

# Smart Mobility perspectives: added-value services, integrating both technologies and environmental/societal requirements

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# MOBILITY = a major transformation

- **Technological disruption** with electrification & the evolution of the energy mix
- **Digital disruption** with connected, intelligent, autonomous vehicle
- **Societal disruption** with new mobility services

*"With the ecological transition, the development of electric and autonomous vehicles and the intensification of international competition, the automotive industry is facing a historic transformation"*

Jean-Dominique SENARD

Chairman of the board of directors – Renault Group



# Tomorrow will be MOBILE

Urban growth, environmental and public health challenges, population ageing, new mobility, changes in behaviors, digital revolution... **The mobility of tomorrow will be:**

- **CLEANER, SUSTAINABLE**
- **SAFER, AUTONOMOUS & CONNECTED**
- **INCLUSIVE, SHARED**

Mobility's revolution is a collaborative challenge. To face the many technical, scientific and social issues, actors needs to:

- **work together**
- **make use of all the skills found in the ecosystem**



# NextMove: European Automotive & Mobilities Cluster

- Which brings together a **unique network**: manufacturers, SMEs, start-ups, public institutions, research and higher education institutions, local authorities (+ 600 members)
- Based in the scientifically and technologically **advanced regions** of Greater Paris and Normandy (25% jobs in the automotive industry upstream in France)
- Where solutions are **invented, developed, tested** and **industrialised** to meet the mobility challenges of the future.



**« FRENCH MOBILITY VALLEY »**

Become the leading Automotive & Mobility ecosystem in Europe along the entire value chain

# Smart Mobility Solutions

Focus on 3 main trends:

- Connected and Autonomous Mobility
- Soft/Active Mobility
- Urban Logistics and last mile delivery



# Connected and Autonomous Mobility

## Autonomous, shared and collaborative mobility

*For an inclusive, efficient, user friendly and sustainable mobility*

- ⇒ Connect peri-urban and urban zones (commuters)
- ⇒ Flexible, personalized and accessible services: transport “on demand”
- ⇒ Extended services (in time and/or in space)
- ⇒ Improved safety and comfort



*Rouen Normandy Autonomous Lab projet*



*TORNADO project*



*MILLA-ISFM project*



# Connected and Autonomous Mobility

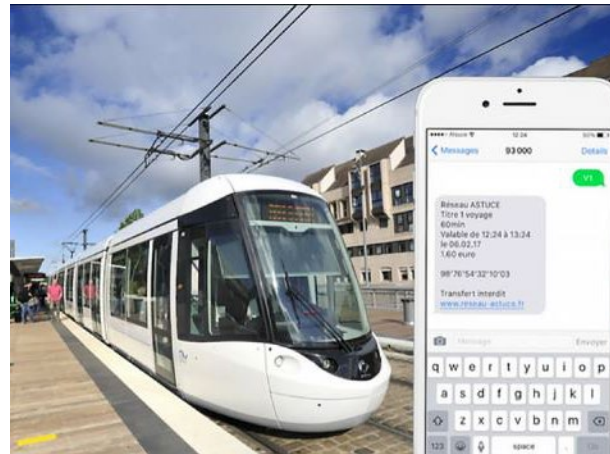
## Smart Services

*For an improved mobility experience*

- ⇒ Vehicle connectivity: V2X, 5G, Cybersecurity
- ⇒ Smart Public Transportation solutions
- ⇒ Mobility as a Service – Seamless mobility
- ⇒ Data management



*5G OpenRoad project*



*ATSUKE: Smart ticketing service*



*Betterway: Mobility Credit Card*



# Soft/Active Mobility

## New modes of transportation / Mobility services

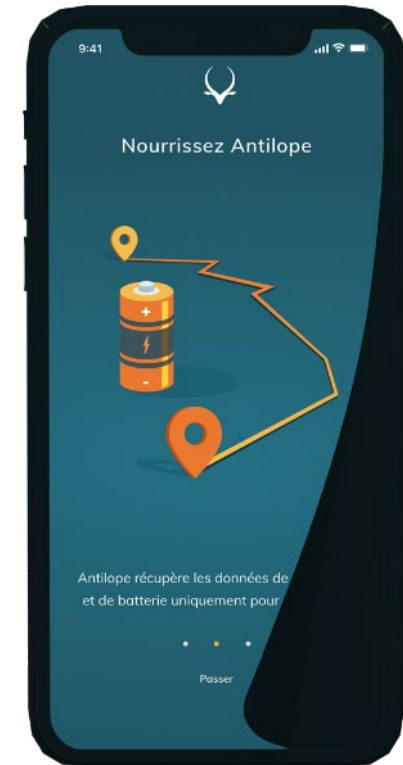
- ⇒ Micro-mobility: e-2-wheelers, e-bikes, e-scooters
- ⇒ Shared-mobility
- ⇒ Electromobility
- ⇒ Smart Grid



*CITYSCOOT: shared electric 2 wheelers*



*ZOOV: shared e-bikes*



*Antilope: electric consumption prediction*



# Urban Logistics and last-mile delivery

## Challenges of sustainable logistics

- ⇒ Regulatory restrictions and requirements
- ⇒ Resource management and consumption
- ⇒ Responsible solutions that meet social and societal expectations (Logistics as a Service)



*K-Ryole: innovative urban delivery system*



*TwinswHeel: Collaborative and autonomous droid for logistics*

# Conclusions

- A major transformation of Mobility
- Smart mobility will depend on many complementary skills
- Smart mobility needs other “smart” initiatives: smart city, smart infrastructure, smart grid, smart data...
- Collaboration is the answer to tackle the challenges of smart mobility



# Thanks for your attention !

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