Mapping of smart and innovative mobility solutions
a) Introduction
b) Plans and strategies
c) Implemented tests and projects:
   1. Autonomous/automated transport (all modalities)
   2. Connected modes of transport (ITS and C-ITS)
   3. Innovative mobility concepts (Mobility as a Service, shared (micro-)mobility)
   4. New transport modes and test facilities (hyperloop/ pipeline, cable, drones, etc.)
d) Vehicle manufacturers and/or technology developers/providers
e) Regulatory framework
Implemented tests and projects
Autonomous/automated transport
• **Water:**
  - Møre og Romsdal county (Sundbåten: ships public transport);
  - Central Norway (AEGIS: ships meet ports);
  - Aalborg (Fjordbus: ferry)
  - Groningen (Eemshaven, small ship);
  - Vestfold and Telemark county (Bastø: ferry; Yara Birkeland: containership; ASKO: seadrones);
  - Weser and Ems Region (AVATAR: vessels)

• **Road:**
  - Rogaland (shuttle);
  - Gothenburg (Vera: freight transport);
  - Groningen (shuttle);
  - Aalborg (Smartbus);
  - Weser and Ems Region (ART-Forum and Test Bed Lower-Saxony: pilots and policies)
Connected modes of transport

• Aberdeenshire Council: remote sensing real time weigh in motion installation local road;
• North Denmark Region: bike barometers measuring bike traffic;
• Vestland County: automatic signal prioritization (ASP) for public transport;
• Groningen: 5G tests with drones, ambulances, a.o.; I-VRI’s for traffic intersections;
• Vestfold and Telemark: signal prioritization system for public transport; sensing data in roads;
• Weser and Ems Region: BITS (bicycles and intelligent transport systems)
Innovative mobility concepts
• Aberdeenshire: demand responsive transport (DRT), shared e-bike schemes, trials, school travel plans and bike counters;
• Region Västra Götaland: MaaS (Västtrafik);
• Møre og Romsdal County: DRT in rural areas (FRAM) including a variety of multi-modal mobility solutions (bikes, e-scooters, etc.);
• North Denmark Region: Car-pooling service (NaboGO, Plustur and Flextur), My Travel Plan (app), shared car and bus service (Havbakkebussen);
• Vestland County: dynamic transport concept in Odda and Bergen (HentMeg or Pick-me-up), shared city bike services;
• Region of Southern Denmark: DRT (Flex-traffic) for elderly, disabled people, etc).
• Groningen and Drenthe: DRT Hub program with small buses and a so called Hub Taxi system; also used for MaaS and several shared mobility solutions (including bikes);
• Rogaland County: DRT bus service, MaaS and city bike system (all Kolumbus) and car-pooling project Stavanger;
• Vestfold and Telemark county: city bike system (Grenland), kick-bike service (Tønsberg), DRT system in several locations and a Mountain Elevator replacing buses (Holmestrand);
• Weser and Ems Region: project citizens as mobility providers (NEMo) in rural areas;
• Örebro region: Bus Rapid Transit system (BRT) and Clean Journey (Rena Resan) project for walking, cycling and PT.
New transport modes and test facilities
• Aberdeenshire: drones for road inspections and possibly health care logistics; education for active and sustainable transport (EASTiE);
• Västra Götaland: test facility for future road safety (AstraZero); knowledge center for efficient freight transport (Triple F); Surflogh; several platforms for sustainable travel;
• North Denmark region: pipelines system (hospital Aalborg); Bus Rapid Transit system Aalborg;
• Groningen: European Hyperloop Center (2022);
• Region Örebro County: Test tracks for electric charging infrastructure in roads; Test long vehicle combination (HCT Duo pilot project Hallsberg).
Regulatory framework or incentives

- Legal frameworks mainly on national scale:
  a) Specifically on autonomous transport (Denmark, Germany, Scotland, The Netherlands and Norway (shipping)). All of them include exemptions for specific tracks and periods;
  b) On innovative mobility solutions like ITS and zero emission transport and also within cycling, logistics and shipping (Germany, Sweden, Scotland, The Netherlands and Norway);
  c) Some countries have specific national platforms to stimulate innovative mobility like NPM (National Platform Future of Mobility) in Germany and ‘Krachtenbundeling Smart Mobility’ in The Netherlands.