

# Scandinavian Hydrogen Highway Partnership

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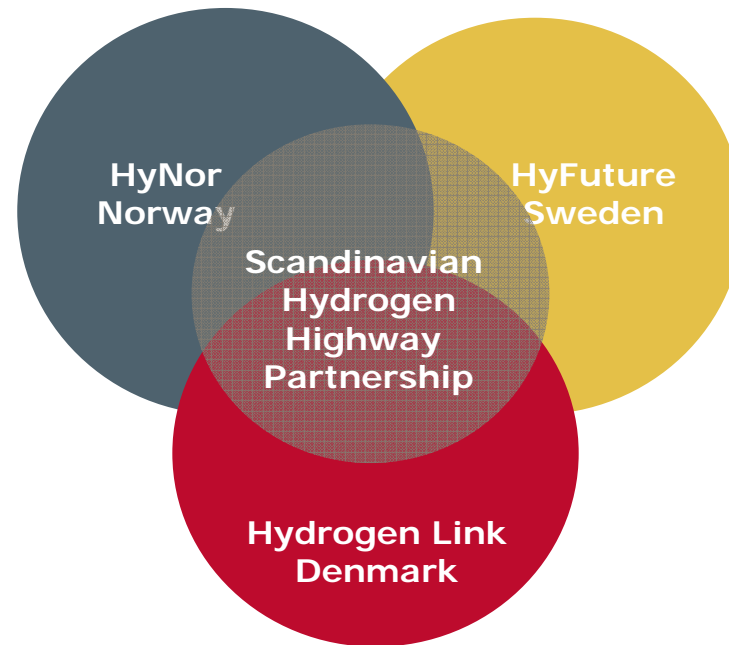


# Agenda

- **About the Scandinavian Hydrogen Highway Partnership**
- **Some experiences from HyNor**
- **Moving forward**



# Joining forces



Making the Scandinavian Region one of the first regions in Europe where hydrogen is commercially available and used in a network of refuelling stations



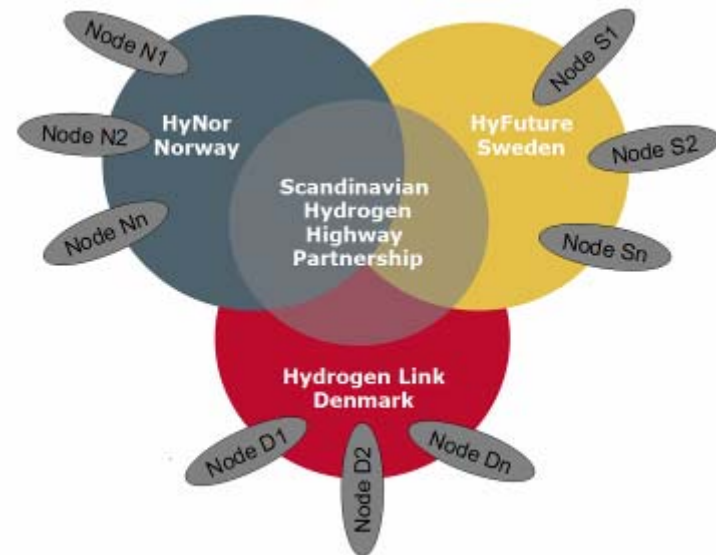
# SHHP Role & Purpose

## Role

- Trans-national network and bridging institution
- Coordinator of a Scandinavian large scale demonstration project
- Body for dissemination of information and marketing

## Purpose

- Co-operation
- Co-ordination (standardisation)
- Pooling and lifting Scandinavian Hydrogen competences and international impact



