



GreenLab

Green industrial park – National research facility – Technology enabler

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2020



Green industrial park

- »»» A green approach to the industrial business park
- »»» Everything runs on 100% sustainable energy – generated and stored on site
- »»» Companies share their surplus energy through the SymbiosisNet

National research facility

- »»» Testbed for academics who turn theory into practice

Technology enabler

- »»» Market creator for tech- and energy companies looking to explore and capitalise on P2X technologies.



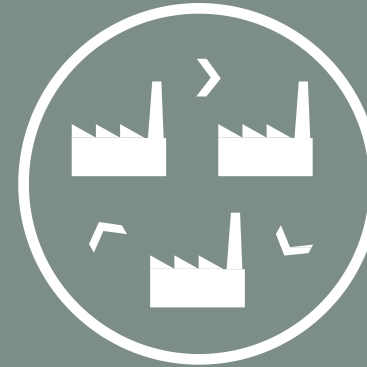
GENERATE

We generate sustainable energy for our partners



STORE

The green energy is stored in all its forms:
Power, heat, and electrofuels



SHARE

The SymbiosisNet™ is an intelligent grid of energy and data that lets our companies share their surplus energy

LET'S CREATE A POWER SHIFT

We offer an intelligent energy platform

- »» We are a truly green and circular industrial park - connected by the SymbiosisNet energy exchange infrastructure
- »» Frontrunner in commercial scale P2X
- »» Creating the world's first software optimisation for green energy use from "prognosis to product"

We are a value intermediary

- »» We work with a unique public/private partnership model.
- »» We believe in ambitious green communities connected by common aspirations
- »» We are an open innovation platform

We believe in change at a system level

- »» The future of energy is collaborative and commercial.
- »» We need to transform the way energy and resources are produced and consumed by industry – and we work to move the political system in a greener direction.

Unique location

We are close to national gas and electricity grids as well as Batum Salt Cavern for potential seasonal storage.

On site infrastructure:

- >>> 80MW wind and solar power and grid
- >>> Large Scale Biogas Production
- >>> Green Hydrogen and Methanol generation
- >>> High and Low Pressure steam
- >>> Water Treatment Loop

