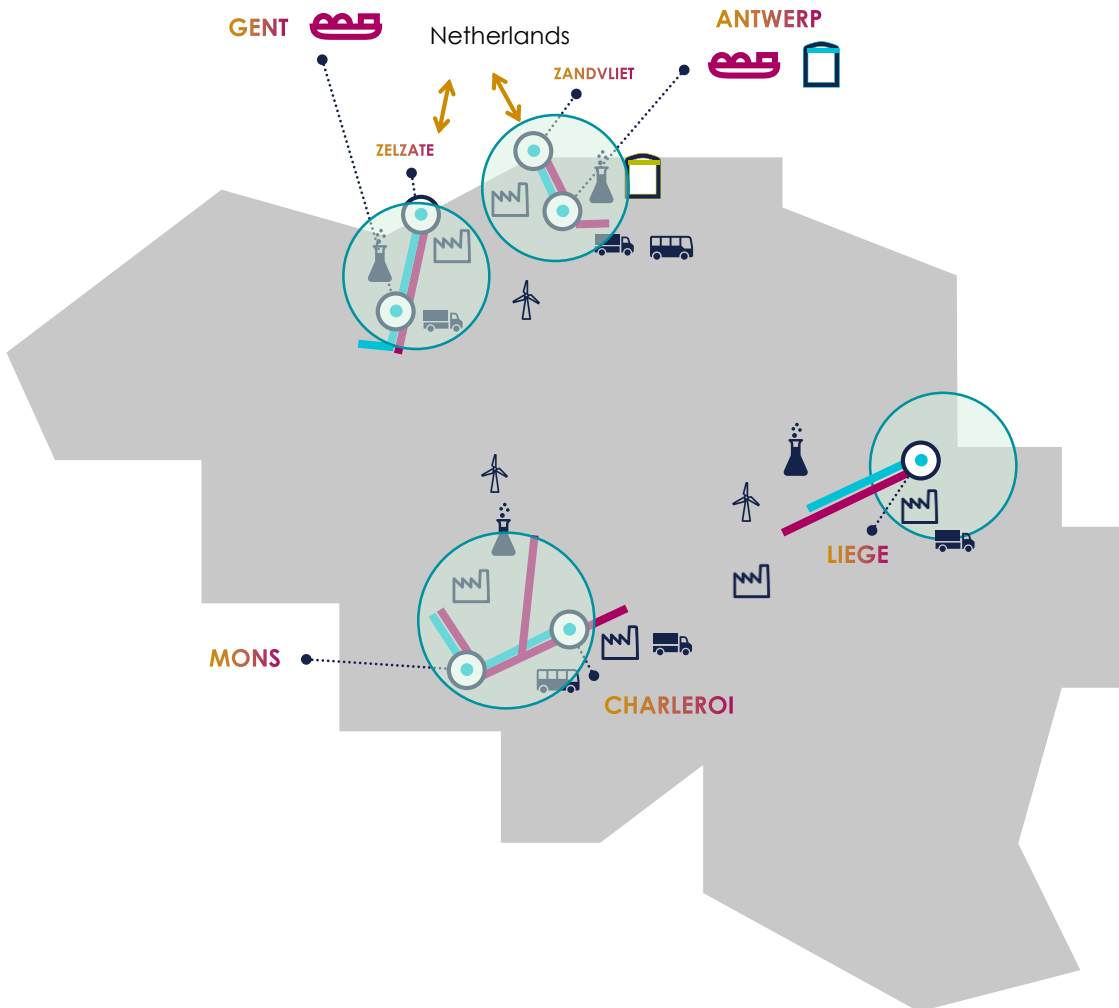
- develop industry clusters
- connect and develop clusters
- provide additional interconnections
- provide overseas import & export capacity
- create a production hub

