



CONNECTING CULTURES
ENABLING ECONOMIES

6th to 10th October 2019

دائرة النقل
DEPARTMENT OF TRANSPORT



UNITED ARAB EMIRATES
MINISTRY OF INFRASTRUCTURE
DEVELOPMENT



الإمارات العربية المتحدة
وزارة تطوير البنية التحتية

BENCHMARK STUDY

NEW MOBILITY & ROAD INFRASTRUCTURE

2019

CONDUCTED
BY



BACKGROUND

Signing the Strategic Sector Contract "Industry for Construction", including Routes de France

To adapt roads to new mobility uses and prepare the roads of tomorrow

Routes de France, ERF, FNTP & FIEC launched a benchmark study in March 2019

OBJECTIVES

Imagine

Imagine the evolution of mobility in 2030 with all stakeholders in order to reach consensus or identify disagreements or conflicts on major changes in 2030

Raise

Raise their expectations regarding infrastructure in the future at territorial and regional scales that are far from homogeneous

Prefigure

Prefigure new forms of partnership and alliances (ecosystem change)

Contact all stakeholders: road authorities, ministries, federations and companies, research centres

By a questionnaire

On different items such as:

Expected changes of the road regarding new mobility

Development of CAVs

Deployment of electromobility

Sustainability issues

Changes in usages and service needs

Effectiveness of road infrastructure management

METHODOLOGY

WHICH
COUNTRIES?



01

Road & Electromobility: mainly a European priority with national / EU plans for electromobility, awareness of the need for an adapted infrastructure

02

Road & CAVs: mobility widely studied, many pilot projects and experimental legislation adopted

03

Road & Digitalisation: adaptation of the road to the technical possibilities of V2X technology and the 5G network

04

Road & Sustainable issues: fostering soft and urban mobility - many climate objectives highlighted by participants

FIRST OUTCOMES

FIRST OUTCOMES



Expected changes in mobility usage: flexible and multimodal mobility is expected, where the road will remain predominant and should allow the coexistence of many uses and serve as a multi-platform



Changes in the services provided by the infrastructure: performing several functions energy supplier for electric vehicles, connected for autonomous vehicles, and service provider (MaaS, 5G) for users



Financing modes / Business models: public funding will continue to play a strong role, with a more or less shared application of the "user-pays" principle and the revenue potential represented by the data



Ensuring equal access to mobility: transport on demand (ToD), Mobility as a service (MaaS) and automated driving would provide an efficient solution, especially in rural areas

IN SHORT

- The expectation towards the role of road infrastructure will rise in general:
- Road infrastructure will have to ensure
 - **Intelligent**
 - **Customized**
 - **Adaptable**
 - **Safe**
 - **Green transportation modes**

FIRST OUTCOMES

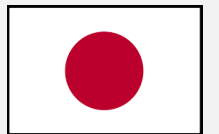


EUROPE

- Concentration of interurban network mostly
- Main researches on EVs on short-term
- On medium/long term, expectations about the slow integration of AVs
- Great need to digitalise infrastructure
- Northern Europe looks more advanced
- New mobility is the opportunity to decarbonise transport
- Report on the high costs of maintenance of road infrastructure

ASIA

- Great need for infrastructure
- Policy in defining technical standards, is moving ahead more quickly than it is in Europe
- **Specifics for China:** Not fully equipped with road infrastructure yet and can thus build with the opportunity to integrate aspects that contribute to the development of connected, autonomous and carbon-free mobility



FIRST OUTCOMES

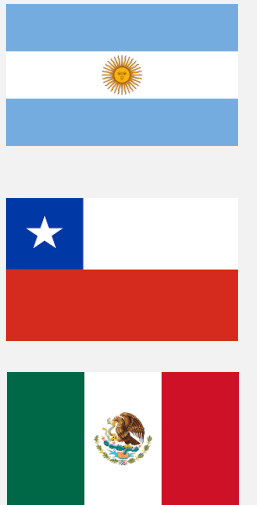
NORTH AMERICA

- Already equipped with transport infrastructure
- Encountering problems of maintenance and optimization
- Moving more slowly in defining technical standards than in Asian regions
- Larger countries with low density (e.g. Canada) will find it impossible to ensure equal deployment of connected and autonomous mobility



SOUTH AMERICA

- Great need for infrastructure
- Does currently not have the level of infrastructure connectivity required to support new mobility
- AVs are not a short-term reality
- South America is building without integrating new technologies directly



WHAT ABOUT FRANCE ?

IN THE BENCHMARK STUDY

- France's European neighbours share the same stakes on the rise of new mobility
- Northern Europe seems more advanced on electromobility and AVs technology
- The UK situation is the closest to the French one (great need for loading infrastructure, modernization and maintenance of the existing network, adaptation and equal access to new mobility for all areas)

NATIONAL INITIATIVES

- France launched a national strategy on CAVs in 2018
- France voted a new “Mobility Orientation Act”:
 - ✓ Develop 100,000 electric vehicle charging points by 2022
 - ✓ Focus financial means to the maintenance of the existing road infrastructure network
 - ✓ Consider the raise of new mobility and the need to provide all modes of transportation in all areas (urban / peri urban / rural)

NEXT STEPS

- Further investigations
- A full publication will take place in 2020
- New stakeholders will be consulted (energy and telecommunications sectors)
- Other countries will be approached



THANK YOU FOR YOUR
ATTENTION !