Challenges and opportunities in the Ministry of Transport's research & development program

Zeev Shadmi
Research & ITS Program Manager
Chief Scientist Department
Ministry of Transport and Road Safety

Thematic Challenges for the 2016 – 2017 R&D Program

1. Traffic management and control to improve traffic flow and safety
2. Improve mobility and accessibility in all modes of transportation
3. Intelligent transportation systems (ITS) and technologies
4. sustainable transportation energy efficiency and environmental impacts

Cooperative ITS

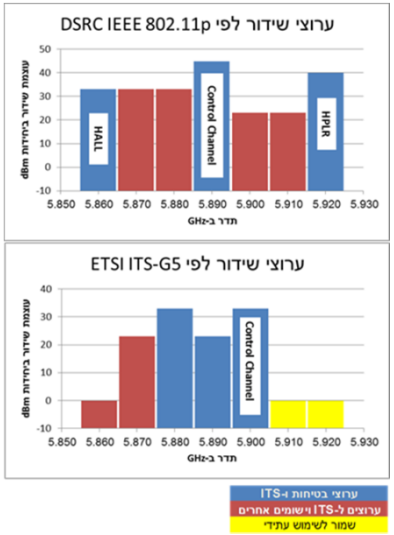
ITS that communicates and shares information between ITS stations

ETSI TS 102 637-1 Basic Set of Applications

DSRC 5.9 GHz

ETSI ES 202 663 ITS-G5

(IEEE 802.11p)



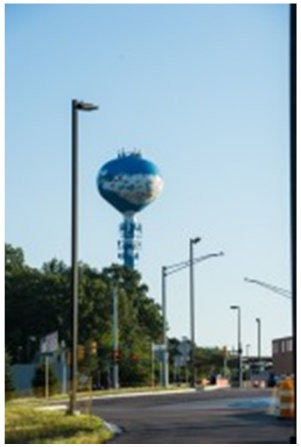
- Regulate DSRC 5.9 GHz
- Minimum set of Standards
- Establish Communication Safety mechanism

Invitation for demonstration projects W/Partner cities

Autonomous Vehicles

- Willingness of MOT to engage in AV research and demonstration projects
- Technology R&D, but also Societal impact and policy implications
- Close relationship with Mobility as a Service, Ride sharing, Car sharing
- Proving ground in Israel – “Sterile” or “open”

- City

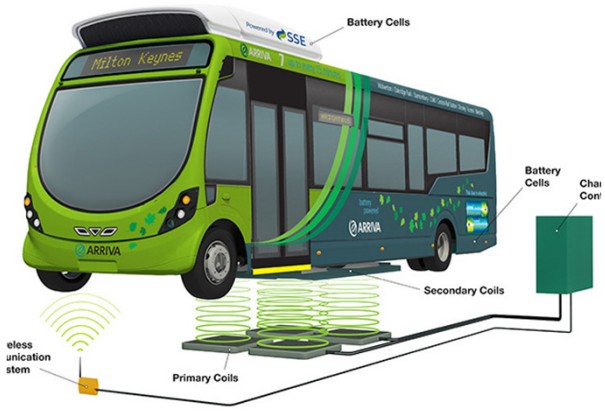


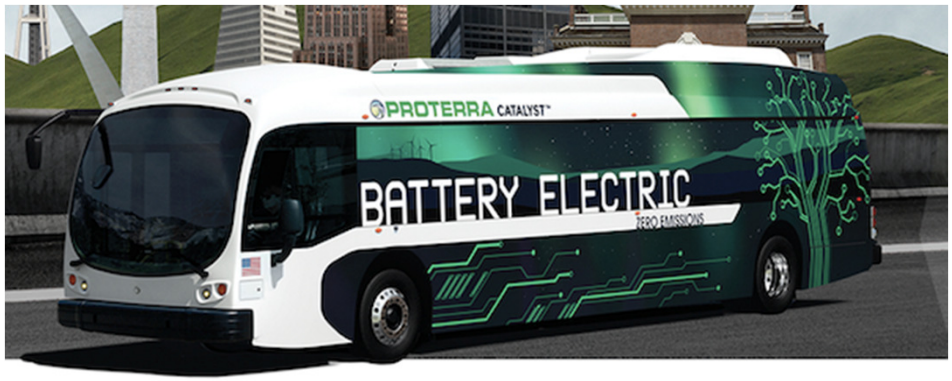
MaaS - Mobility as a Service

- New mode of mobility: ride sharing, car sharing, transit on demand
- Societal impacts:
  Ownership of cars
  Urban environment
- Economic impacts:
  Role of “traditional” transit operators and taxies
  OEMs (and Google) as mobility service providers
- Policy implications

Electric Vehicles

- Very close to full scale marketing, but still depend on government action
- Special interest in public transit





Forthcoming Call for R&D Proposals

"Smart" Transport systems: develop and demonstrate

1. "intelligent transportation" solutions, including flexible public transit, Personal transit, and Car / Ride Sharing
2. Solutions to improve traffic flow and reduced congestion based on V2X communication
3. Sustainable mobility and accessibility in city centers, low-emission zones, employment centers, campuses

“Smart Transportation” Eligibility

- Academic research institutes
- Industry entrepreneurs should join forces with academic research institutes
- Regional Research and Development Centers
- Non-Government Dedicated R&D Institutes

