European Commission

Horizon 2020
European Union funding
for Research & Innovation

"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [644657]".

AutoMat

Automotive Big Data Marketplace for Innovative Cross-Sectorial Vehicle Data Services

BigDataEurope and the Societal Challenge on Transport

Víctor Corral, Atos

TRIALOG

Atos

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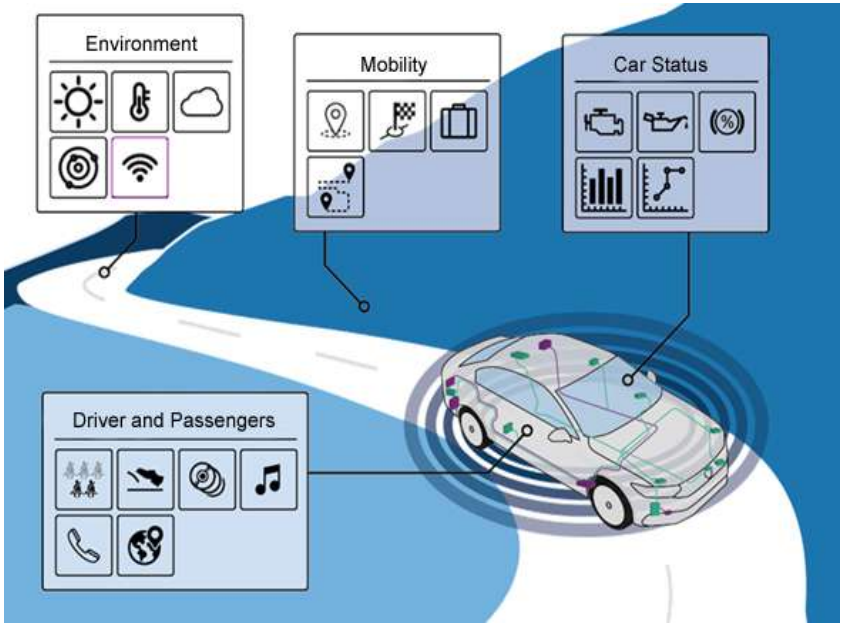
here

ATB

Vehicle Data Ecosystem

Car fleets capture the world‘s aspects



Millions of vehicles as “rolling sensors“ perceive the world in a comprehensive way

<Speaker>

Present Situation compared to AutoMat's Solution Approaches

Automotive industry has not built an open vehicle data marketplace yet

- Creation of an **open ecosystem** for provisioning of manufacturer independent vehicle data to **cross-sectorial service providers**.
- **Single point of data access** for service providers via the Marketplace

<Speaker>

Vehicle data is not provided in a brand-independent format

- Specification of the **Common Vehicle Information Model (CVIM)** data format that enables harmonized, generic and **brand-independent datasets**

Present Situation compared to AutoMat's Solution Approaches

Proprietary OEM solutions render business potentials uneconomical

- Negotiation with different OEMs/data suppliers/partners
- Individual interfaces to different proprietary systems
- Costs of realizing and providing services are too high

- Definition of **standardized and open interfaces** for unconstrained data access
- **Broad spectrum of collected data** due to different participating OEMs

