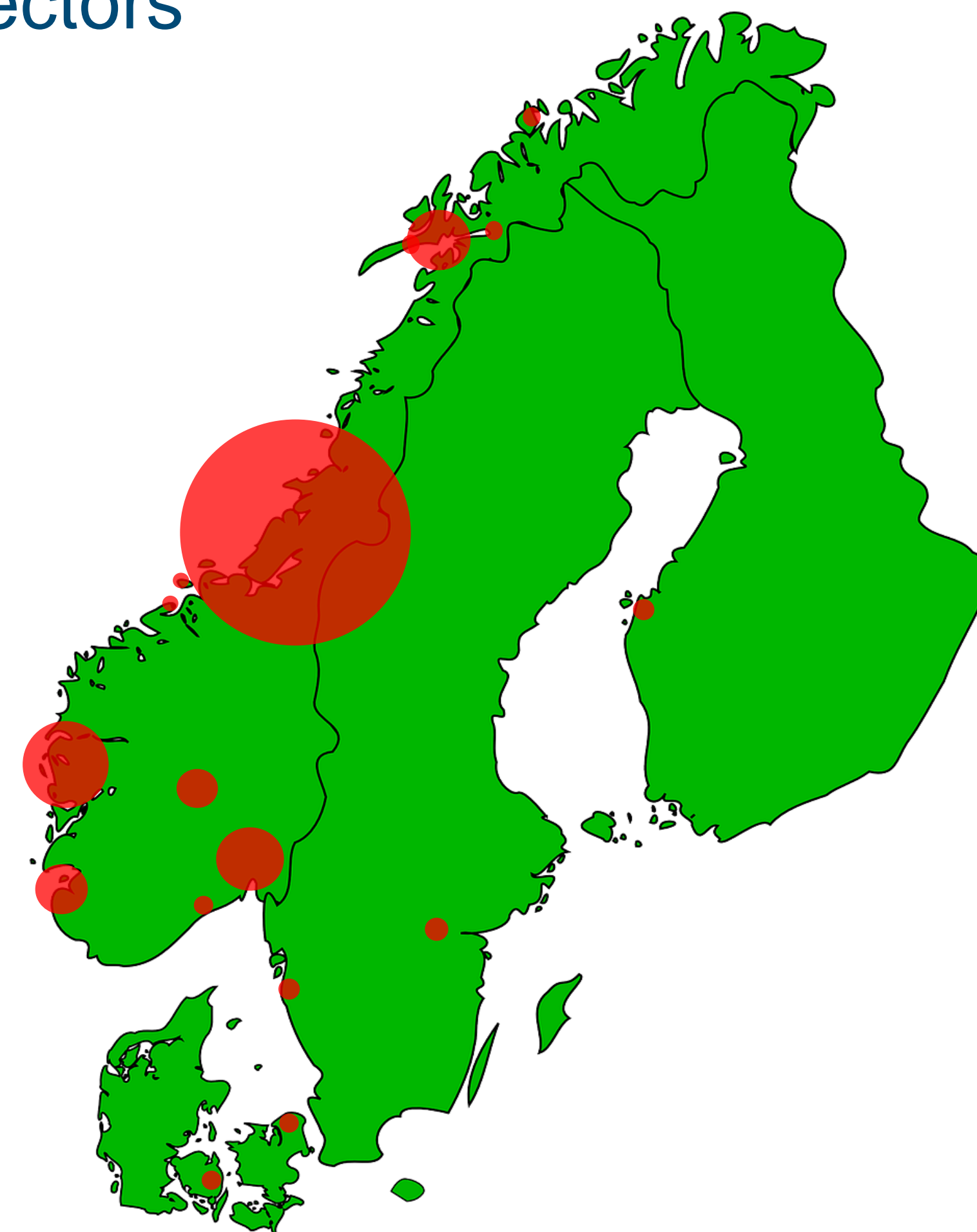