Maximum reuse
Minimal cost for society

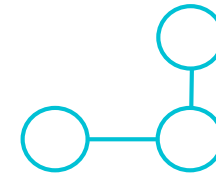


- | | | | | | |
|--|--|--|--|--|--------------------|
| | CH ₄ storage (liquid / gas) | | CO ₂ overseas export | | Options |
| | CO ₂ terminalling
Buffer storage (liquid) | | H ₂ import (different carriers) | | Power-to-Gas |
| | H ₂ terminalling – buffer storage
blue hydrogen production | | H ₂ pipeline | | Local carbon usage |
| | | | CO ₂ pipeline | | |



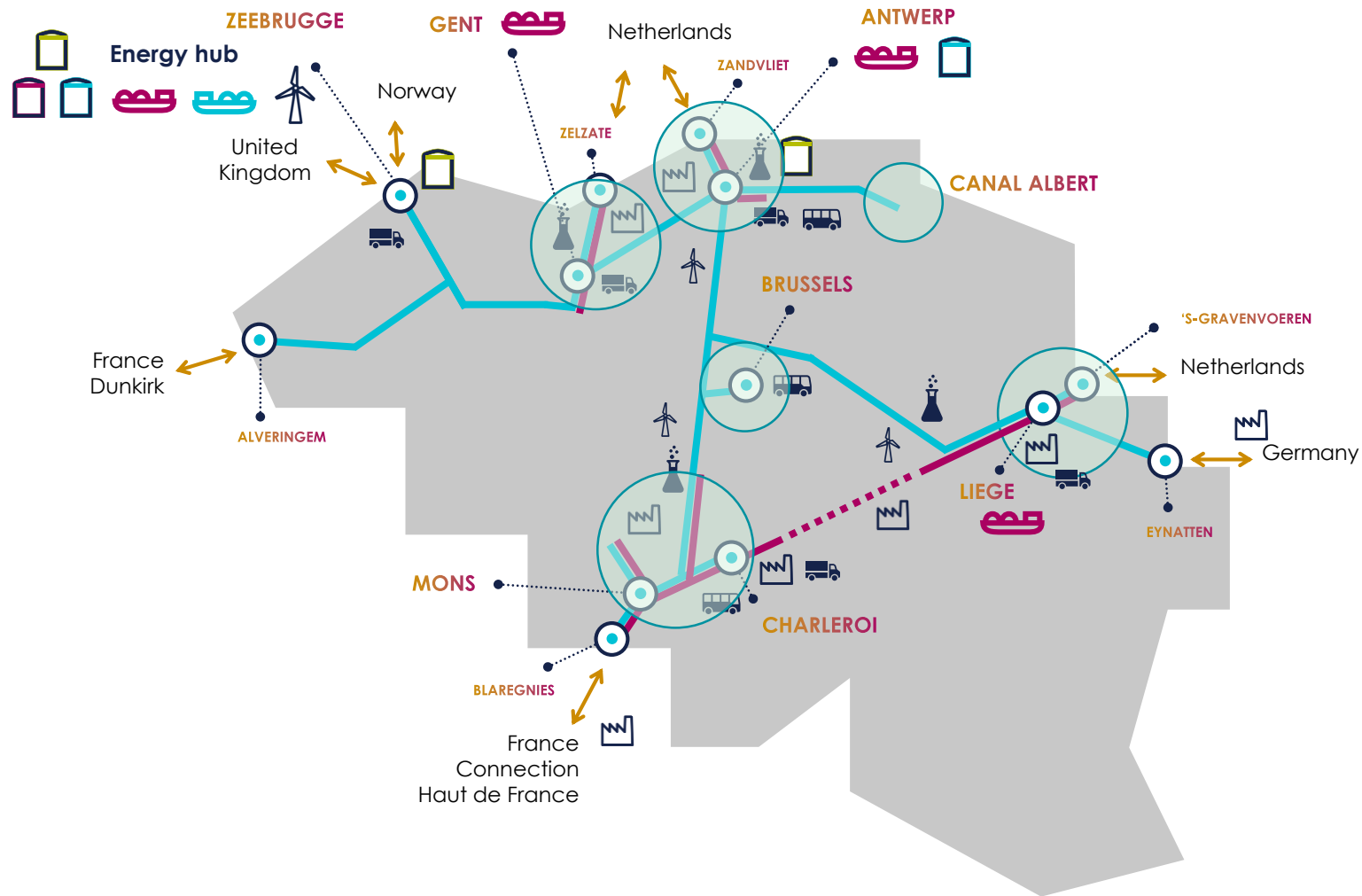


Develop local clusters

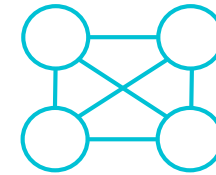


