

# Success factors for accelerating the realization of the hydrogen value chain in Belgium

*Transforming society together*



# Hydrogen and derivatives value chain

## Overview



FEASIBILITY AND BUSINESS CASE  
LICENSE TO OPERATE  
ENGINEERING AND CONSTRUCTION

# Local production

*Understanding the local context is key*



Heat

Oxygen

Regulatory framework and guided subsidies

Upscaling production capacity versus long lead items

Changing market approach for design & construction

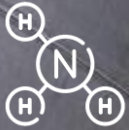
GREEN H<sub>2</sub>  
PRODUCTION  
25–100 MW

VOLTH2  
Vlissingen Terneuzen



# Import of hydrogen

*Cost efficient transport mode is key*



Cooperation and development in export countries

Transport mode vs conversion vs efficiency

Technology readiness level

TERMINALLING  
TRANSITION  
MOLECULES IN  
HARBOURS



# Infrastructure for distribution

*Timing and permitting are key*



Constructability in a dynamic and complex environment

Environmental impact versus repurposing

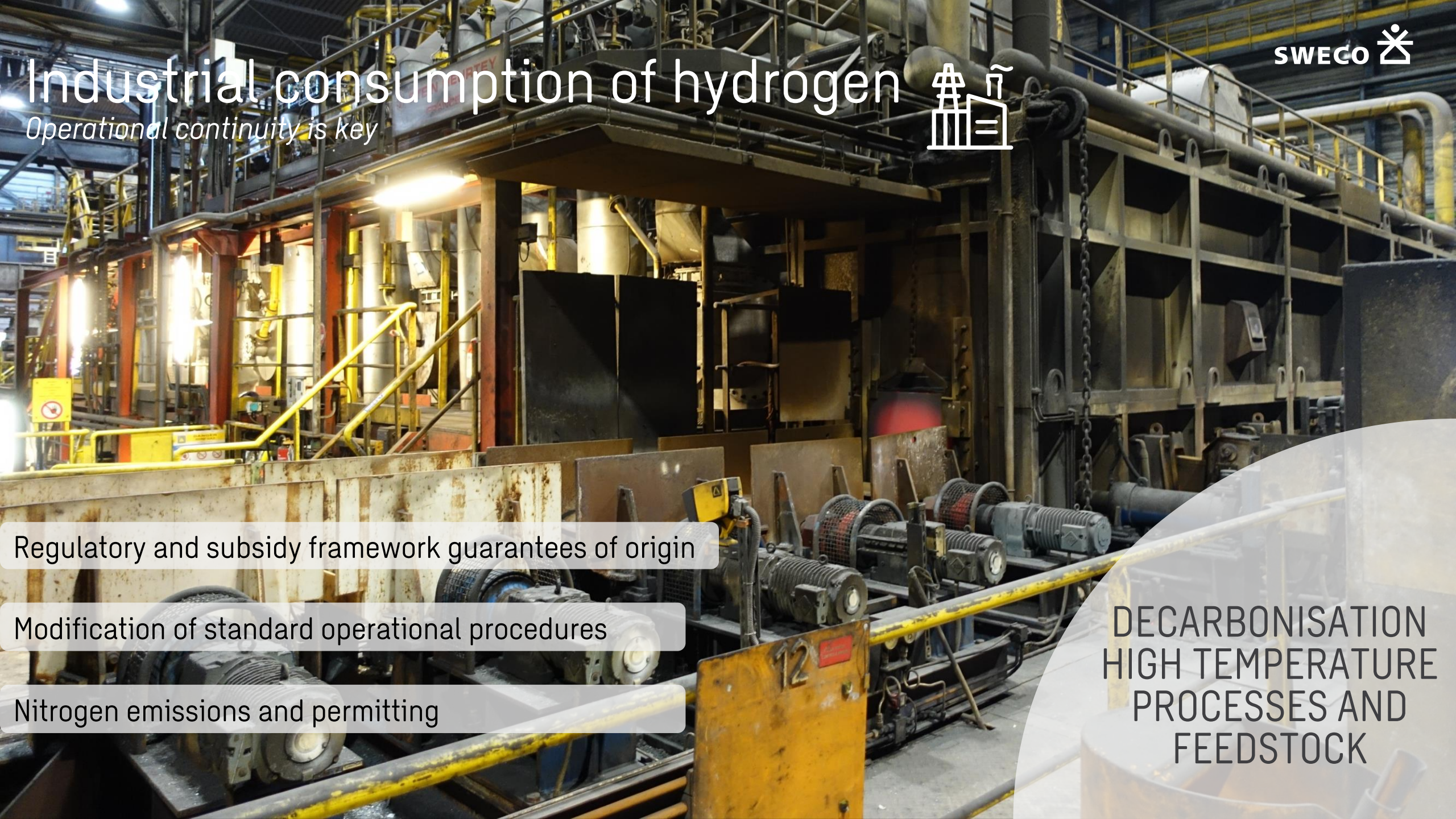
Open access network versus quality

LONG DISTANCE  
UNDERGROUND  
PIPELINES

Fluvius  
Antwerp - Bluegate







# Industrial consumption of hydrogen

*Operational continuity is key*



Regulatory and subsidy framework guarantees of origin

Modification of standard operational procedures

Nitrogen emissions and permitting



DECARBONISATION  
HIGH TEMPERATURE  
PROCESSES AND  
FEEDSTOCK



# Heavy transport consumption

*Hydrogen quality is key*

Fuel cost versus operational impact

Fuel cells demand high purity of hydrogen

Multimodal hubs in port areas

CONSUMPTION OF  
E-FUELS IN SHIP

Decarbonisation of  
DAB VLOOT





An aerial photograph of a lush green forest. A winding river or stream flows through the center of the image, surrounded by dense trees. Mist or low clouds are visible, particularly on the right side and around the river, creating a serene and somewhat ethereal atmosphere. The colors are vibrant greens and blues, with soft whites from the mist.

Are you ready to  
transform society together?

Contact Sweco Belgium  
Sara Vander Beken  
Business unit manager Energy Transition  
+32 471 68 84 16