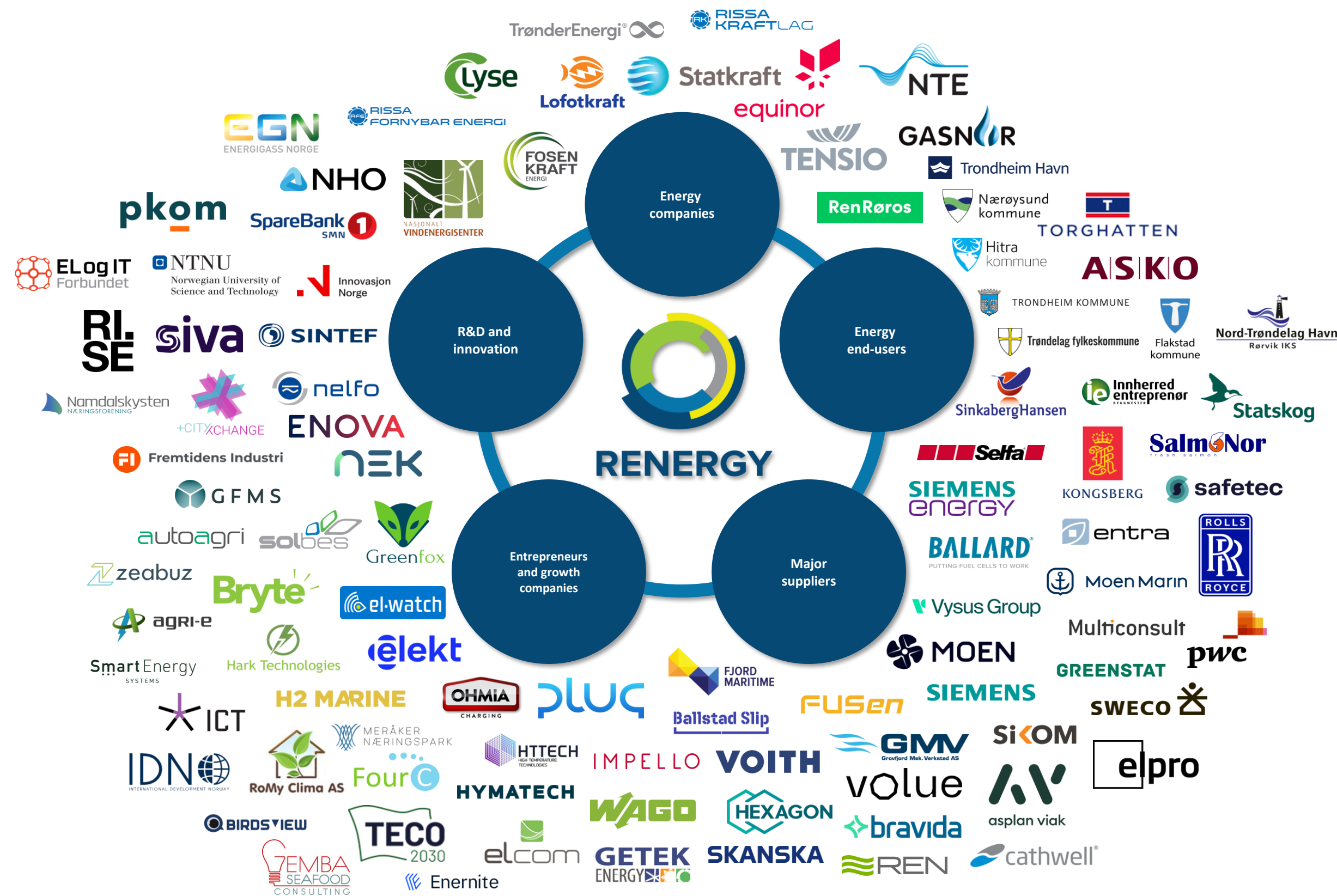