As from 2025



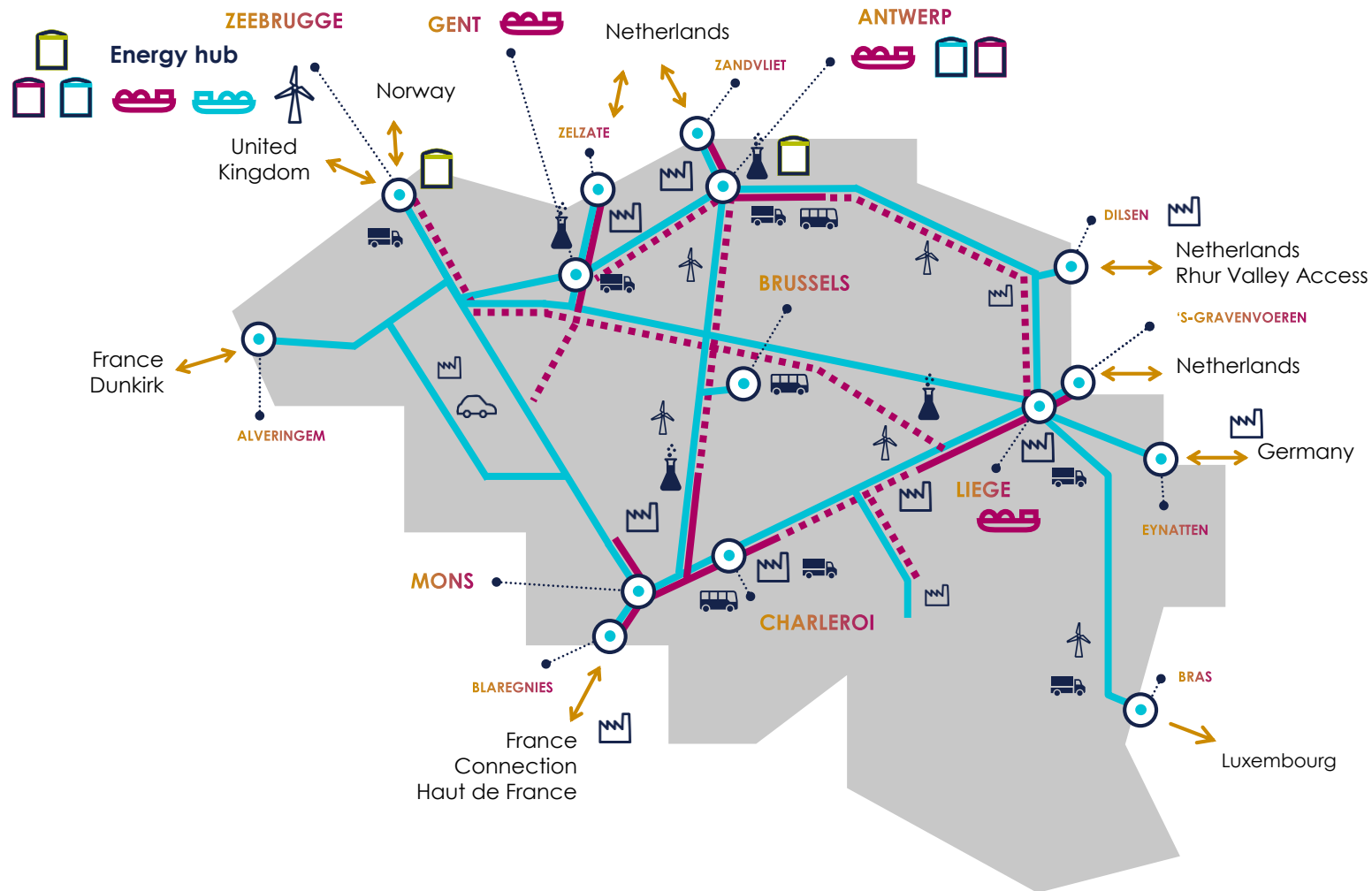


Connect the clusters

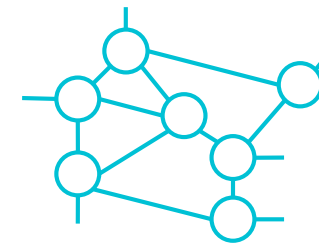


2030





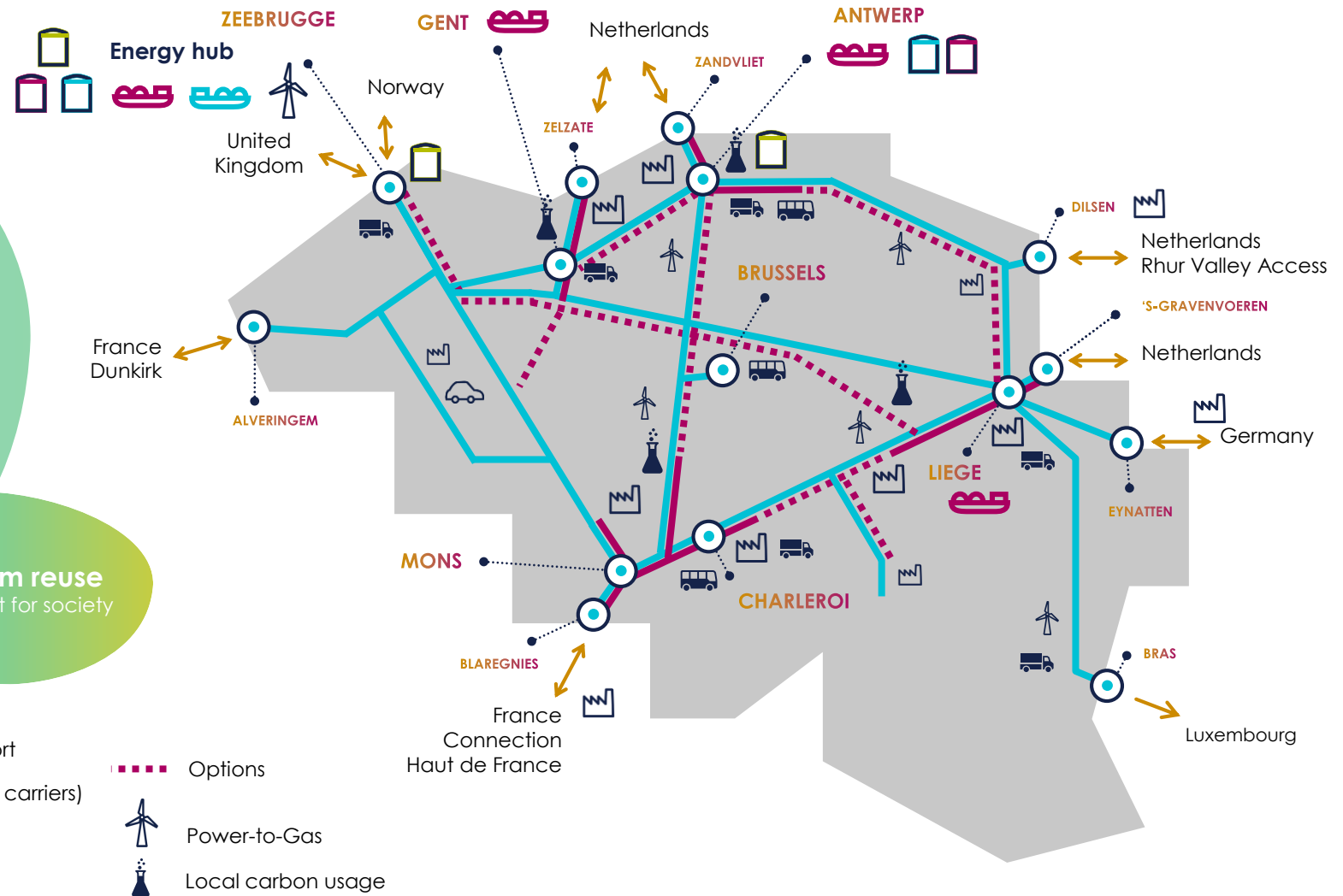
Mature backbone



Leading to an ambitious 2030-2050 vision for our Belgian energy & gas infrastructure