# Targets

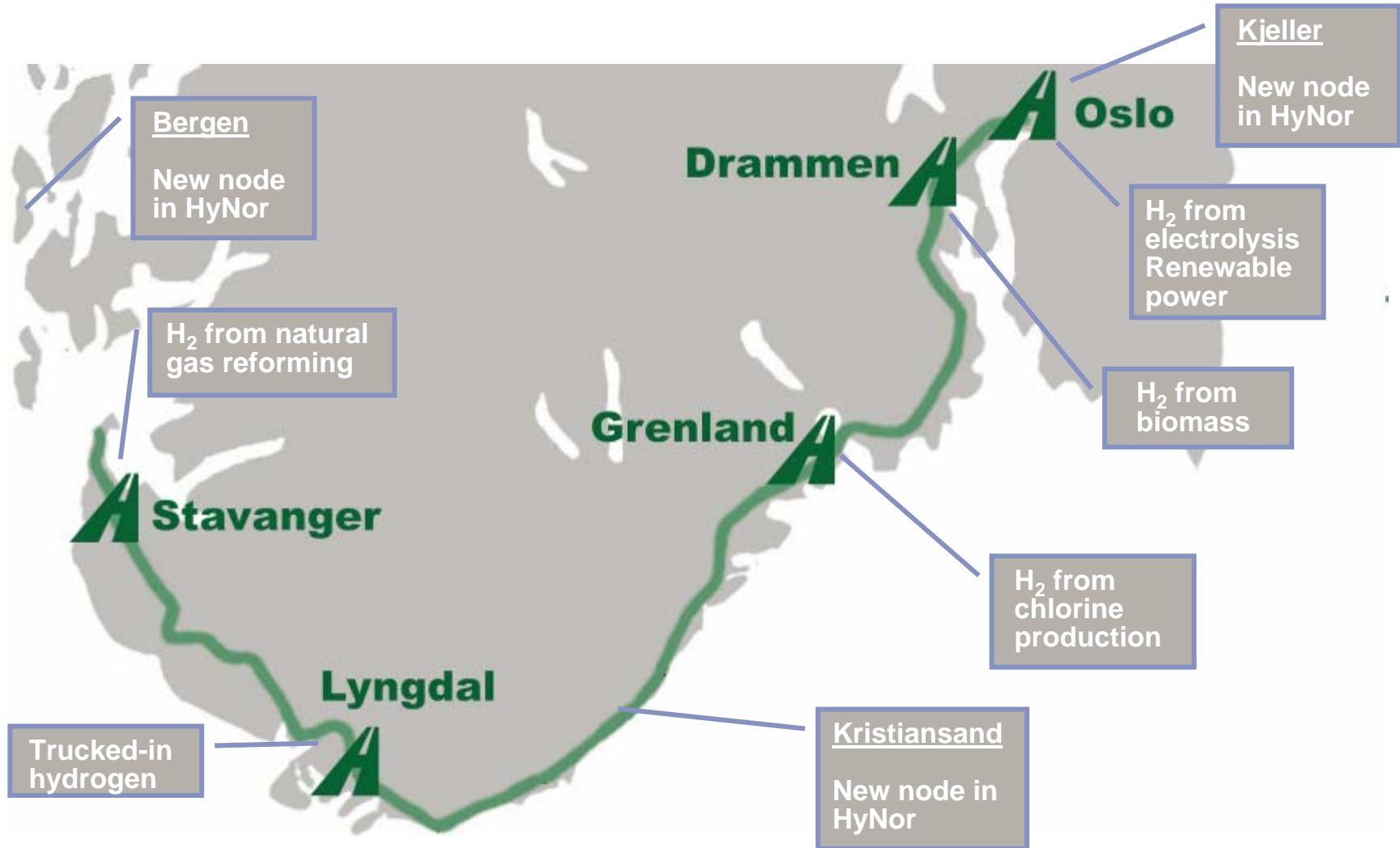
- Establish a collaboration during 2006 between networks of actors and demonstration projects in the Scandinavian Regions.
- Facilitating the establishment of an hydrogen infrastructure by year 2012 that enables hydrogen fuelled vehicles to operate and refill along the Scandinavian Hydrogen Network.
- Ambitions to qualify as a **Hydrogen Lighthouse Project** in the EU
- Connect the Scandinavian Hydrogen Network to the rest of Europe.



## Established Working groups

- **Marketing and Communciation**
- **EU and Nordic lobbying**
- **Project Planning and Coordination**
- **Vehicles**
- **Standards and certification**