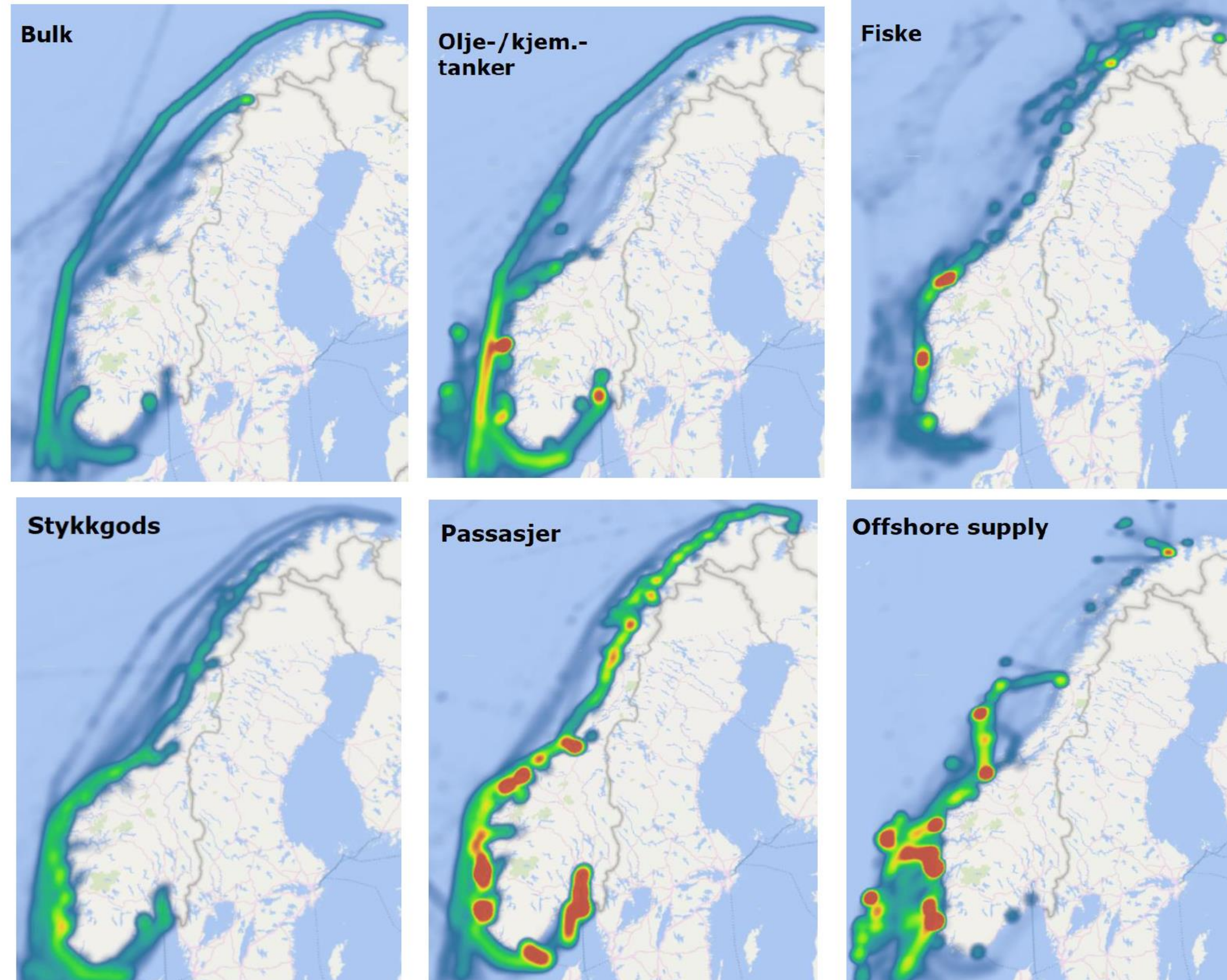


RENERGY is a tech and sector neutral cluster gathering over 100 businesses and organisations from the energy value chain, across several sectors