The Belgian H₂/CO₂ backbone: long-term vision horizon 2050

Maximum reuse
Minimal cost for society

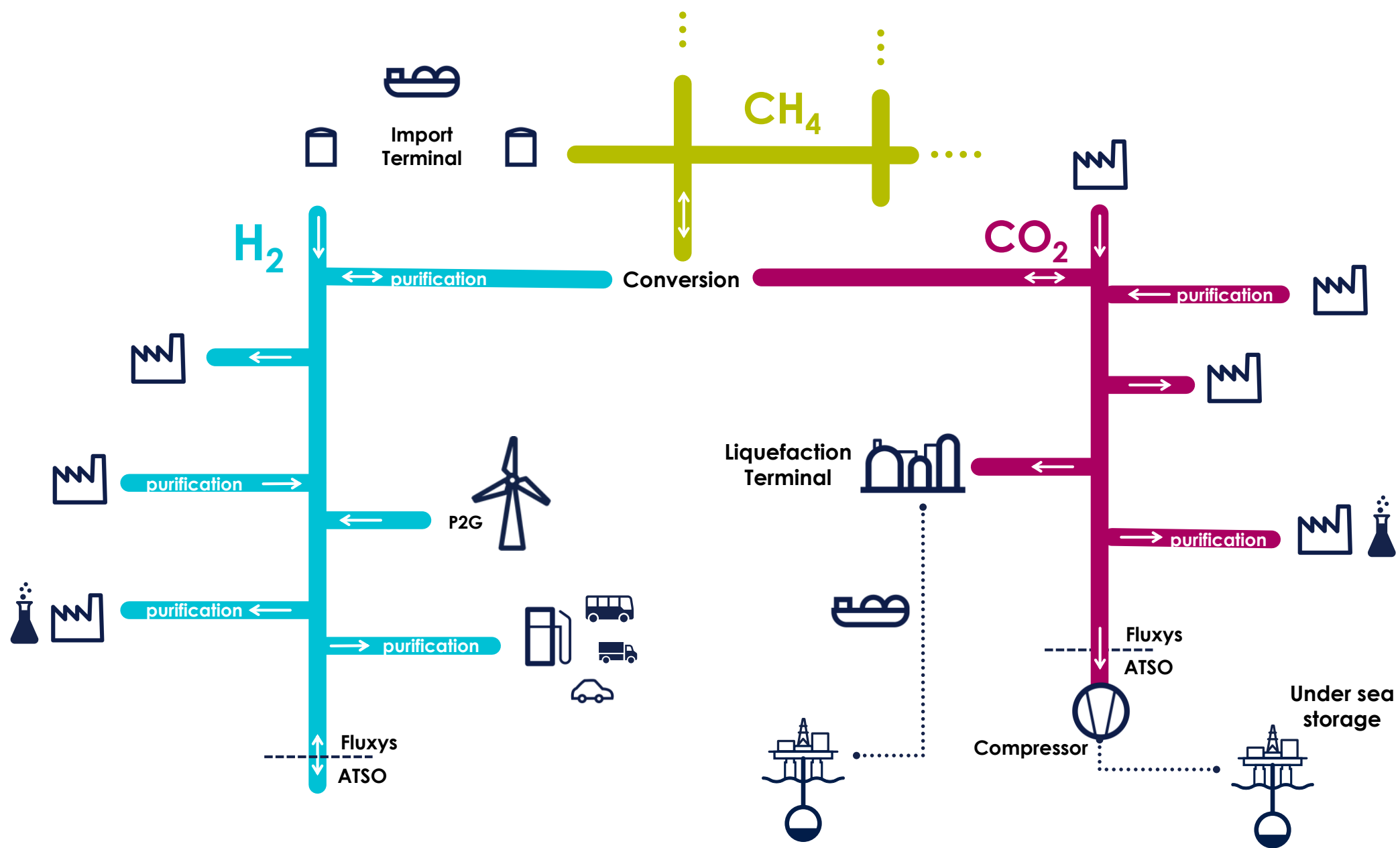


- CH₄ storage (liquid / gas)
- CO₂ terminalling / Buffer storage (liquid)
- H₂ terminalling – buffer storage / blue hydrogen production
- CO₂ overseas export
- H₂ import (different carriers)
- CO₂ pipeline
- Options
- Power-to-Gas
- Local carbon usage