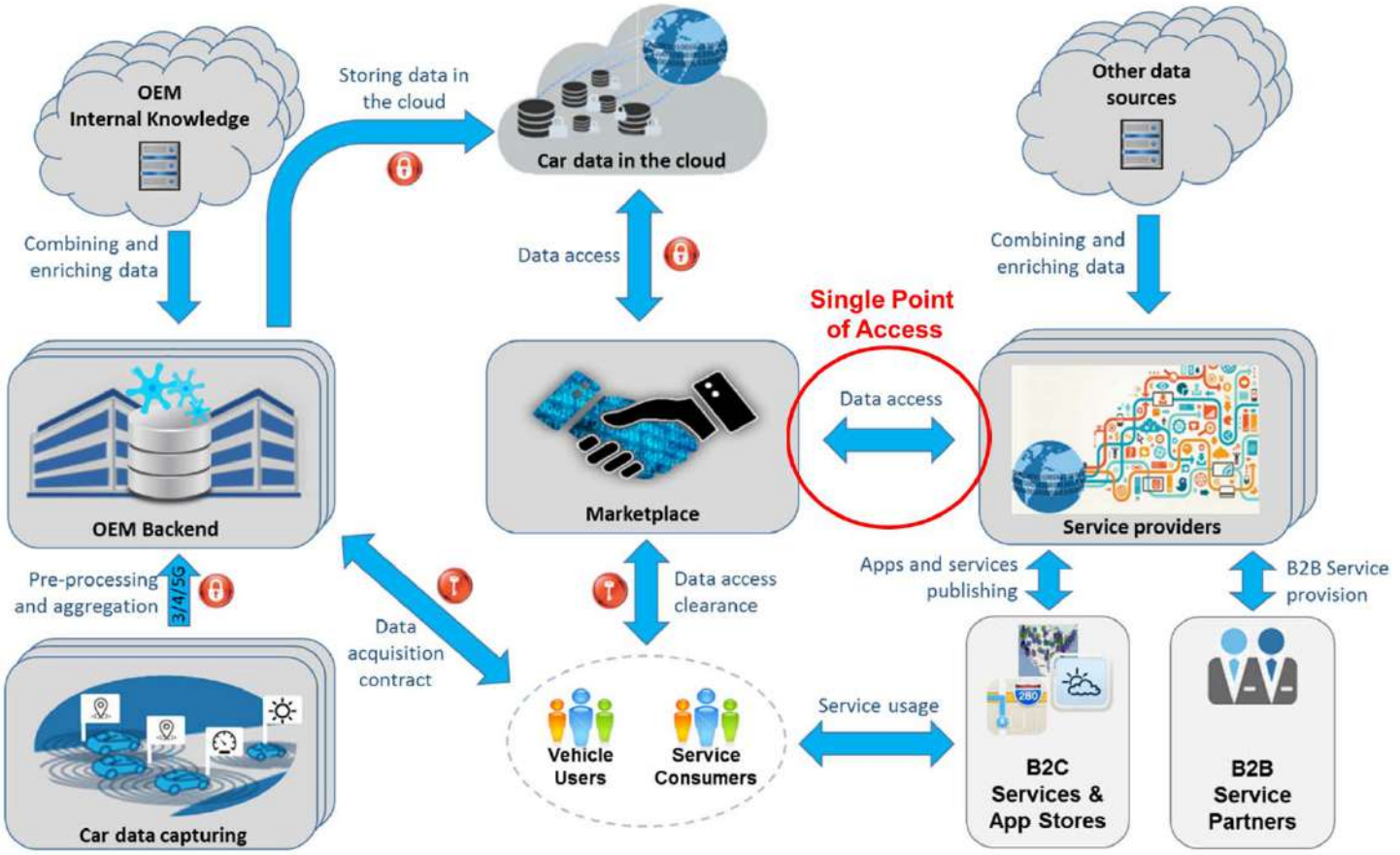
<Speaker>

Present Situation compared to AutoMat's Solution Approaches

No service can cover all costs of the value chain

- Development of a **win-win-based value-chain: B2B and B2C services**
- The vehicle data enables **new and innovative business ideas for many stakeholders**
- Great spectrum of vehicle data allows **new dimensions of services**
- Large amount of continuously aggregated data contains significant **Big Data business potential**