Elektriske ferger og båter

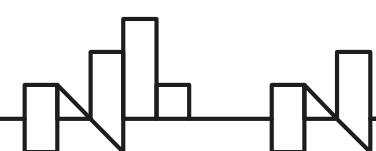
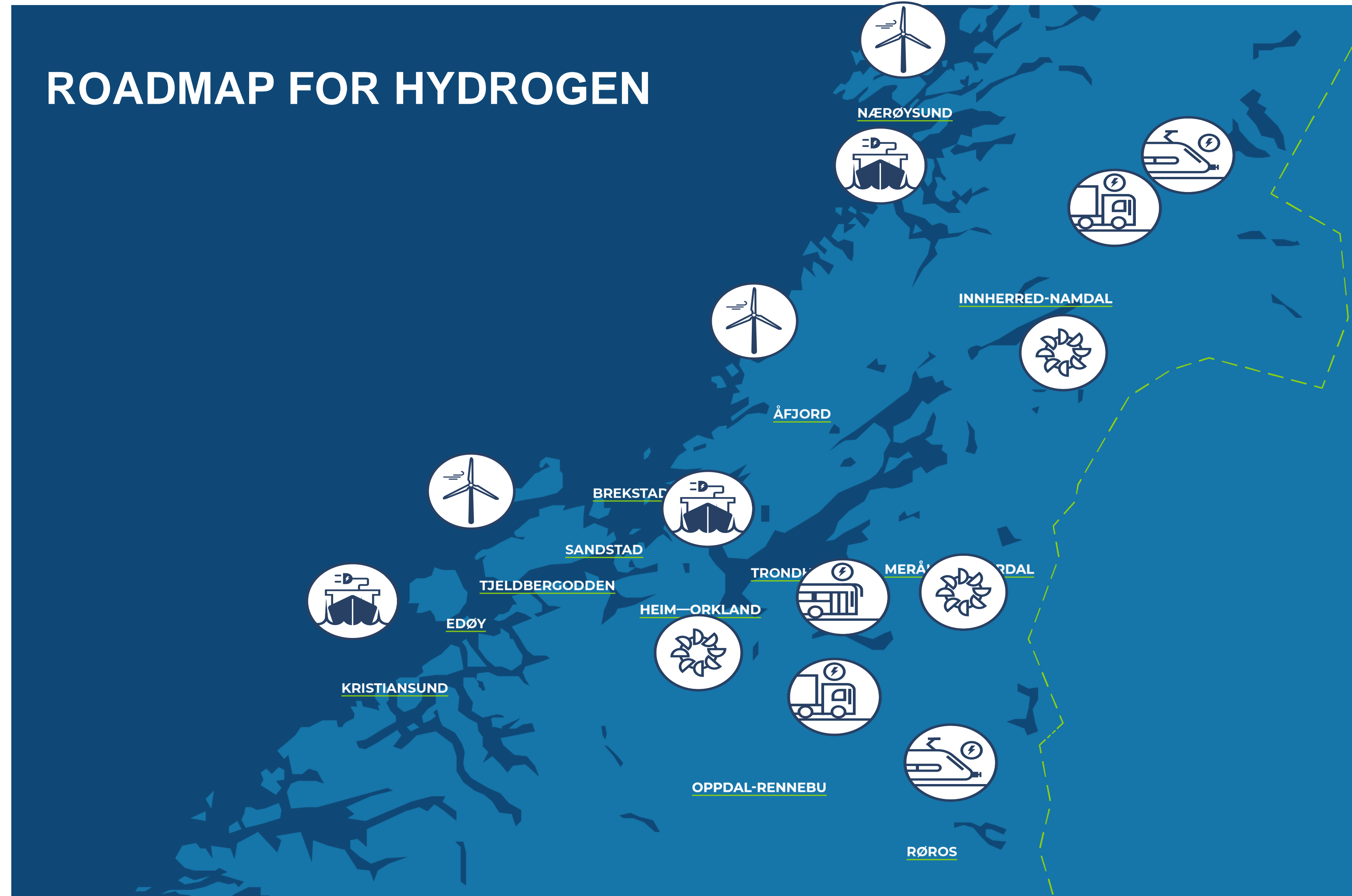


