



# Cross-border Hydrogen Valley around the Baltic Sea (BalticSeaH2)

## Flexens activities

Call: Hydrogen Valleys (Large scale)

September 2022

# Project developer in five primary market segments

## MARKET SEGMENTS

## EXAMPLES OF PROJECTS UNDER DEVELOPMENT

ENERGY ISLANDS

Our main reference is the technology demonstration of a society working on 100% renewables on Åland

OFFSHORE

Engagements in progress with undisclosed offshore wind developer for the Åland opportunity

PORTS

Advisory engagements with undisclosed port clients

INDUSTRIAL GREEN H2

Green NorthH2 Energy; 100 MW ammonia production plant - in cooperation with Elomatic

MOBILITY E-FUEL SUPPLY

Hydrogen ferry fuelled by locally produced green H2 for the Åland Islands

SMART ENERGY ÅLAND



This project has received funding from the European Union's Horizon 2020 Programme under the Grant Agreement no. 957819

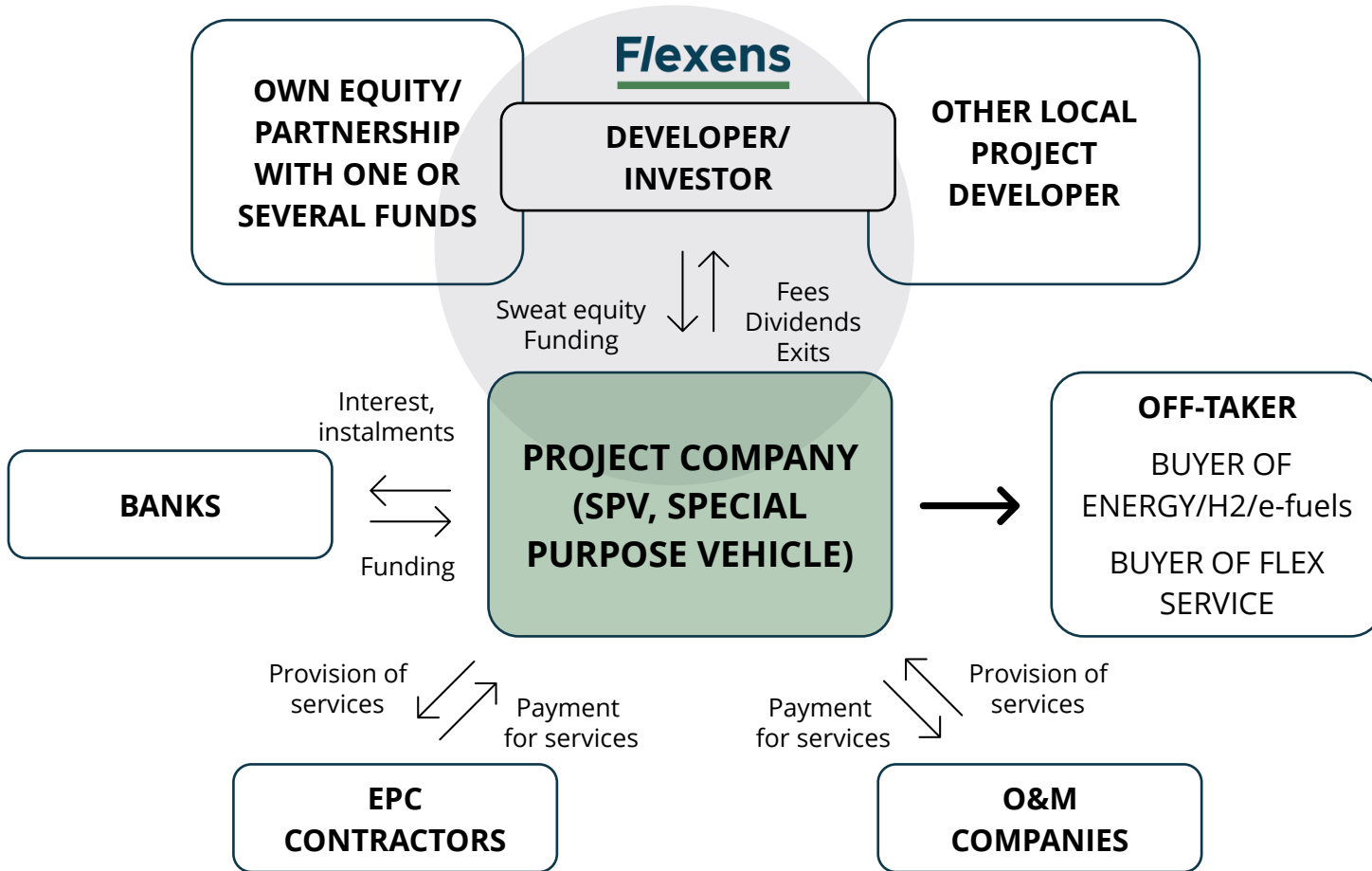


GREEN NORTH2 ENERGY



# Our value creation model ensures project bankability

Our operational model ensures minimal disturbance in day-to-day activities



## BENEFITS OF OUR MODEL

- ❖ Timely involvement of stakeholders
- ❖ Rapid implementation
- ❖ Open and transparent communication
- ❖ Efficient response times

# Flexens demo action

## Preparing a pilot of hydrogen supply and storage to a large passenger ferry in Helsinki

### 2023

Goal: Identify the most potential H2 fuelled ferry routes and carry out a study on H2 supply pre-requisites

#### Tasks:

- Feasibility study of H2 power passenger ferries operating from Helsinki.
- Stakeholder engagement with shipping companies, ports and other relevant stakeholders.