Key technical insights



Drivers for gas quality specifications

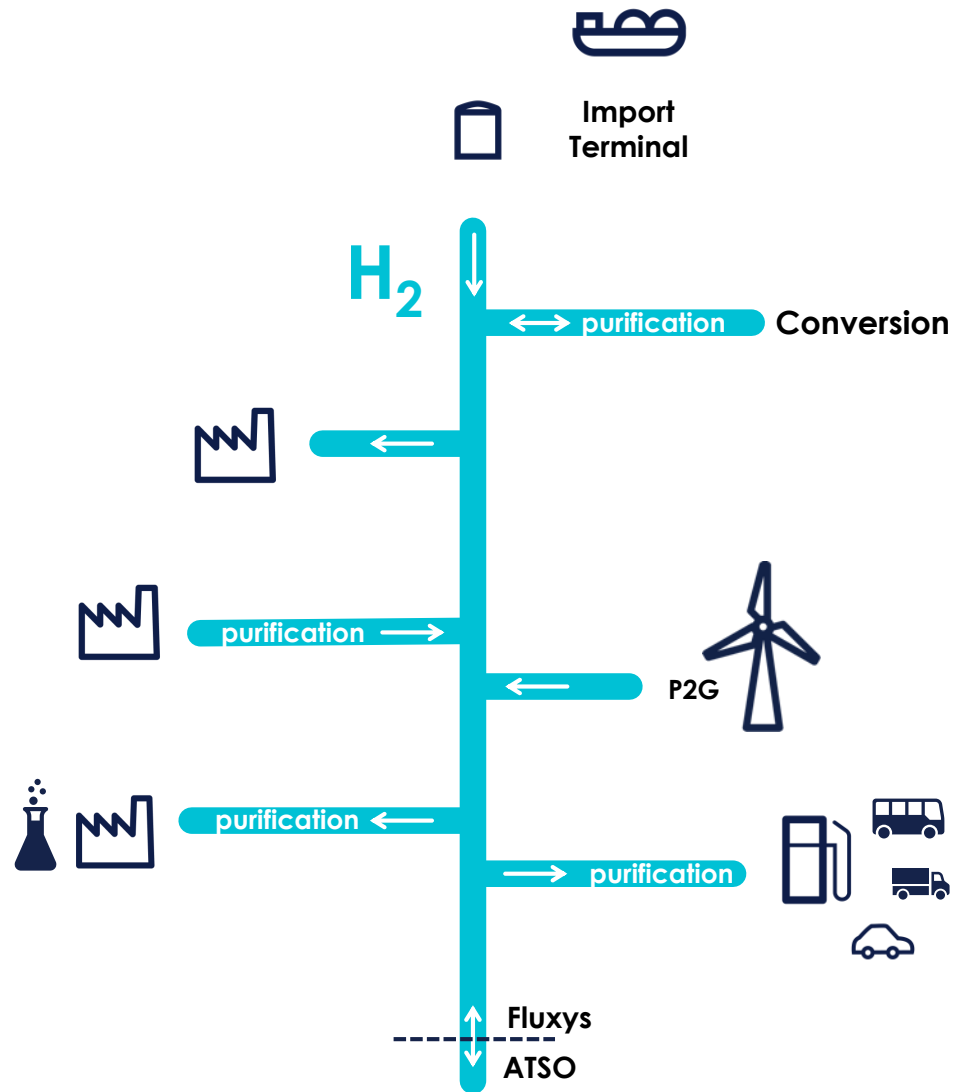


Safety

Integrity

Interoperability