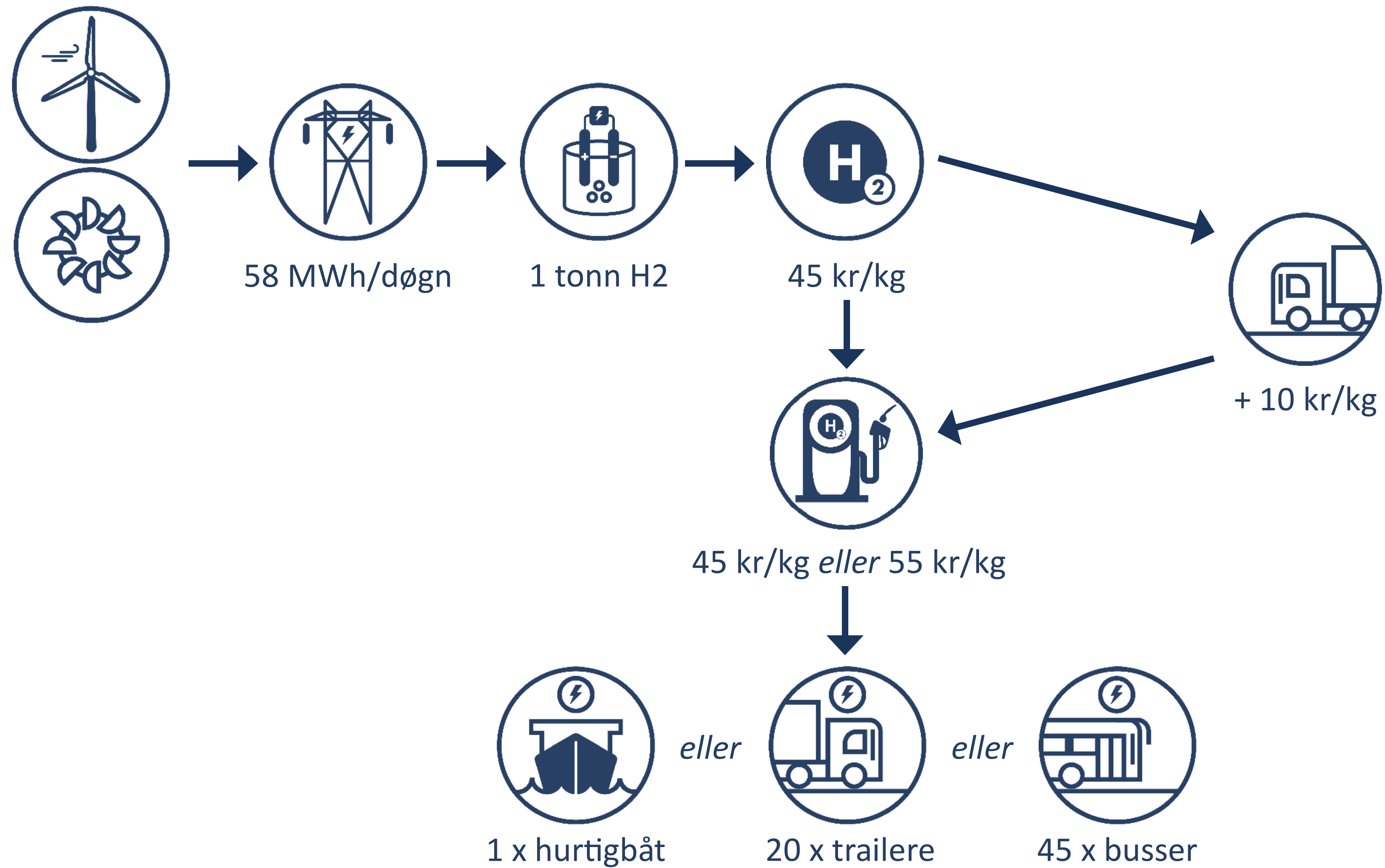


Tetthetsplott over skipstrafikk (drivstofforbruket) i norske farvann for ulike skipstyper. Illustrasjon: DNV GL



