VIENNA 2018 TRA TRANSPORT RESEARCH ARENA

A digital era for transport

solutions for society, economy and environment

Infrastructure as a Service

Guillaume GROLLEAU, SER – FRANCE
LACROIX City

Hosted and organised by:

Austrian Ministry for Transport, Innovation and Technology

AIT TOMORROW TODAY

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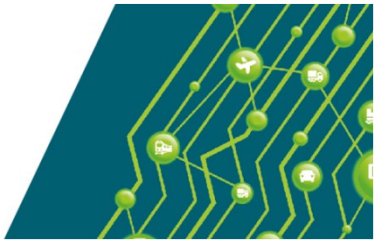
Infrastructure as a Service

A need for New **mobilities**



URBANIZATION AND ECONOMIC GROWTH LEAD TO TRAFFIC CONGESTION

DETERIORATION OF TRAFFIC

INCREASE IN POLLUTION AND STRESS LEVELS

REDUCED ATTRACTIVENESS

KEY FIGURES

50%

OF GREENHOUSE GAS EMISSIONS ARE DUE TO OUR EVERYDAY TRAVEL

(Source: PDU Nantes Métropole 2017)

+ 4% / year

INCREASE IN THE TURPE* IN THE YEARS TO COME

**public electricity network user tariff*

(Source: Commission de Régulation de l'Energie 2017)

28–44hrs / year

AVERAGE TIME EUROPEANS SPEND IN TRAFFIC JAMS

(Source: Le Panorama du Trafic INRIX 2015)

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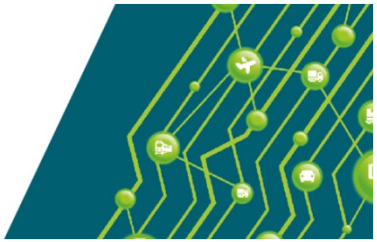
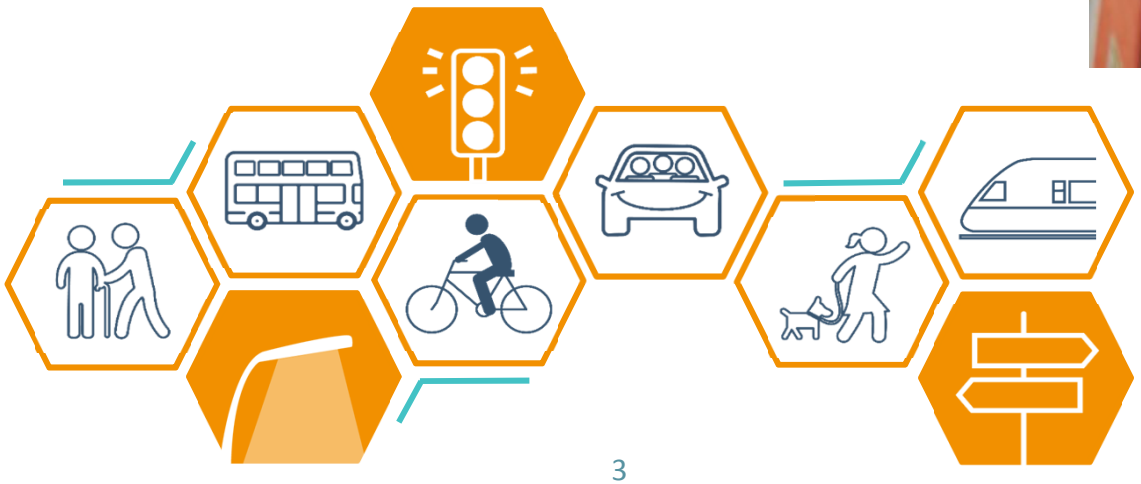
New Challenges to integrate New **mobilities**



- Multiples vulnerables (pedestrians, cycles…)
- New conceptions of mobility
- New solutions to share the road



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New Challenges to integrate New **technologies**

- Digitalization of the road:
  - V2X Connectivity
  - Cybersecurity
  - Artificial Intelligence
  - Video Analysis
  - Wifi & Bluetooth
  - Floating Car Data integration
  - eCall
  - Consumption Reduction
  - Cloud Solutions