 **GreenLab areas**

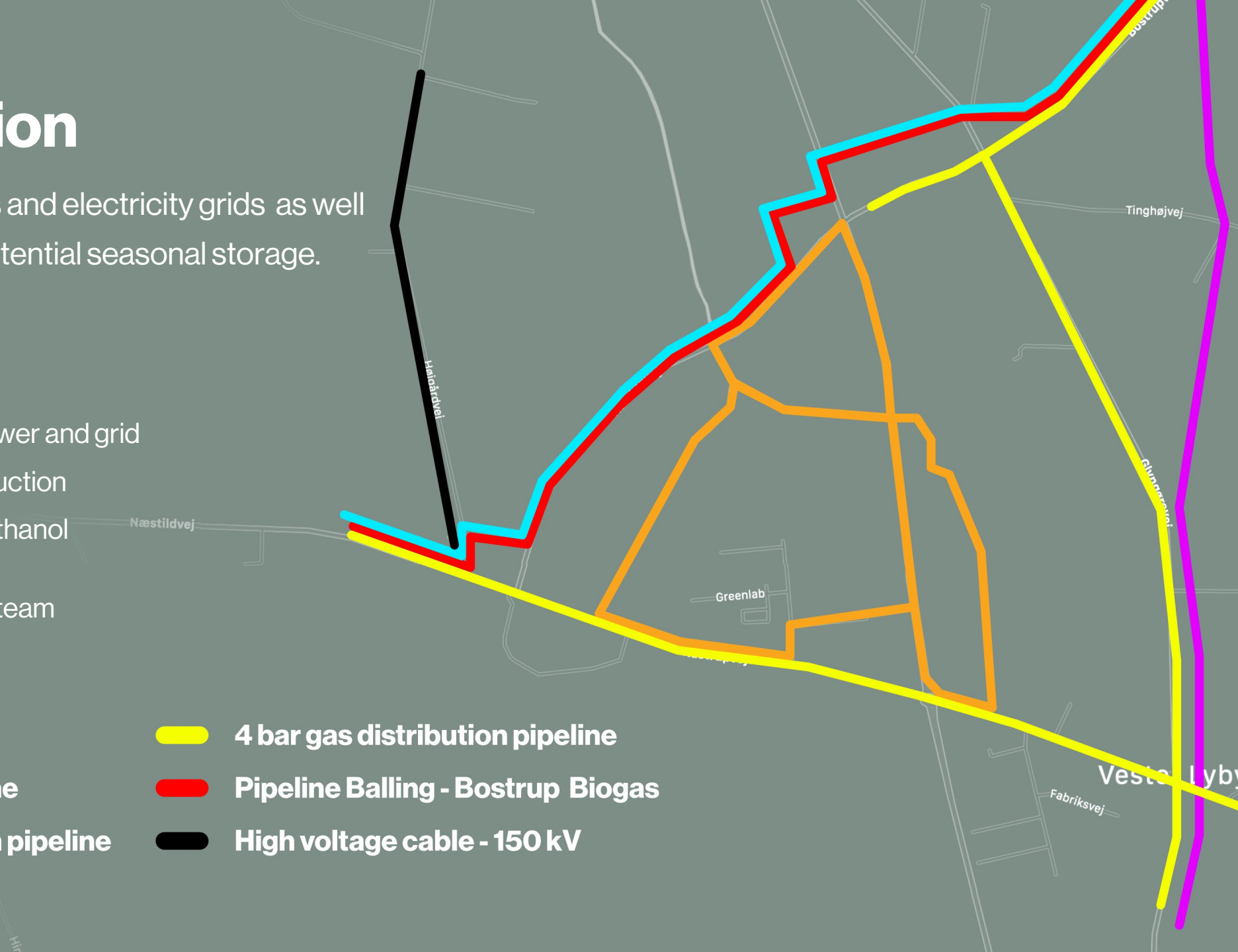
 **District heating pipeline**

 **40 bar gas distribution pipeline**

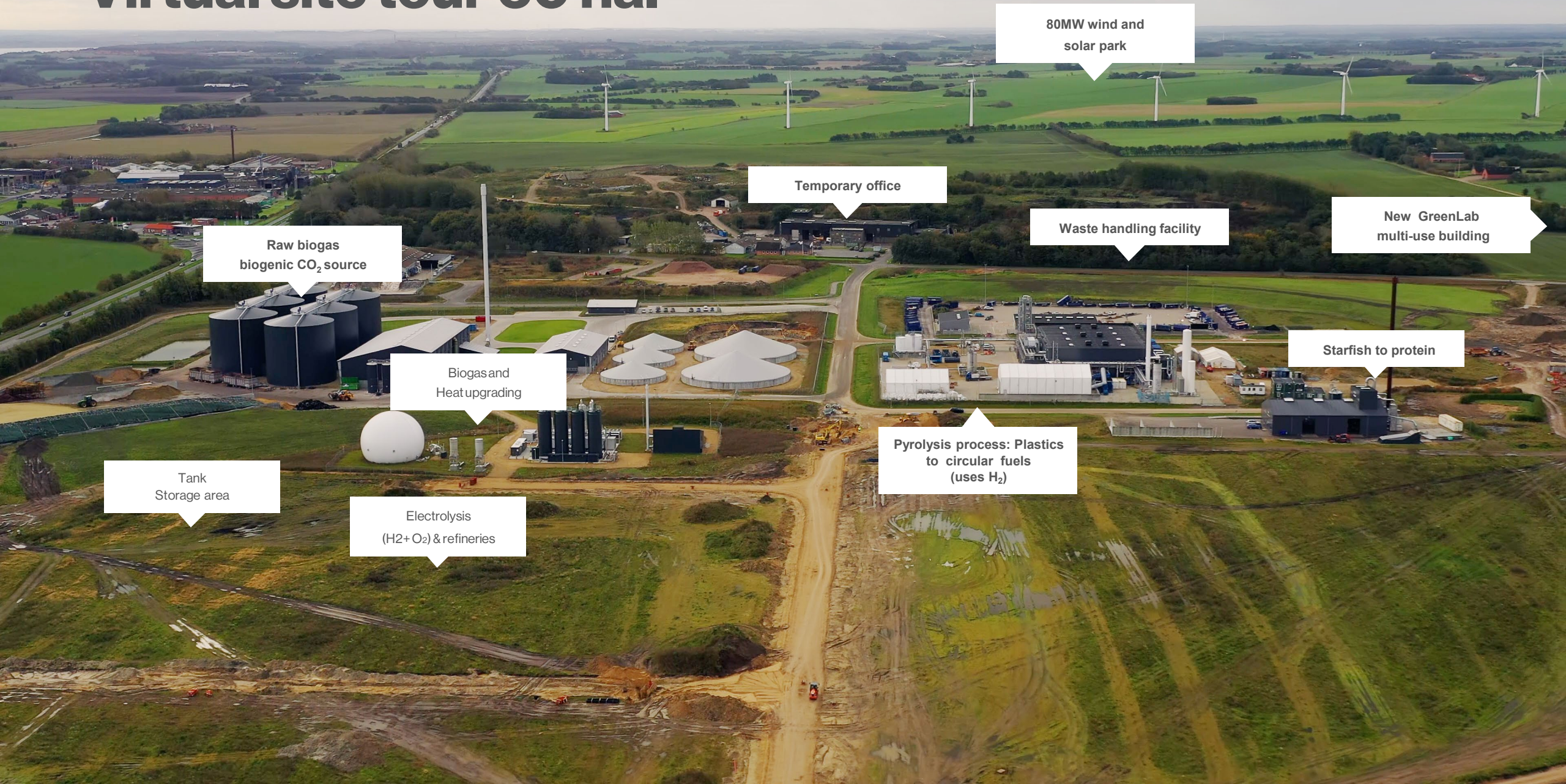
 **4 bar gas distribution pipeline**

 **Pipeline Balling - Bostrup Biogas**

 **High voltage cable - 150 kV**



Virtual site tour 60 ha.