ROADMAP FOR HYDROGEN





Hydrogen vessel and bunkering system

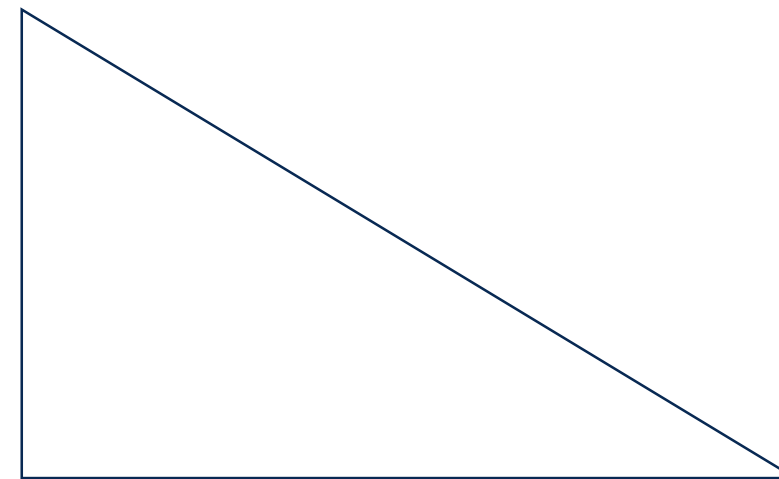
