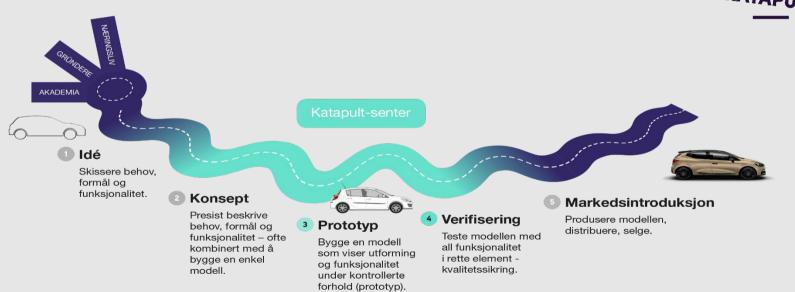
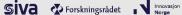


#### **Shorter Route to Market for new** inventions



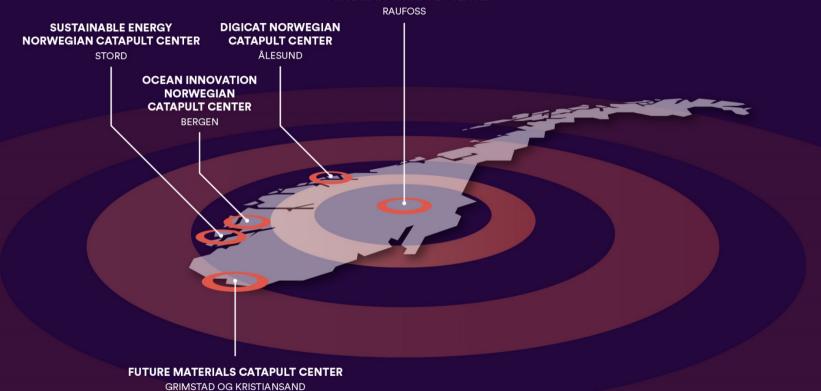








#### MANUFACTURING TECHNOLOGY NORWEGIAN CATAPULT CENTER









## Full scale LAB's

- The Switch energy test centre,
  - 1600 m2 available for all sorts of energy testing and training purposes.
- Future Maritime Fuel test Infrastructure
  - Full scale infrastructure for testing of energy production Nh3 / H2 / LBG / Syntetic fuels







### Small scale Lab's

- Energy Lab, Photoetch
  - Testing facilities for testing of various small scale Gas Solutions (H2, O2, CH4, N2, CO2)
- Hydrogen and Battery LAB, IFE
  - Hybrid small scale Hydrogen electric test facility
  - Battery cycling and battery performance Lab
  - Fuel Cells (Power Cell)
- Hybrid H2 & Battery Lab Westcon
  - Full system software for sailing ships
  - Power management
  - Batteries
  - Fuel Cells (Ballard)









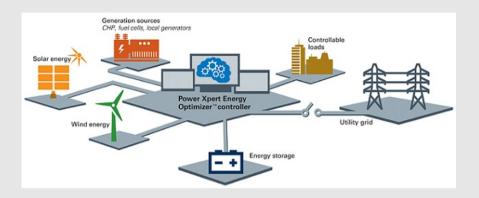
## SHIPS

- Offshore Vessels
  - Solstad-Farstad fleet of offshore service vessels
- Ferries
  - Norled Commuter ferries and fast ferries
- Tankers
  - LNG and oil tankers
- Passenger Vessels
  - GANN



#### OCEAN

- MET Centre,
  - Testing site for offshore wind and other ocean based installations
  - Unitech Zefyros (Ex Hywind)
  - MET Buy
- Unitech floating Solar & Energy
- Site for testing of energy system including solar panels, storage, micro wind and subsea energy.
- Unitech Subsea test bed
  - Cables / connectors
  - Wireless charging
  - Subsea Communication





## Micro Grid

- Utsira Living LAB and Micro grid
  - Site for testing of new energy sources and control system for weak networks in a real environment
  - Smart societies test platform













# Competence

- HVL
  - Western Norway university of applied science
- IFE
  - Institute for energy technology
- SINTEF OCEAN
  - Machine LAB
- UIB
  - University in Bergen
- NORCE
  - Research Institute
- VIS
  - Incubator and business development







### Clusters

#### - NCE Maritime Cleantech

 NCE Maritime CleanTech (NCE MCT) is a world-leading cluster for clean maritime solutions with more than 100 members companies

#### - NMEC

- Technology cluster within the areas of maritime, oil and gas, fishery and aquaculture and renewable energy.
- Arena Offshore Wind Cluster
  - Establishment of supply chain for Floating Offshore wind industry.





Norled Solstad Knutsen Gann



Utsira Living lab

IFE



Westcon P&A



Tier 2 **Prototech** 



Sintef Ocean



**HVL Basin** 

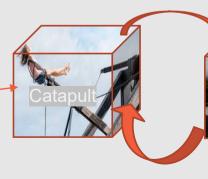


Hall of flames



Tier 1











**Prototype** Workshop

**Simulations** 







#### SUSTAINABLE ENERGY

NORWEGIAN CATAPULT CENTRE

Google Makani (Alfabet)

