Plans for mapping of the uptake of innovative mobility solutions

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CPMR North Sea Commission
Transport group meeting, Aberdeen, 19th of February 2020
Megatrends

• Digitalisation
• Automation
• Clean fuels, in particular electrification
• Societal changes such as environmental awareness (e.g. «flyg skam»), sharing economy

Paradigm shift
Smart Mobility Groningen

www.at-north.nl
Dutch conduct first ATO trial with passengers

Passengers have travelled for the first time onboard an ATO test train in the Netherlands in a trial organised by Dutch infrastructure manager ProRail, the province of Groningen, Arriva Netherlands and Stadler.

The 50 local and national dignitaries were invited to ride on a Stadler diesel-electric GTW train operated by Arriva Netherlands. The train is designed to accelerate and brake automatically based on the journey profile provided by ATO trackside. It operates at Grade of Automation 2 (GoA 2) under the supervision of a train protection system and a driver.
European Hyperloop Test Center to be opened in Groningen
European Hyperloop Test Center to be opened in Groningen

- Europe’s first facility to test hyperloop at high speeds will be built in the Dutch province of Groningen.
- The new European Hyperloop Center (EHC) will be open to hyperloop developers from all over the world. This will promote cooperation, in order to accelerate the development of a technology that could offer a clean alternative to air travel.
- Construction of the EHC will start in 2020 and is expected to be completed in 2022.
- Tests conducted at the EHC will determine whether the hyperloop is a realistic alternative to short-haul flights.
- Travel by hyperloop is CO2 neutral and can provide a sustainable solution for the growing global number of passengers and amount of freight.
Electric operation Buses

- 2 e-buses 12 meter: Feb 2017
- 10 e-buses 18 meter Q-link groen: December 2017
- Per dec 2019:
  - City electric (20 buses)
  - Q-link electric (70 buses)
Hydrogen economy
Asse
- Emme
- Zuidwending (HyStock)
  - 1 kleinschalige elektrolyser
  - Cavernes Gasunie
  - 1 HRS
  - H2 auto's

Groningen
- 20 H2 bussen (150 ton/jr)
- 4 vuilnisauto's (10 ton/jr)
- binnenstadsbusje
- H2 auto's
- 1 HRS
- 20 H2 bussen
- 4 vuilnisauto's
- 20 H2 bussen (150 ton/jr)
- 4 vuilnisauto's (10 ton/jr)
- binnenstadsbusje
- H2 auto's
- 1 HRS

Chemiepark Delfzijl
- 1 HRS (Pitpoint)
- Akzo groene waterstof

Stalling Appingedam
- 2 pilot bussen (HighVLOCity)
- Inzet op streeklijnen
- 18,5 ton/jr

Eemshaven
- Windenergie naar H2

Groningen
- Opstelterrein 55 regionale treinen
  - Max 3500 ton/jaar

Assen
- 1 HRS
- H2 auto's

Eemmen
- 1 HRS
- H2 auto's

Posse (Green Planet)
- 1 HRS
- H2 auto's

Transport
- Tankwagens (?)
- Leidingen (?)

Zuidwending (HyStock)
- 1 kleinschalige elektrolyser
- Cavernes Gasunie
The aim of hive.mobility is to connect knowledge, experience and initiatives of the different joining partners, to strengthen the position of the Northern region further and to make the region more visible as a frontrunner in smart & green mobility.

**Innovation agenda**

1. Smart Logistics
2. Open and shared networks of freight and passengers (like the Hubs and Mobility as a Service, MaaS)
3. Sustainable mobility and infrastructure
4. Autonomous transport on the road, railroad, water and in the air
5. Smart Networks (communication between vehicles, the road and the total network, 5G, datasharing)
Automated passenger ferry Horten-Moss

World’s First Adaptive Ferry Transit With Passengers On Board Achieved By Kongsberg

By Mil Novy

Kongsberg Maritime are proud to announce the world’s first adaptive ferry transit conducted during normal service. This landmark event, which took place last week on a vessel fully loaded with passengers and vehicles and demonstrated fully automatic control from dock to dock, is a key step forward in the integration of autonomous technology into everyday shipping operations.

It was made possible by close collaboration between shipping company Basta Fosen, KONGSBERG and the Norwegian Maritime Authority (NMA).
Autonomous cargo ferry and drones
Examples of projects

Projects

• Autonomous shuttle bus pilot
• Mobility-as-a-Service-pilot/ FLEX – on demand in rural areas
• «Water buss» project (small passenger ferry to operate in Tønsberg city)
• Establish a «Living lab» for autonomous mobility (triple helix)
Proposed purpose of the initiative

• Benchmark and learn from each other
• Cooperation and EU-projects
• Influence policy developments
• Position the region for investments and activities related to smart transport
Proposed questionnaire

- Does your region have plans, strategies or measures for testing or rolling out innovative mobility solutions in the transport system?
- Have your organisation or other actors in the region conducted tests or implemented innovative mobility solutions? What is the experience of the project owners, users, society and what is/has been identified to be the key factors in making the project a success (evaluations, impact assessments, reflections on the environmental settings etc.)
- Are there significant vehicle manufacturers and/ or technology developers/providers within innovative mobility solutions operating in your region?
- Is there a regulatory framework, or incentives in place to manage/support the uptake of innovative mobility solutions in your country/ region?
- Other comments?