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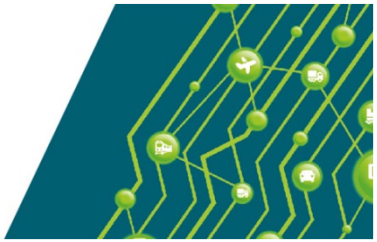
Choices versus time and challenges



- Multiples technologies :
  - New uses and not in line with standard road projects
  - Cross technologies vs Road Management Silots
  - Difficulty of choice => extra time before deployment

- No more time to resolve issues
  - Pollution
  - Congestions
  - Increase of Road Fatalities and Injuries

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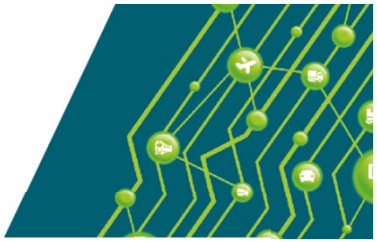
Back to basics



- **To Enhance Safety** Services
  - For all users !
- **To Enhance Orientation** Services
- **To Optimise** Flows

PROTECT FROM HAZARDS | **SECURE INVESTMENTS** | **ENHANCE DATA SECURITY**

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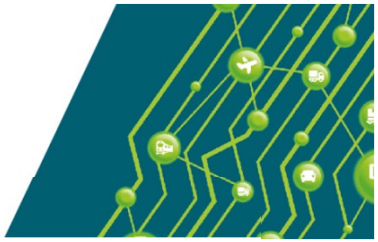

- **To Enhance Safety** Services
- **To Enhance Orientation** Services
  - For all users !
- **To Optimise** Flows

MANAGE AND REGULATE TRAFFIC

MANAGE INTELLIGENTLY AND SUPERVISE REMOTELY

SAVE ENERGY AND OPERATIONAL COSTS

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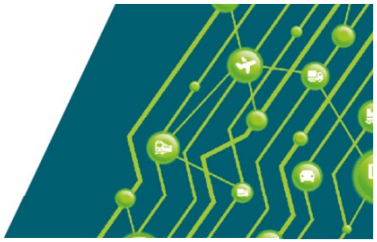

- **To Enhance Safety** Services
- **To Enhance Orientation** Services
- **To Optimise** Flows
  - …. Also for all users !

CREATE INTERMODAL MEANS OF TRANSPORT

GUIDE USERS

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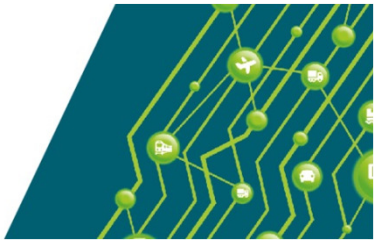
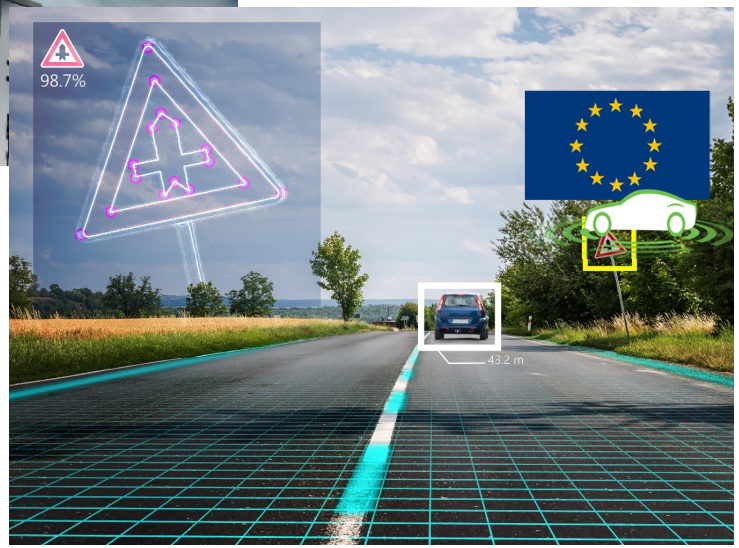
Evolution of Safety Services





- New statics signs
  - Able to help locating vehicles
- Passive safety solutions
  - The road that forgives
- New dynamic & connected signs
  - Day 1 services
- New Road marking products