An Overview of the AutoMat Ecosystem



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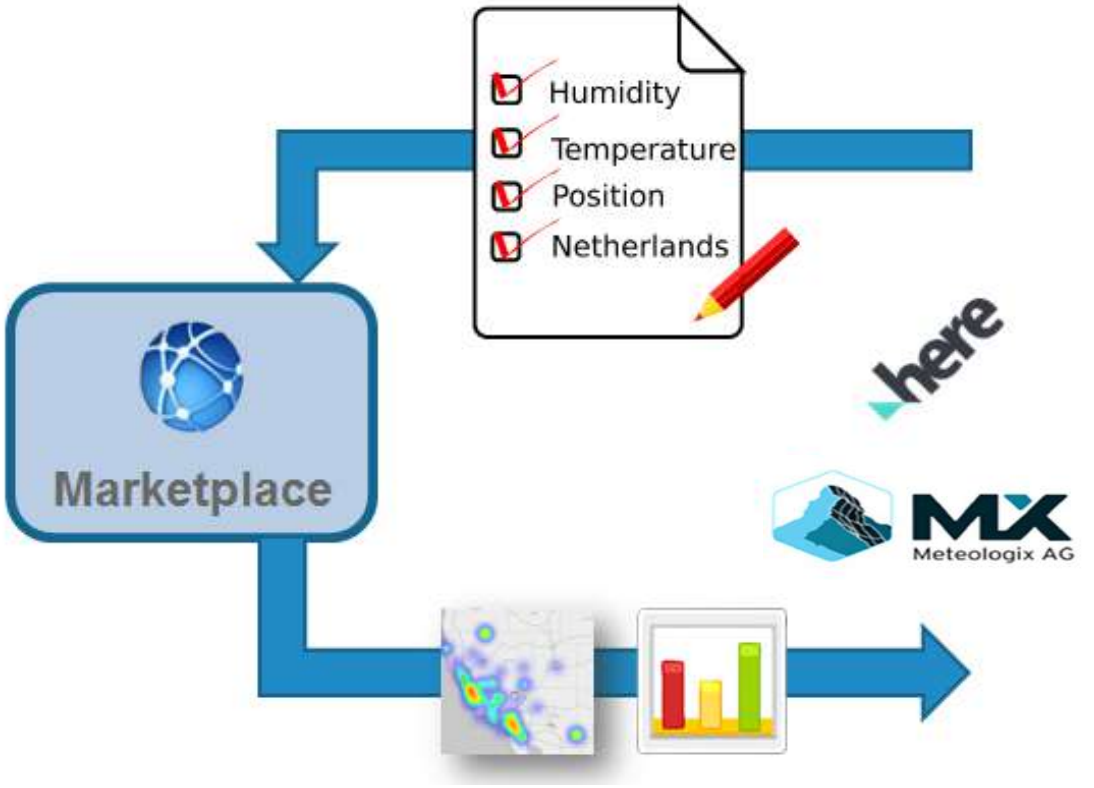
The Vehicle Big Data Marketplace