H₂

Key parameters:

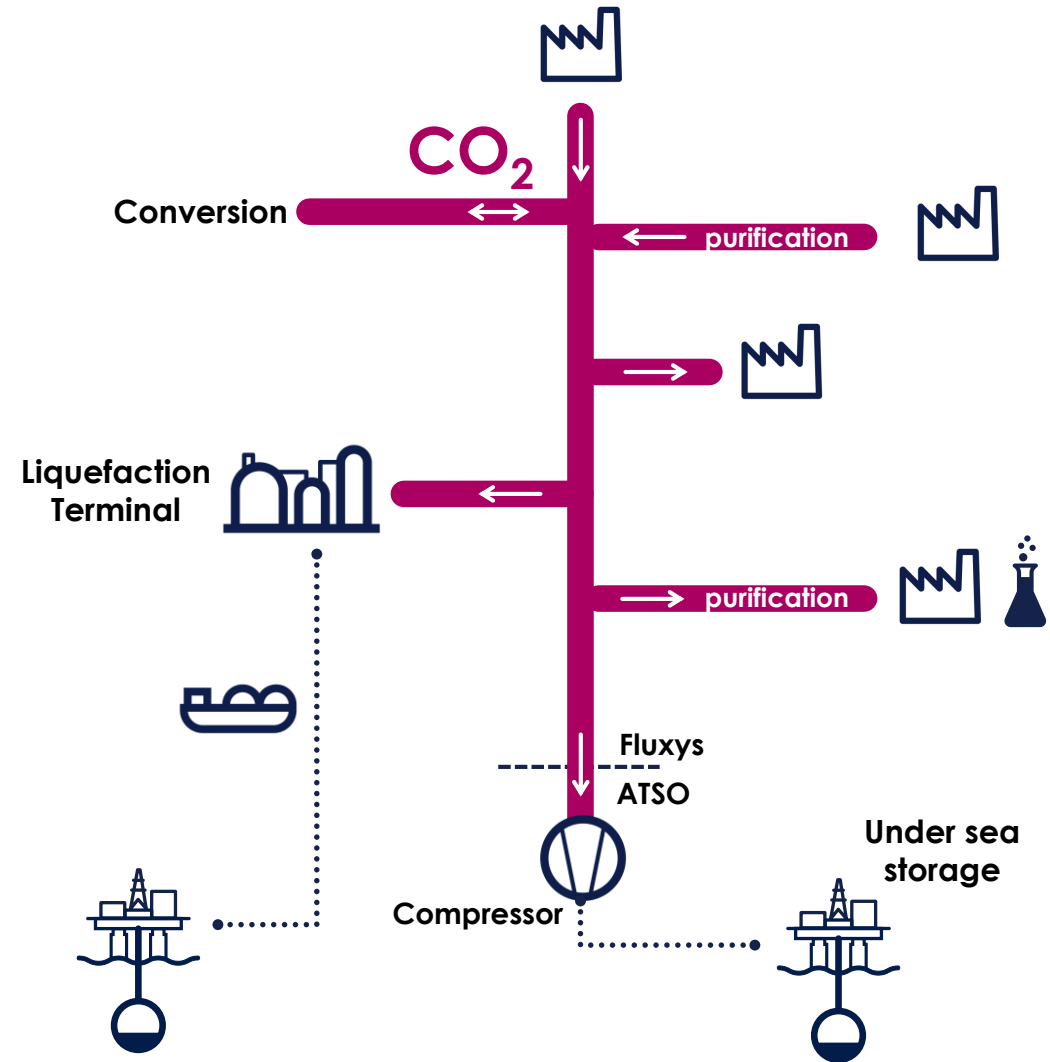
- Purity
- Hydrocarbons
- Inerts
- Oxygen
- Carbon monoxide
- Sulfur components