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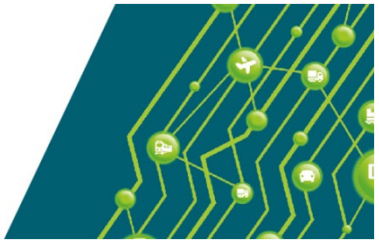
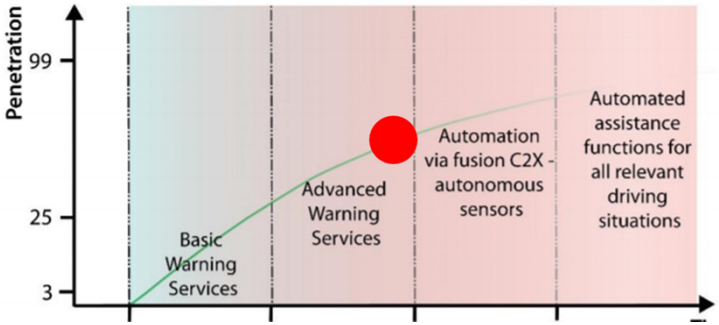
Evolution of Safety Services



- To ensure interoperability with connected vehicles

- To take advantages of Day 1 services
  - *Emergency brake light*
  - *Emergency vehicle approach*
  - *Stationary vehicle*
  - *Roadworks Warning*
  - *In Vehicle Signage*
  - *Signal Violation*
  - *GLOSA …*



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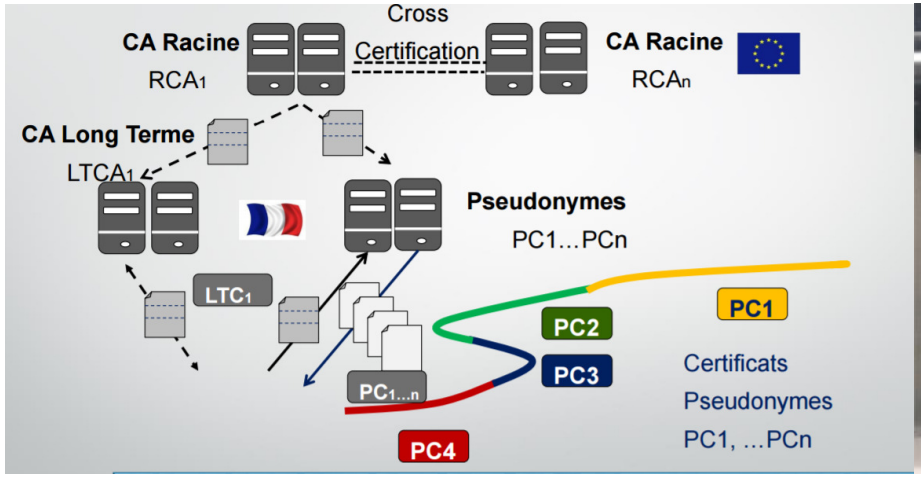
Evolution of Safety Services

- Cybersecurity as the next key functionnality of the Infrastructure



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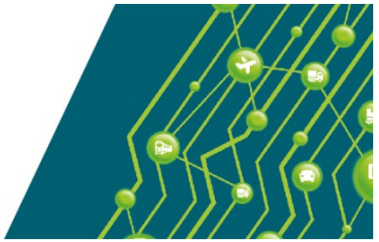
Evolution of Orientation Services



- Roadworks management
- Data collection from the field for a better information
- Qualified itineraries to connected vehicles
  - Do the drivers have to use their phones to balance the lack of information on the field ?

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Evolution of **Optimisation** Services

- Interurban regulation
- Traffic Light regulation
- New devices to ensure a better service with autonomous vehicles

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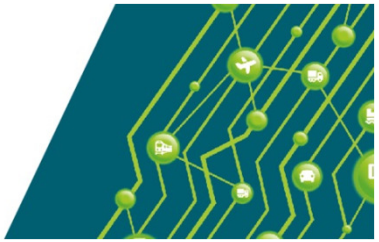
To facilitate the integration of technologies



- To save lifes, to reduce pollution and congestions
- To locate data into the EU
- To prevent from being dependent of Big Data Companies

- Solutions are here, they need early adopters

- The Industry of the road is changing to integrate the digitalization of the information and being ready and reliable for years

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