WANTED

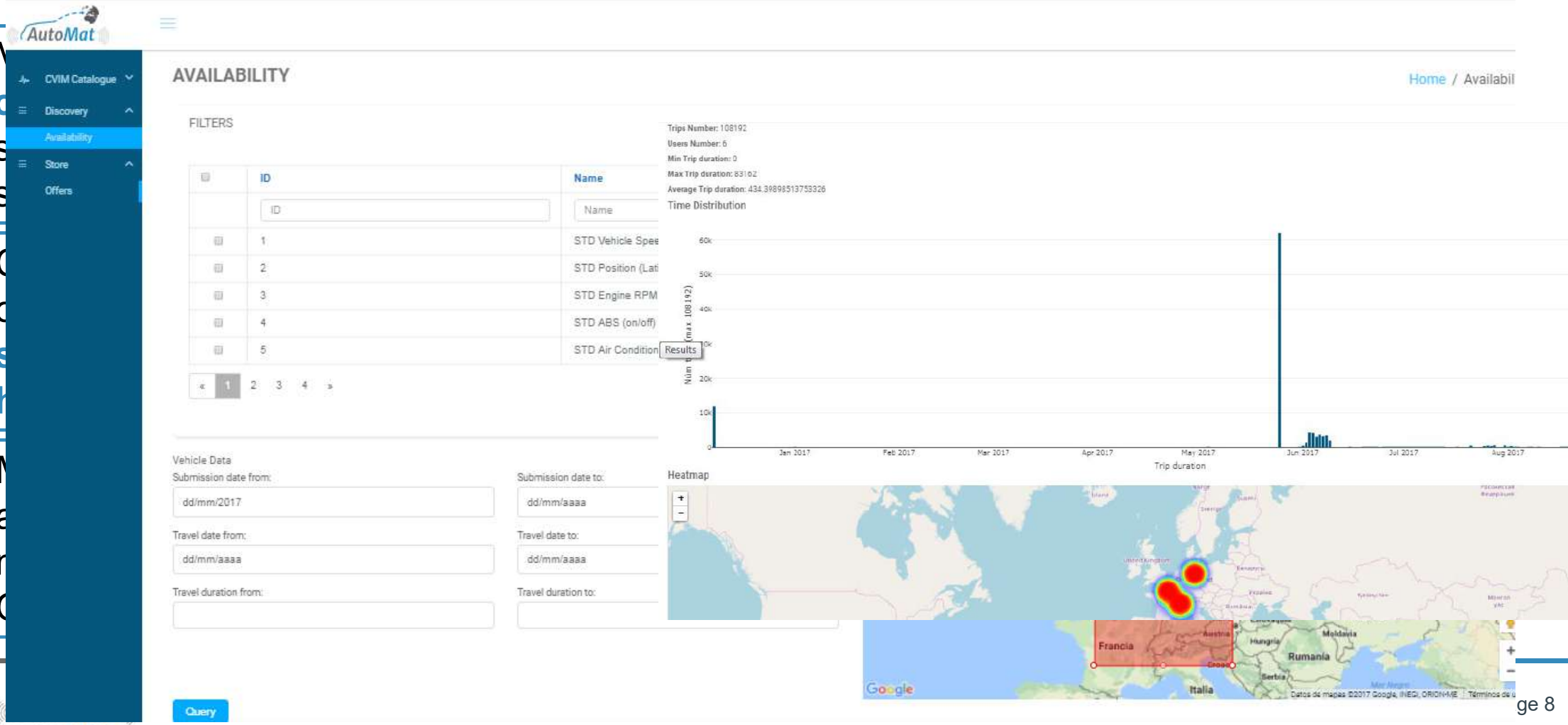
Drivers

Who provide:
- Temperature, humidity, position
- Freq > 1 value per hour
- Country: Netherlands

Limited to 5000 drivers



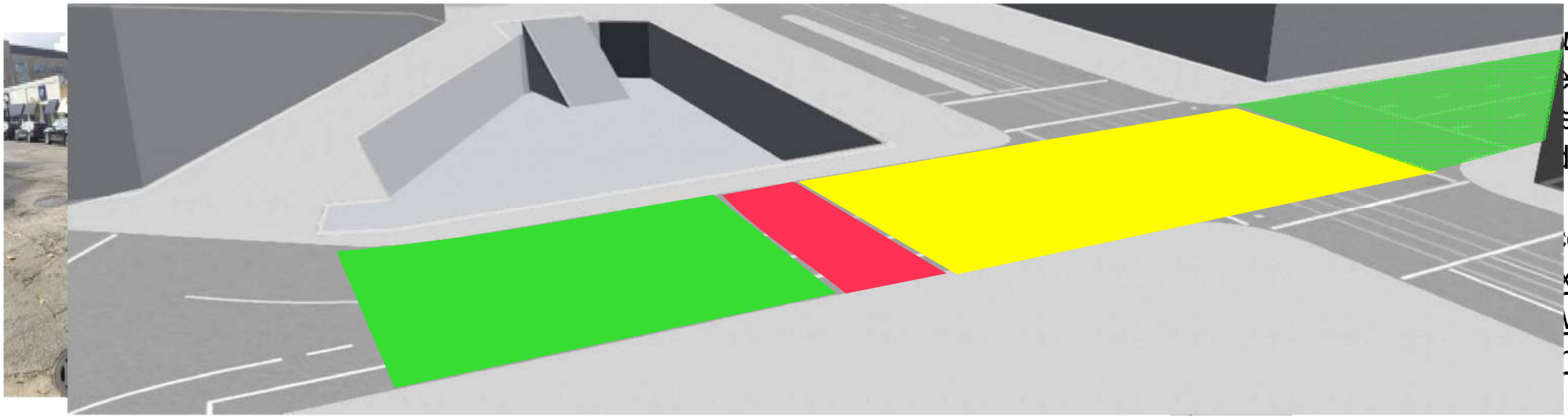
The Vehicle Big Data Marketplace



AutoMat Use Cases **Road Roughness by** here

What is it?