CO₂

Key parameters:

- Purity
- Temperature
- Pressure
- Inerts
- Oxygen
- NO_x
- SO_x





Our commercial proposal

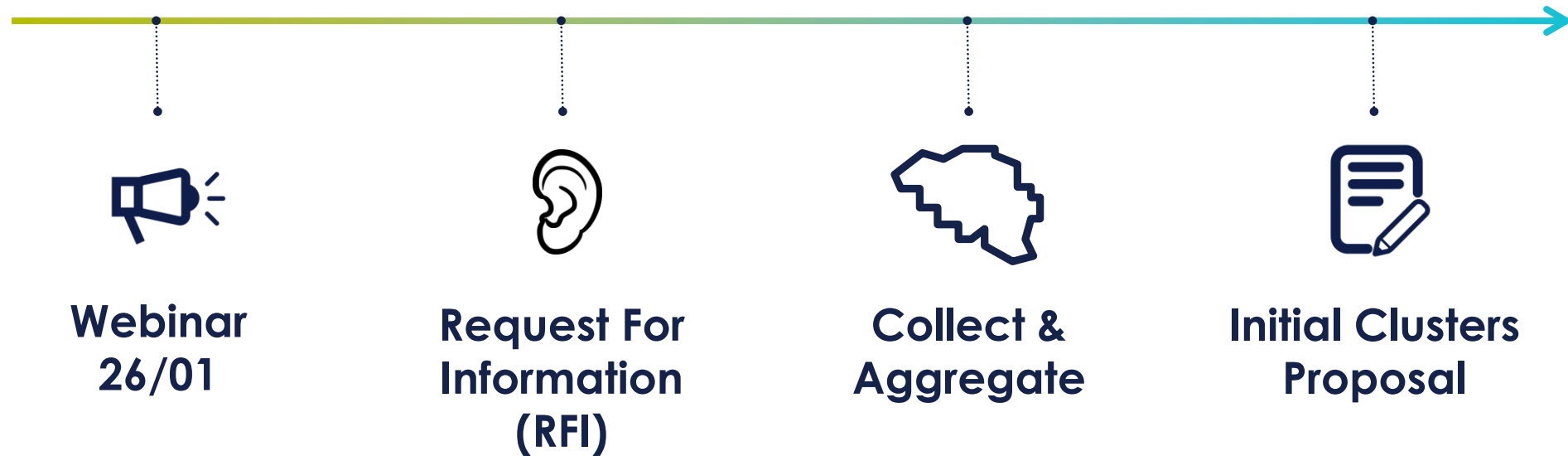
Fluxys to act as a market facilitator

**Informative
Non-binding**

Open Season



Our journey starts today



Open Season Process



**We need
your input.**





Enabling the transition Let's move ahead!

Tinne Van der Straeten,
Belgian federal Minister of Energy

fluxys 