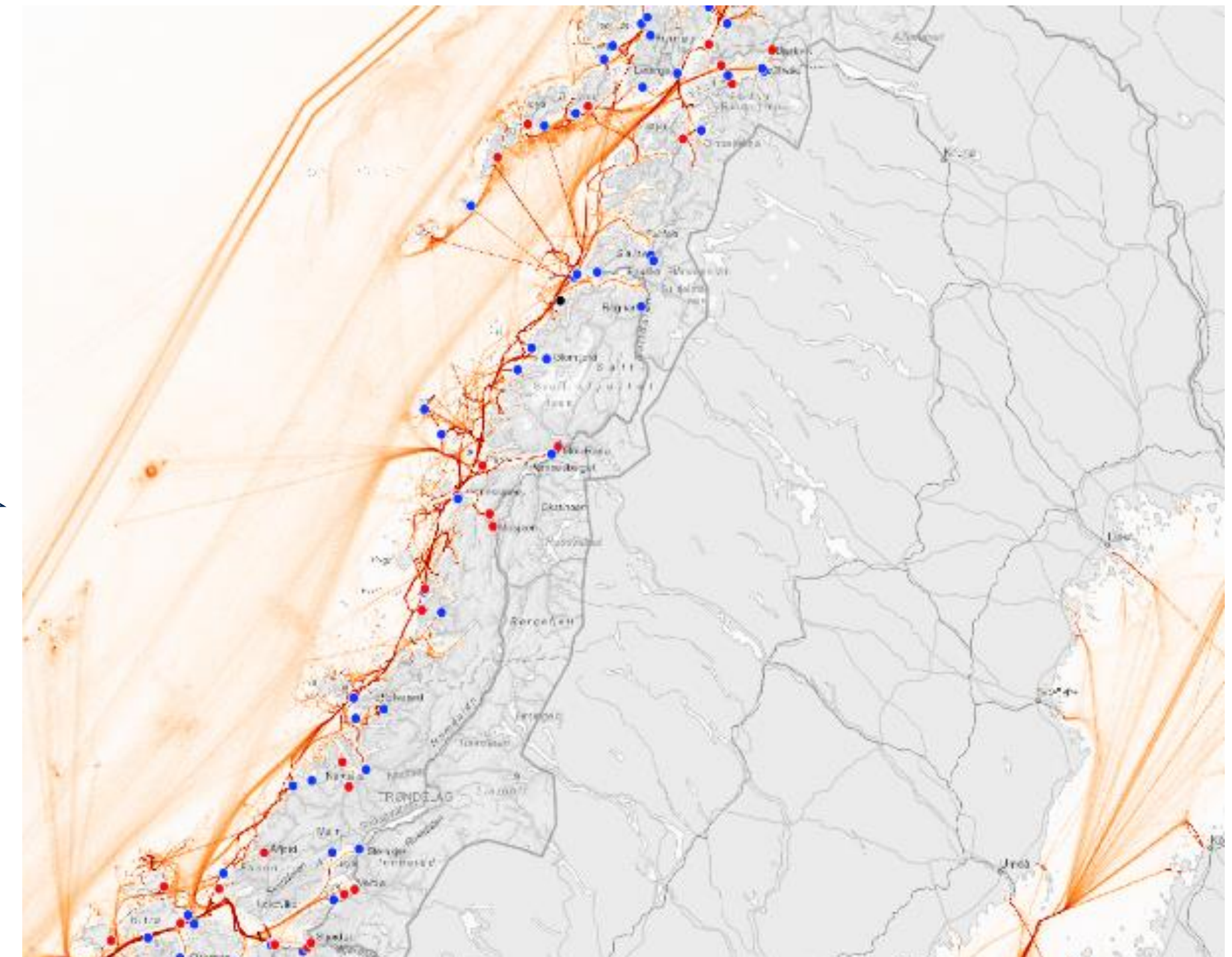
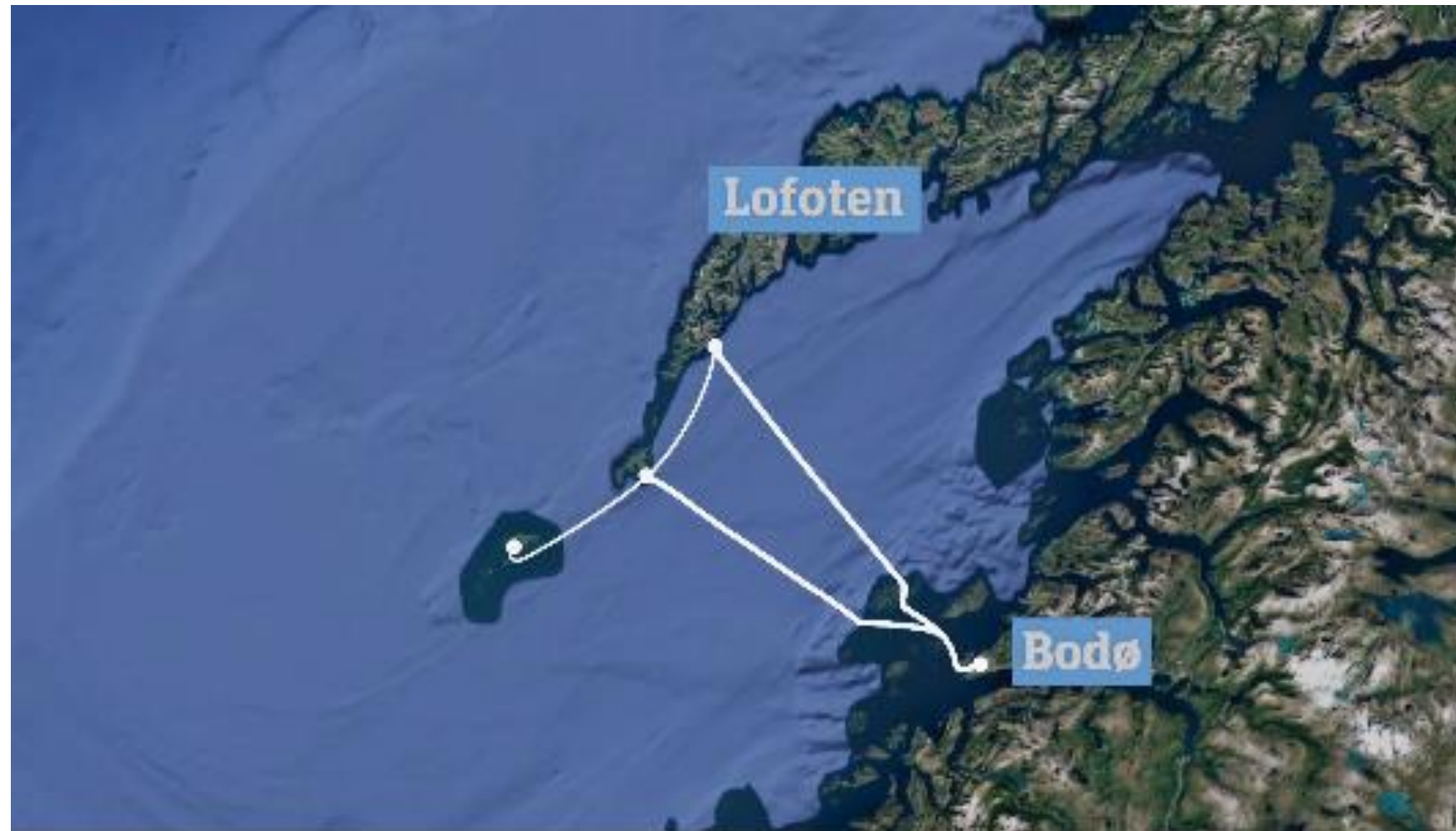
Hydrogen infrastructure doesn't need to be expensive!