Another content layer on top of existing map that indicates road roughness (dips, bumps).



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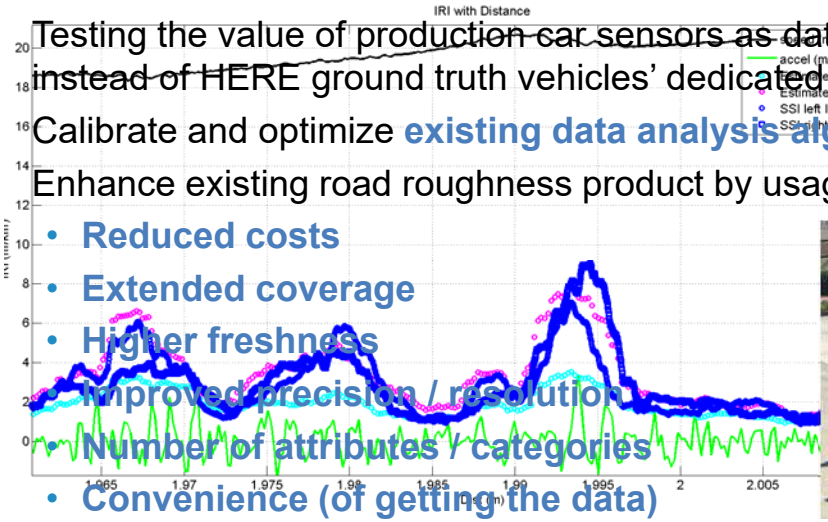
Target: Governments road maintenance authorities, Fleet and Automotive Market

AutoMat Use Cases: **Road Roughness by** here

Why Road Roughness using AutoMat vehicle data?

- Testing the value of production car sensors as data source instead of HERE ground truth vehicles' dedicated sensors
- Calibrate and optimize **existing data analysis algorithms**
- Enhance existing road roughness product by usage of AUTOMAT data
  - **Reduced costs**
  - **Extended coverage**
  - **Higher freshness**
  - **Improved precision / resolution**
  - **Number of attributes / categories**
  - **Convenience (of getting the data)**



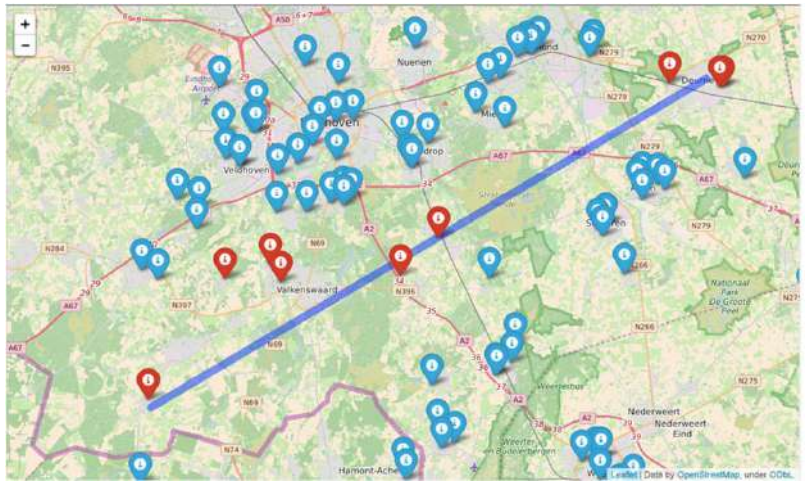
AutoMat Use Cases **Meterological data based Hyper Local Services by** Meteologix AG

What is it?