Raw biogas
biogenic CO₂ source

Biogas and
Heat upgrading

Tank
Storage area

Electrolysis
(H₂+ O₂) & refineries

Temporary office

80MW wind and
solar park

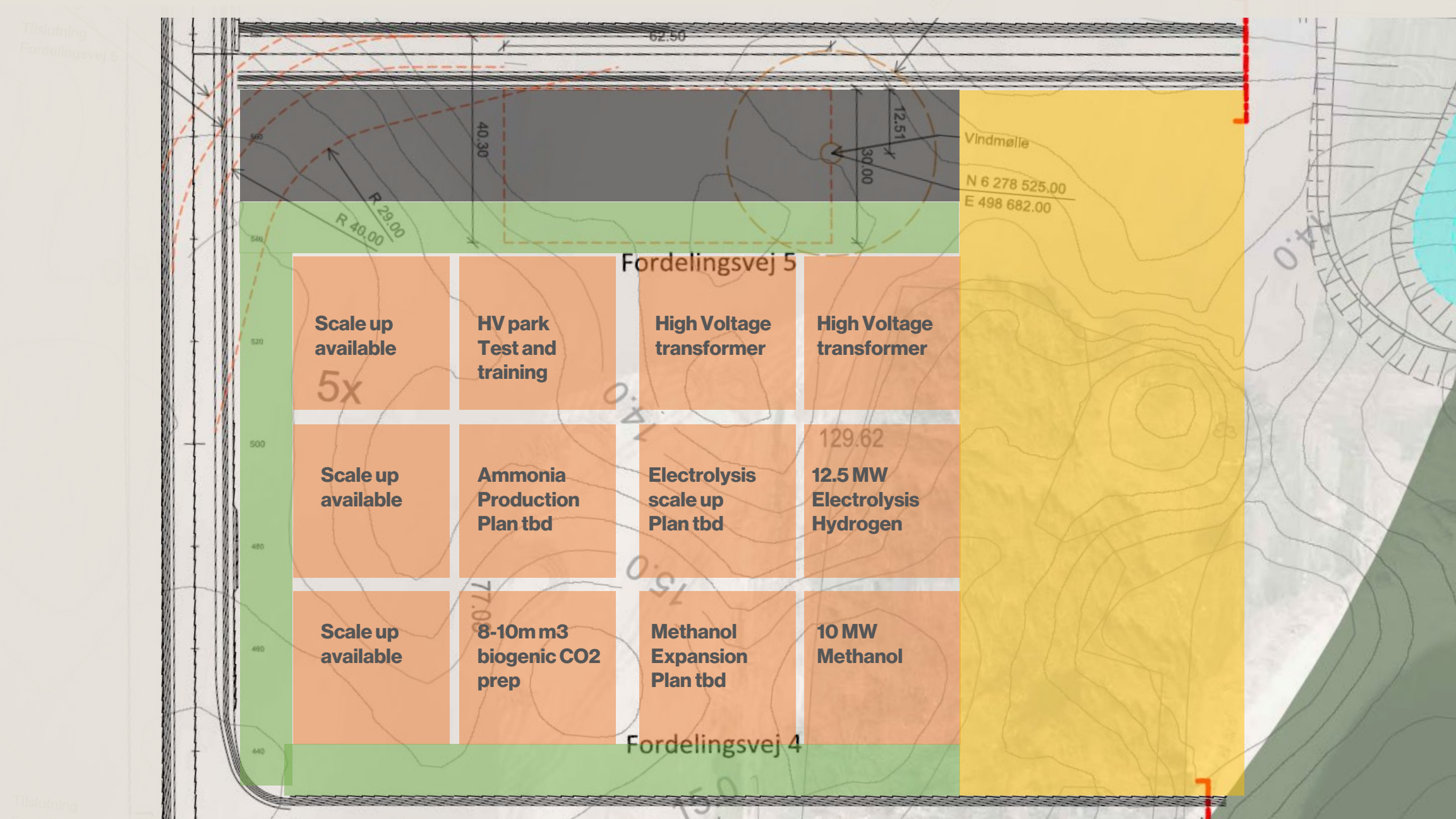
Waste handling facility

New GreenLab
multi-use building

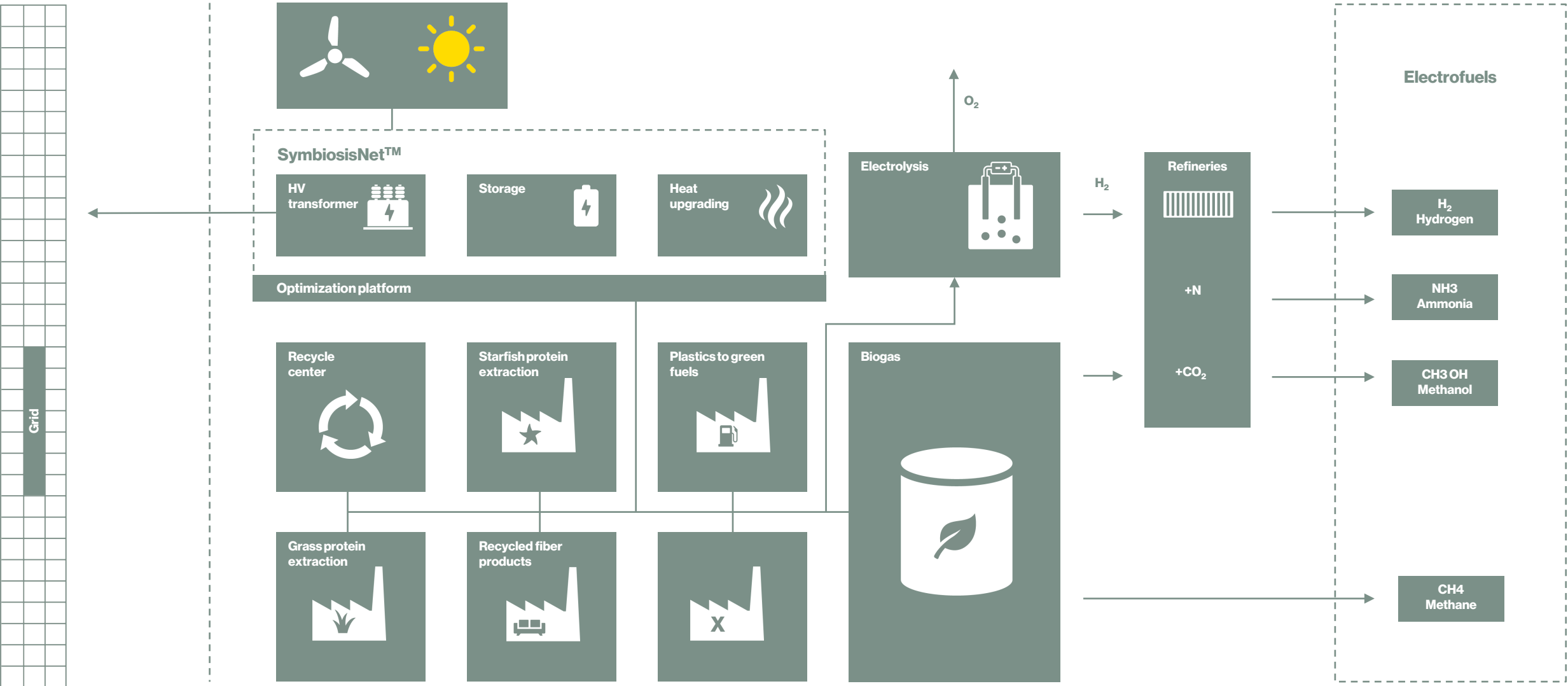
Starfish to protein

Pyrolysis process: Plastics
to circular fuels
(uses H₂)