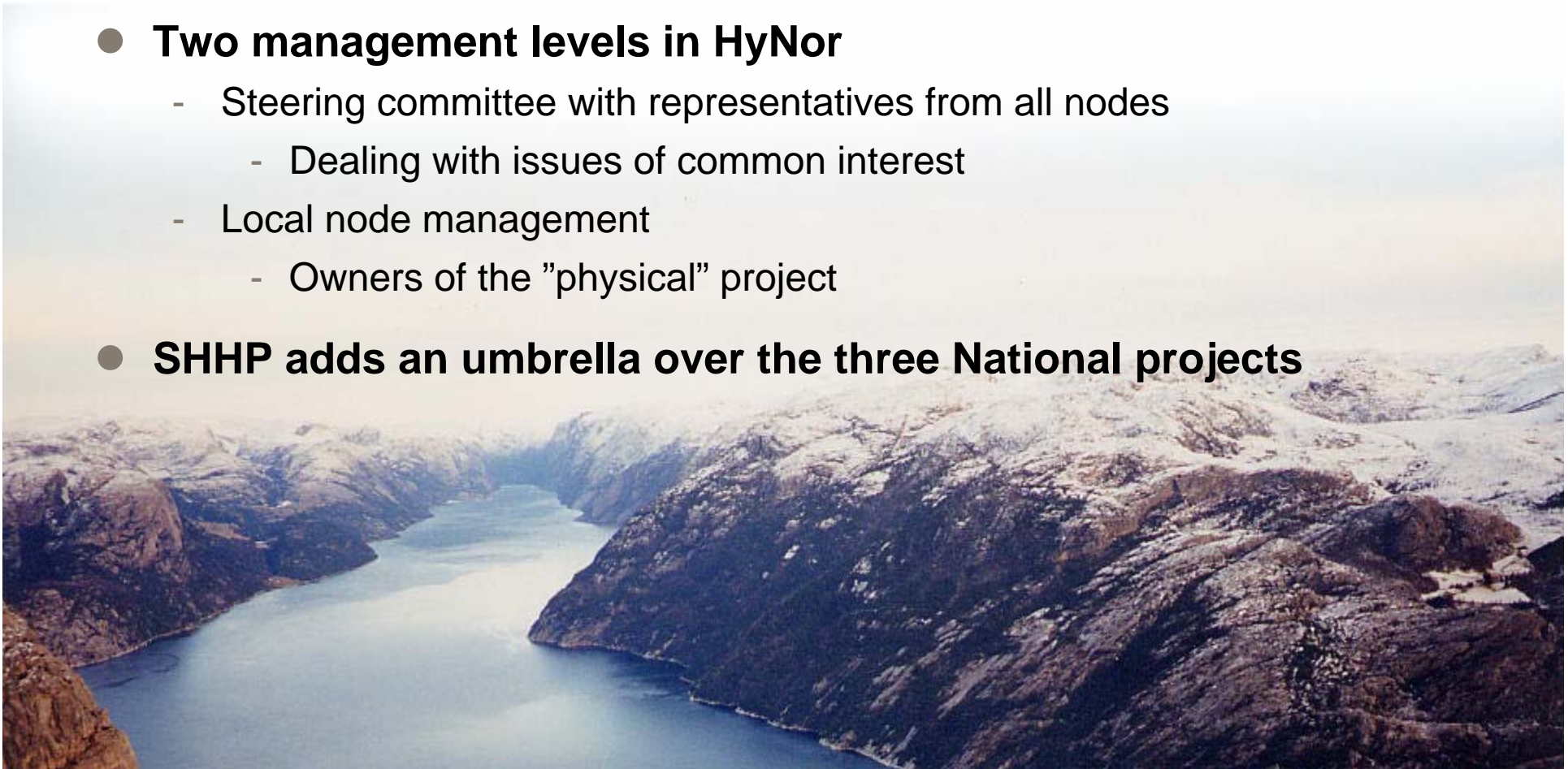


# Legal and Management Issues

## Example HyNor



- **Management structure is based on consortium agreements**
  - Legal advice sought to work out both levels of consortium agreements
- **Two management levels in HyNor**
  - Steering committee with representatives from all nodes
    - Dealing with issues of common interest
  - Local node management
    - Owners of the "physical" project
- **SHHP adds an umbrella over the three National projects**



# Public Private Partnerships

## Example HyNor



- **HyNor has 40 – 50 partners**
  - Important to have all the right categories of partners
- **Public funding is given by Department of Transport via Norwegian Research Council**
  - Support can be up to 50 % of project cost
- **Special support regime**
  - Import duty exempt for hydrogen vehicles
  - Use of public transport lane, free parking and toll roads