Weather API (fog):

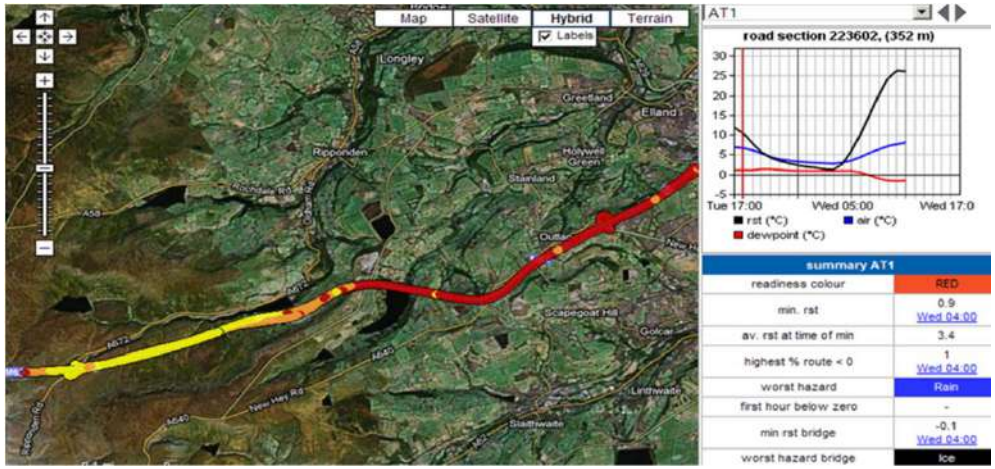
- Example of the track of a hail storm that caused a lot of damage.
- This storm was not detected by official weather stations due to the low spatial density.
- It was detected by consumer weather site (CWS) as a result of a much higher spatial density.

(blue line is track of storm) detected by NetAtmo CWS.



Route Based Forecasting model prototype:

- On top of the weather API we propose to build a prototype Route Based Forecast (RBF) model
- A route based forecast is a road weather forecast for every stretch of a road network



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Success factors

- **Ecosystem**
  - ✓ External access to vehicle data enables viral growth of services provided based on such data
  - ✓ Attractive and innovative services are created in a similar fashion to the mobile device app world
  - ✓ Linking vehicle data with data from other sectors enables higher quality content
- **Data usage rights**
  - ✓ The business with data usage rights enables return flows from service providers and content providers
- **User acceptance**
  - ✓ The vehicle owner has incentives to provide his vehicle‘s data
  - ✓ The owner / driver can fully control which data he provides to which Service Provider

<Speaker>

Thank you for your attention !

Víctor Javier Corral Franco
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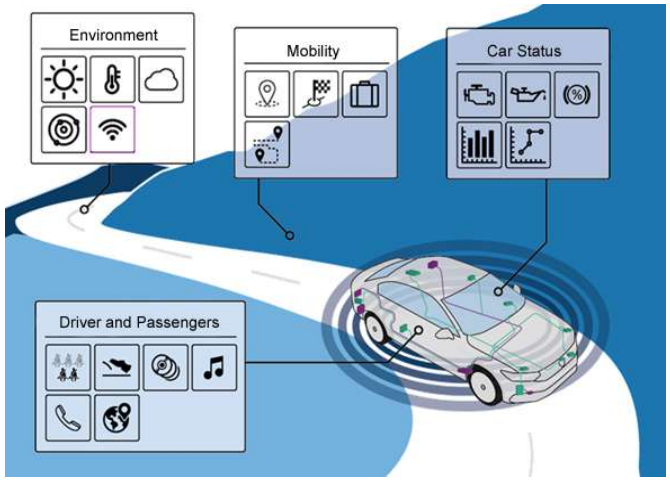
Transport Sector

European Commission
Horizon 2020
European Union funding
for Research & Innovation

<Speaker>

The vehicle as moving collection of sensors

- Vehicles move in its surroundings, perceiving various aspects (Environment, Mobility, Driver and Passengers, Vehicle Status) via on-board sensors
- Connected sensors in vehicles provide a mobile sensor network producing over 4000 signals per second per vehicle
- Number of on-board sensors is strongly increasing and thereby the amount of data useable in near future.



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