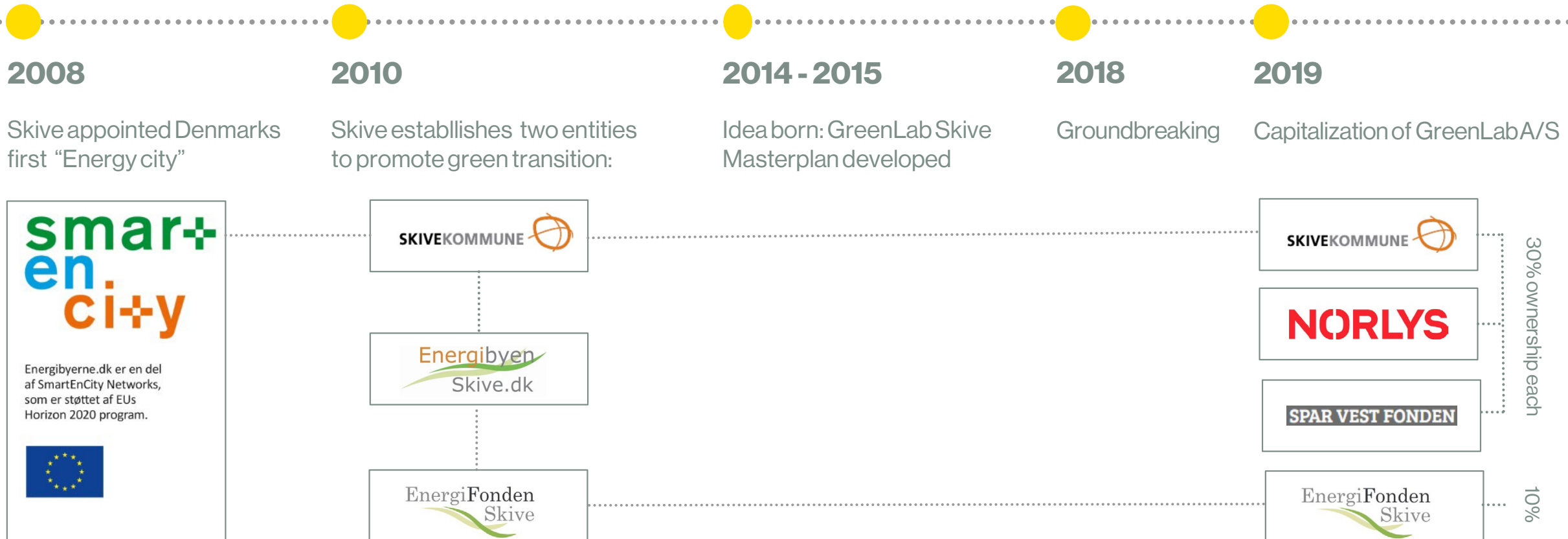
P2X as a "plug and play" platform



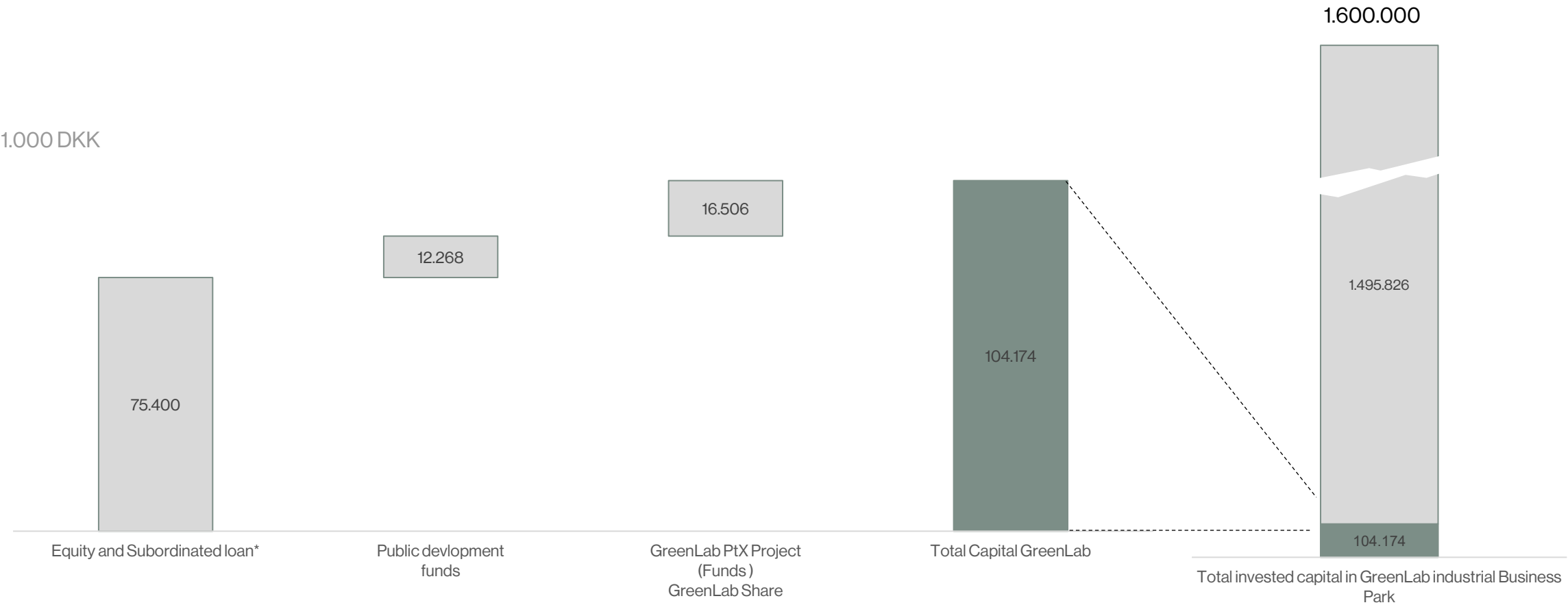
Q4 2022



Origin and ownership structure a truly collaborative public-private-partnership



Funding sources



The total impact of GreenLab as a regional development initiative is estimated at DKK 1.6b

Industrial park investors

<div>      </div>				
<div> <p>GreenLab Skive Biogas Holdingselskab A/S</p>   </div>	<div> <p>Quantafuel AS (Norway)</p>     </div>	<div> <p>Local farmers</p>  <p>Vestjyllands Andel</p> </div>	<div>  </div>	<div>     </div>
270m DKK	500m DKK	80m DKK	600m DKK	15m DKK

The GreenLab Principles

1

Positive community effect

High growth, global view,
trust, share

2

Competitive Advantage

Attract resourceful partners via lowered
costs of green energy

3

Mutual incentives

Long term engagement
and improvement via scale-up

4

Sustainable

Accelerate bankability of the
circular economy

5

Continuous learning and development

Accelerate R&D to commercial scale

6

Global frontrunner

Show it, don't tell it

Key market drivers and mega trends

Green transition urgency

- Towards 70% CO₂ reduction
- REDII compliance




Hydrogen
economy

- Wind market hedge
- Development curve similar to wind and solar energy
- EU hydrogen strategy: 6GW i 2024, 40GW i 2030


Climate
laws


Circular
economy

- Ressource efficiency throughout value chain
- Next generation sustainable production




Sector
coupling

- Need widely accepted: Treat energy as energy regardless of form (SymbiosisNet™)

Need for a power shift – market making

GreenLab achieves full operation in 2022

Aug. 2018

2020

2022

2022 and beyond

Groundbreaking

Major milestones



Green field land development



Four industrial plants established: Biogas, pyrolysis of plastics, marine protein extraction and recycling center



Strategic partnerships with value chains and major power shift stakeholders

The site becomes operational

Major milestones



80MW renewable energy park (55MW wind and 25MW solar) approved



Four industrial plants in operation. Pipeline expanded



Research projects active with focus on digital energy systems and biovalue development

SymbiosisNet obtains direct connection and is expanded with P2X

Major milestones



SymbiosisNet fully operational with a direct connection and high voltage transformer, and value capture begins.