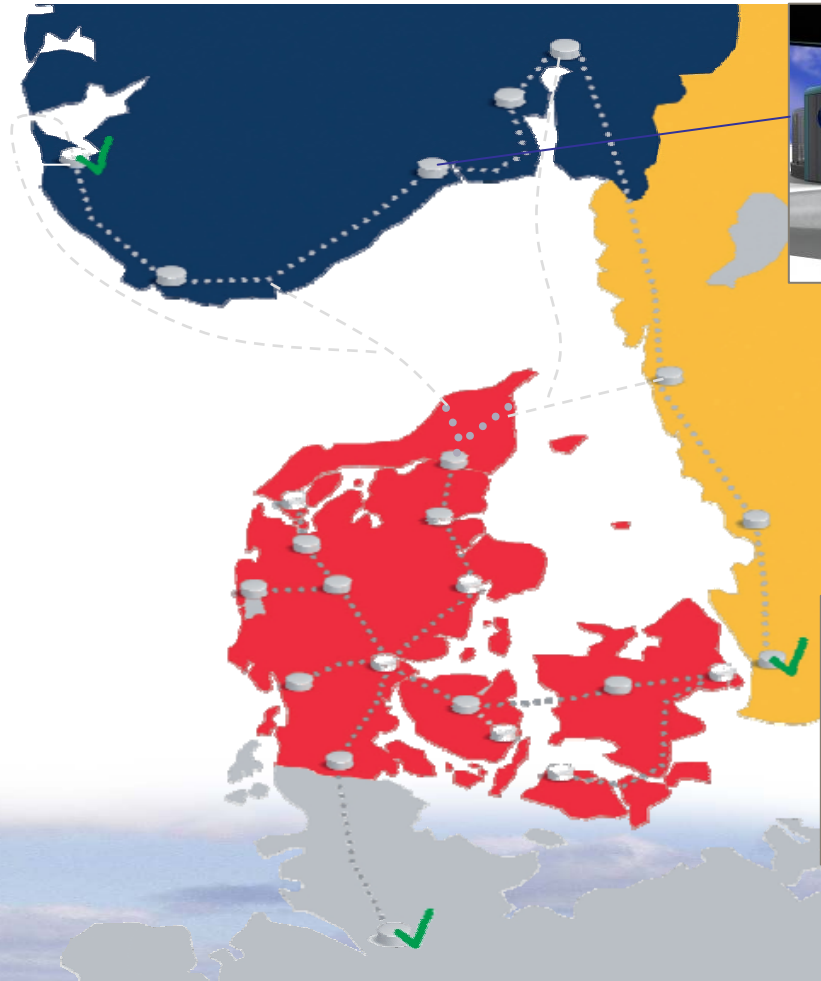


# Building a network of hydrogen stations



Stavanger

2 stations are opened  
1 opens June 2007  
2 planned for 2008  
3 planned for 2009



Grenland



Malmö



## Vehicle fleet in SHHP



**Prius:** converted to hydrogen operation by Quantum US, 15 cars to Norway 2006/07



**Think Hydrogen:** A hydrogen/electric hybrid  
5 cars planned to operate in HyNor by 2007/08



**Buses:** Plans for buses in  
three nodes in HyNor  
2008/09



## Raising our ambitions

- **We are looking at the next level of development for 2008 – 2015**
  - SHHP aims to become a Lighthouse Project in EU
- **A network of Hydrogen stations**
  - 15 stations
  - 30 satellite stations
- **A large fleet of vehicles**
  - 100 buses
  - 500 cars
  - 500 speciality vehicles



# Challenges

- **Vehicles**
- **Matching demand from customers with available vehicles**
- **Setting up the right consortium with all the right partners**
- **Securing national and EU funding**



# Benefits

- **Bringing Hydrogen demonstrations up to the next level**
  - Moving closer to a commercial market
  - Spreading knowledge to a larger audience
- **Showing a multitude of pathways for hydrogen supply with focus on sustainable hydrogen production**
  - Using local resources
- **Bridging trans-national competencies**
- **Showing Hydrogen to be an alternative fuel with large GHG reduction potential**





# SCANDINAVIAN HYDROGEN HIGHWAY PARTNERSHIP

[WWW.SCANDINAVIANHYDROGEN.ORG](http://WWW.SCANDINAVIANHYDROGEN.ORG)



**HyNor**

[www.hynor.no](http://www.hynor.no)



**HyFuture**

[www.hyfuture.eu](http://www.hyfuture.eu)



**Hydrogen Link**

[www.hydrogenlink.net](http://www.hydrogenlink.net)