H2 Marine and NTE's innovative solution includes

- As few components as possible
- Approx. 15–20 % lower CAPEX
- Lower OPEX; approx. 5 % lower power consumption
- Mobile combined storage and bunkering unit
- Flexible and scalable



Lofoten 2 hydrogen ferries by 2025 3-4 hours route



The first upscaled h2 production sites





H2 VALLEY MID-NORWAY

1 express boat
operative from 2028

1 service vessel
operative from 2023

2 container ships
under planning

8 service vessels
under planning

RØRVIK



H2 PRODUCTION | H2 STORAGE | H2 DISTRIBUTION

One service vessel and H2 infrastructure for bunkering
under construction. Operative from 2023

Investment: €6 million | **Production: 0,5 T/day**



H2 PRODUCTION | H2 STORAGE | H2 DISTRIBUTION

Funding approved. Full-scale production, storage and
distribution for mobility. Operative from 2025

Investment: €30 million | **Production: 8 T/day**



H2 PRODUCTION | H2 DISTRIBUTION

Four heavy-duty trucks, warehouse forklifts
and fuel station. Operative from 2020

Investment: €9 million | **Production: 0,3 T/day**



H2 R&D LAB FACILITY (SINTEF & NTNU)

Research and development
Norwegian Fuel Cell and Hydrogen Centre

HITRA

4 bulk carriers
under planning

4 service vessels
under planning

TRONDHEIM

1 express boat
operative from 2025

4 trucks operative
from 2020

MERÅKER



H2 PRODUCTION

Joint initiative
Ambitions for operation from 2028

Investment: N/A | **Production: N/A**

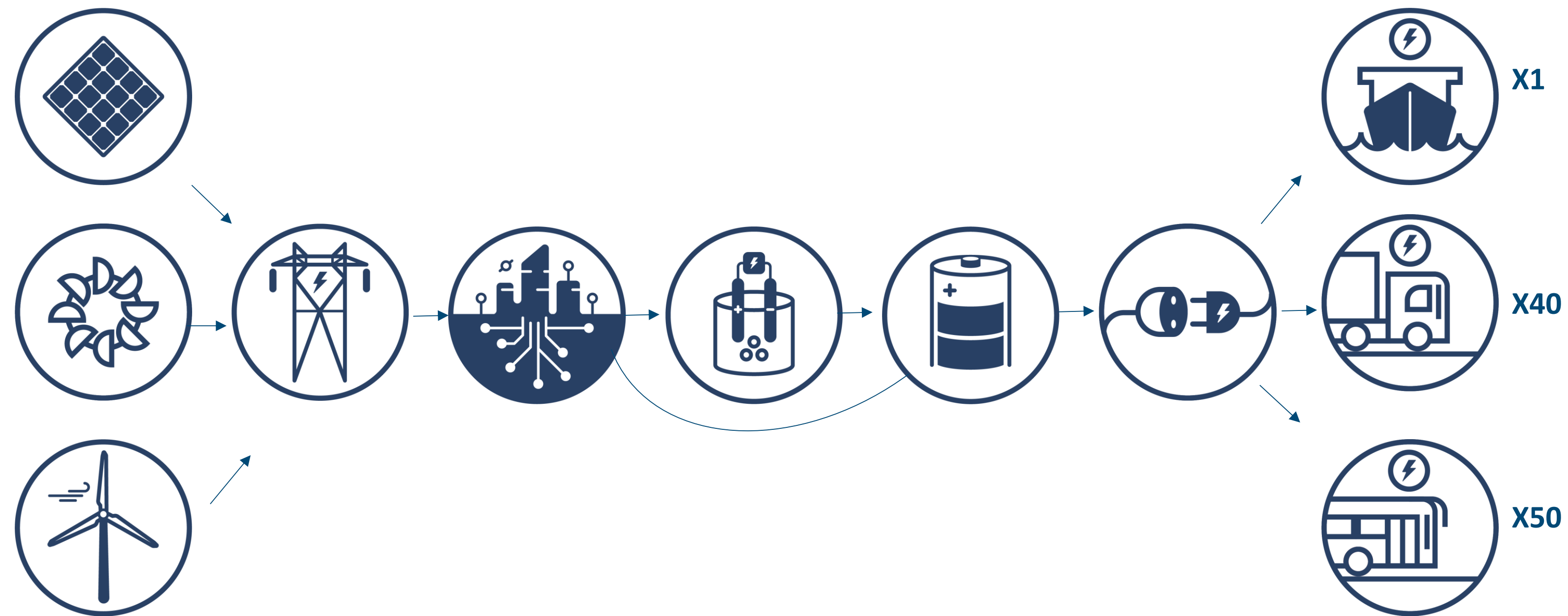


H2 PRODUCTION | H2 STORAGE | H2 DISTRIBUTION

Funding approved. Full-scale production, storage and
distribution for mobility. Operative from 2025

Investment: €30 million | **Production: 6 T/day**

The energy value chain





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