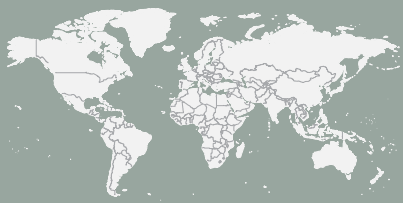
Electrolysis installed onsite enabling large scale green electrofuels production



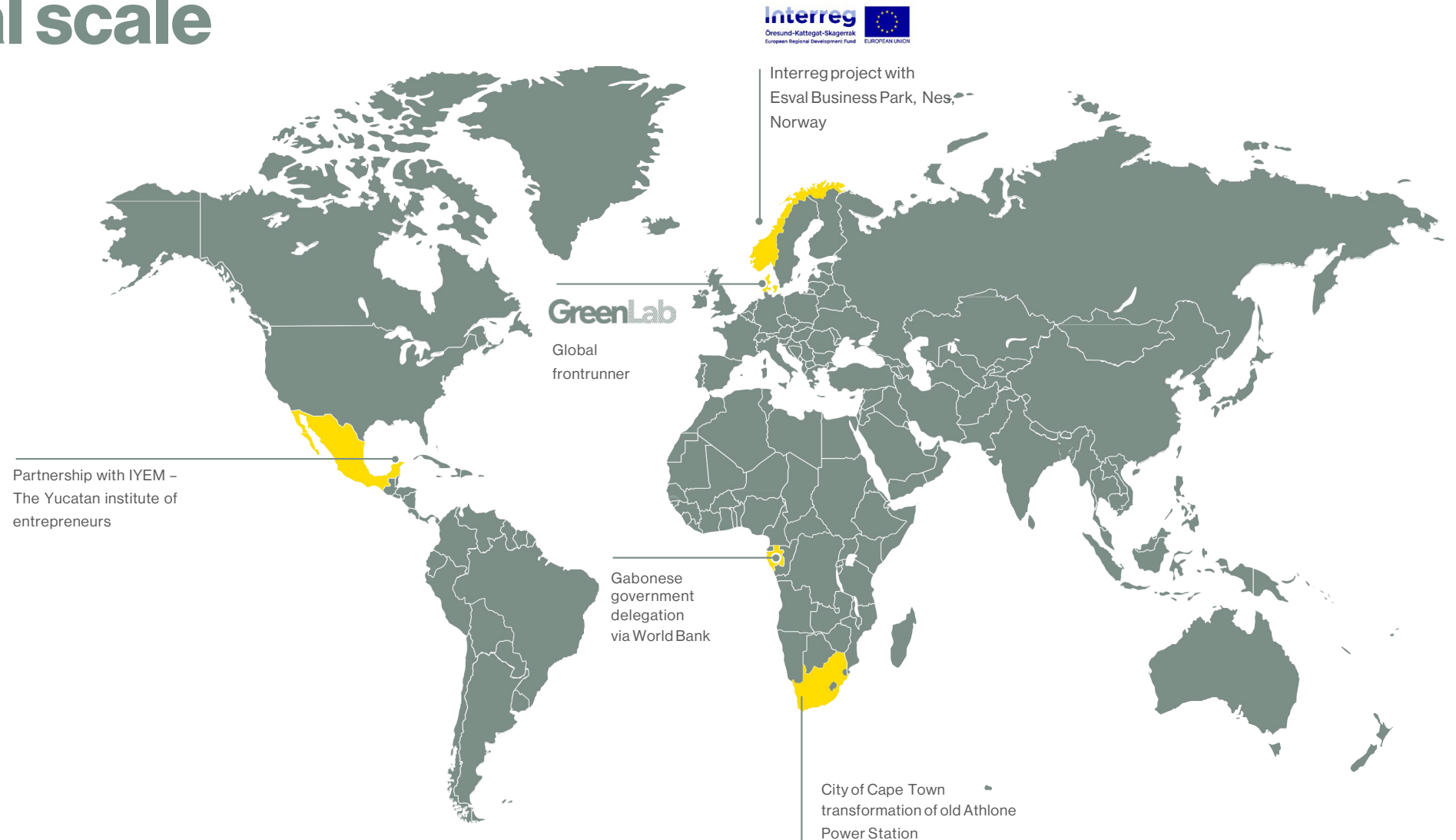
State-of-the-art research facility with short go-to-market time

Global partnering

Major milestones



Contributing to the green transition on a global scale





THANK YOU

GreenLab