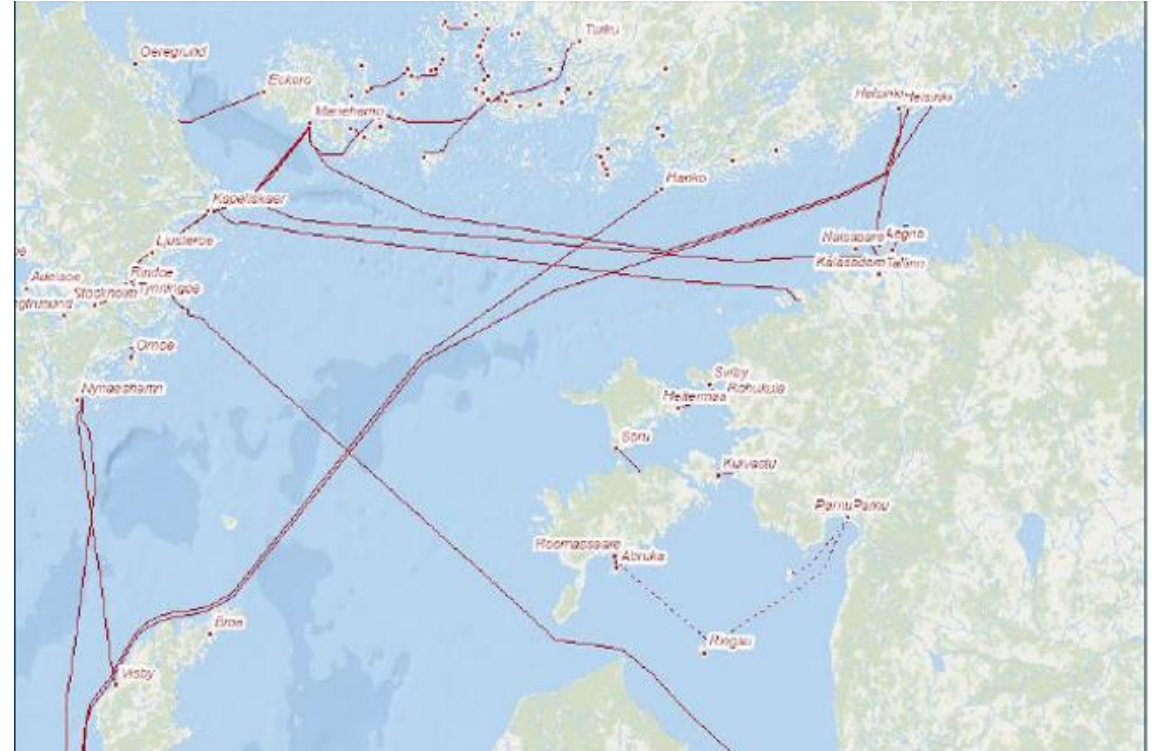
### 2024-2025

Goal: prepare detailed technical planning, cost estimations and business modelling for the H2 fuelling infrastructure and storage investment and operations.

#### Tasks:

- investment ready project plan
- Offers for equipment and engineering work
- Safety planning and permitting
- Investment subsidy application

**2027:** Implement the pilot investment (with separate investment subsidy and funding)



# Flexens other activities in the projects

## FEASIBILITY STUDY OF INTEGRATION OF HYDROGEN PRODUCTION TO OFFSHORE WIND POWER INFRASTRUCTURE

- Mapping of the offshore and onshore wind parks potential in Latvia, Estonia and Finland (special focus on Åland island): locations, capacities, commissioning timetables and energy transfer solutions.
- Estimation of potential total volumes of hydrogen provision from the wind parks and potential markets for the hydrogen
- Mapping of the existing relevant regulatory environment
- Development of potential local site-specific scenarios for hydrogen production and transport from the wind parks to the main European Hydrogen Backbone (EHB).
- Evaluation of the developed scenarios against criteria like technological feasibility, marine spatial planning, environmental impacts, lifespan cost benefit, connection solution and terms to EHB and terms to the wind parks
- Selection of the most optimal scenario for each the most promising locations.
- Producing the plan for the implementation of the scenario and conducting additional evaluations and planning procedures for the site-specific scenarios, if necessary





**Thank you!**

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