Up to 2 millions IS for each project
100% finance

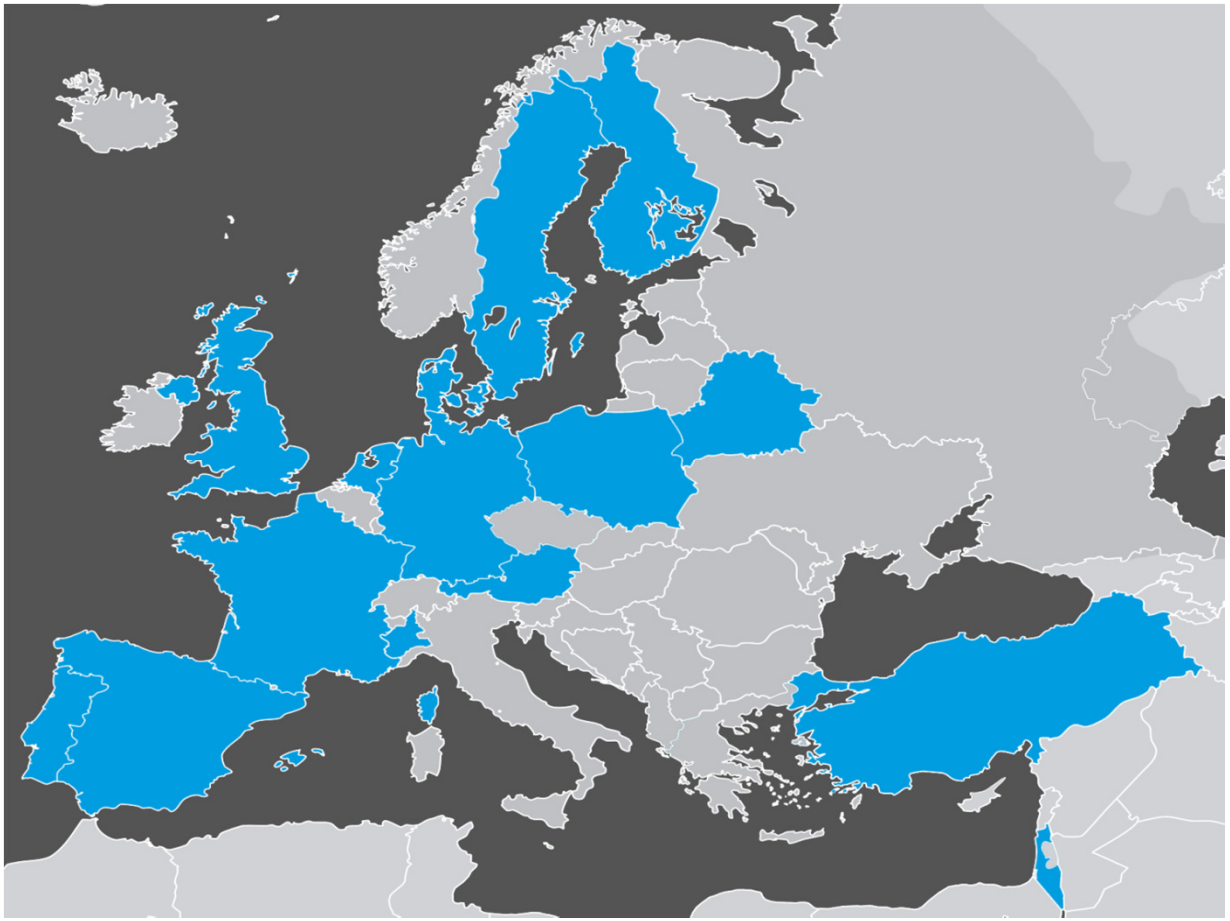
EME - Electro Mobility Europe

Combined contributions 20 M€ + EU 10 M€

- Accelerate time to market for electric mobility in Europe's urban transport systems
- Provide tangible and practical guidance to decision makers
- Support industry and the service sector to provide suitable and feasible solutions for electric mobility

- Eligibility: at least 2 participating countries/regions
- Expected call publication: Nov/Dec 2016

Electro Mobility Europe
Geographical coverage



15 countries

- Austria
- Belarus
- Denmark
- Finland
- France
- Germany
- Israel
- Italy
- The Netherlands
- Poland
- Spain
- Sweden
- Turkey
- United Kingdom

4 regions

- Baden-Württemberg
- Catalonia
- Nord-pas de Calais
- Piedmont

USA – Israel bi-national R&D program for advanced transportation

- MOU between USA DOT and Israeli MOT
- 16 key thematic areas relevant to advanced, efficient and safe transportation

Two tracks

(1) Academic: BSF - Bi-national USA Israel Science Foundation

(2) Industry: BIRD - Bi-national USA Israel Industrial Research and Development foundation

Topics of Interest[1]

Technology orientation

- Sensors, computer vision, Sensors fusion;
- Cognition: Machine learning and artificial intelligence;
- Communication safety for connected V2X and Cyber security;

Mobility services orientation

- Impact of autonomous vehicle technologies on the transportation landscape;
- Scenarios of mobility services supply and demand.

1 To be negotiated

Questions, Suggestions

Zeev Shadmi

shadmiz@mot.gov.il

02-6663390