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Interreg Europe

European Union
European Regional
Development Fund

Improving urban mobility through self-driving vehicle

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The Interreg «MENTOR» project

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ITALIA SVIZZERA - ITALIE SUISSE - ITALIEN SCHWEIZ

MENTOR

Project duration: 29.11.2018 – 28.11.2021

Project budget: 1.164,75 € + 320.000 CHF

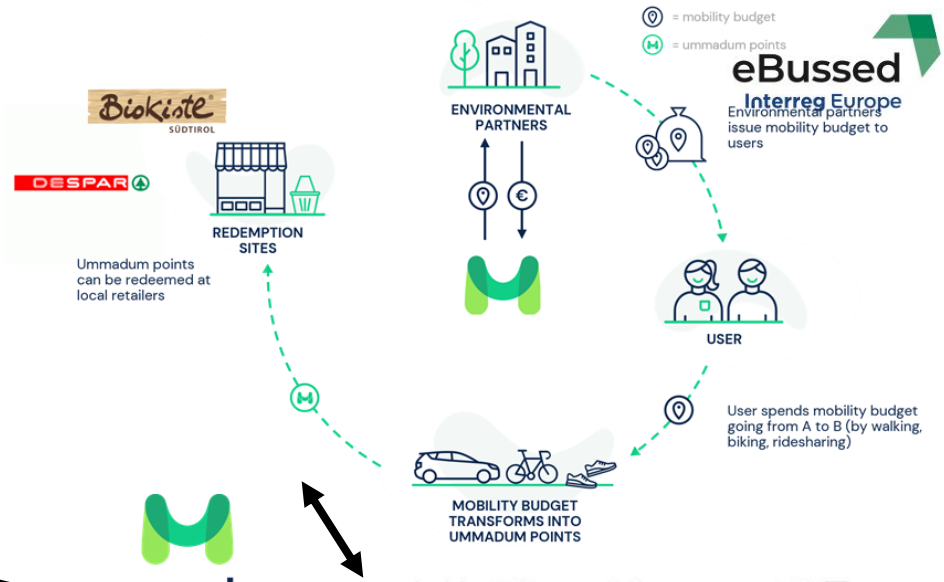
Goals

- Pilot **sharing mobility services** that are by design complementary with **public transportation**
- First local tests of comprehensive **MaaS** applications

Merano (I), ~ 40k inhabitants

Brig-Glis (CH), ~ 13k inhabitants


bike sharing
merano


= mobility budget
= ummadum points
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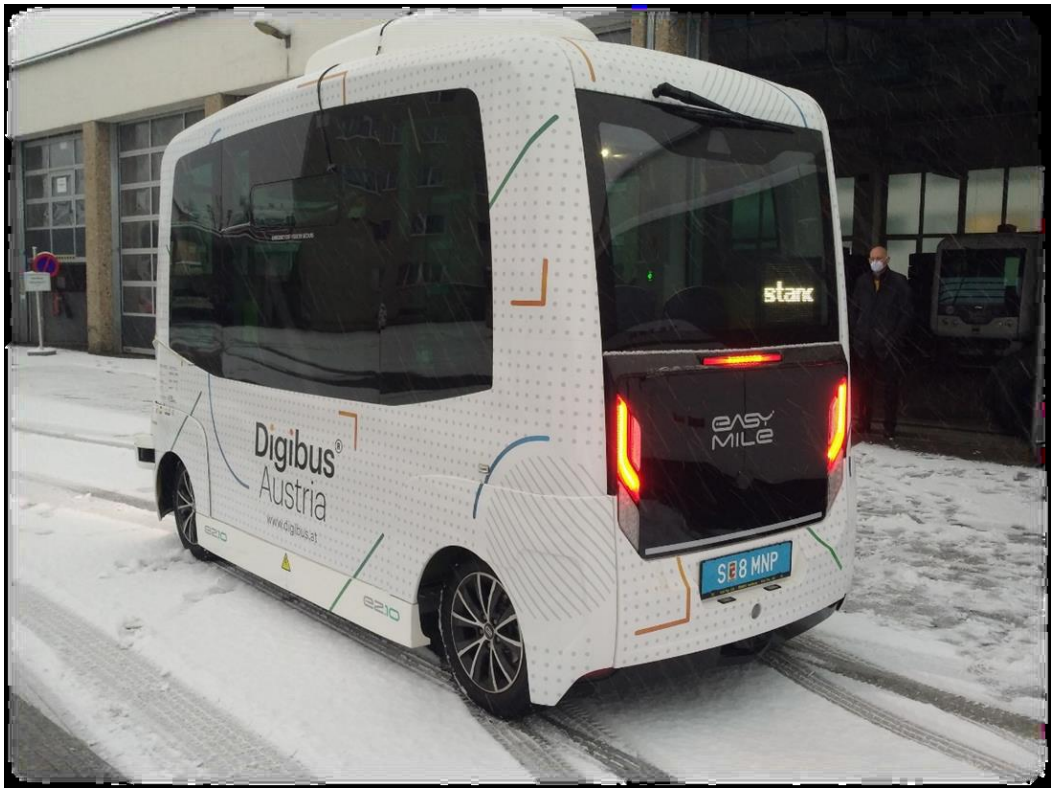
ENVIRONMENTAL PARTNERS
Environmental partners issue mobility budget to users
USER
User spends mobility budget going from A to B (by walking, biking, ridesharing)
MOBILITY BUDGET TRANSFORMS INTO UMMADUM POINTS
REDEMPTION SITES
Ummadum points can be redeemed at local retailers
BioKiste
SÜDTIROL
DESPAR

ummadum


alperia
NEOGY
www.sasabz.it/callbus 0471 706633
CALL
BUS


vodafone IT
13:29
66%
MERANO
BETA
46.484, 11.320
City Hotel Merano, BZ, Italy
Modifica
8 min
Leaflet | Map tiles: © OpenStreetMap, © CARTO
Opzione 2
1 hr, 17 min
11:04 - 12:21
39 Calorie
2 cambi
6
204
201
AA
mobility.meran.eu

Autonomous shuttle services: where are we?



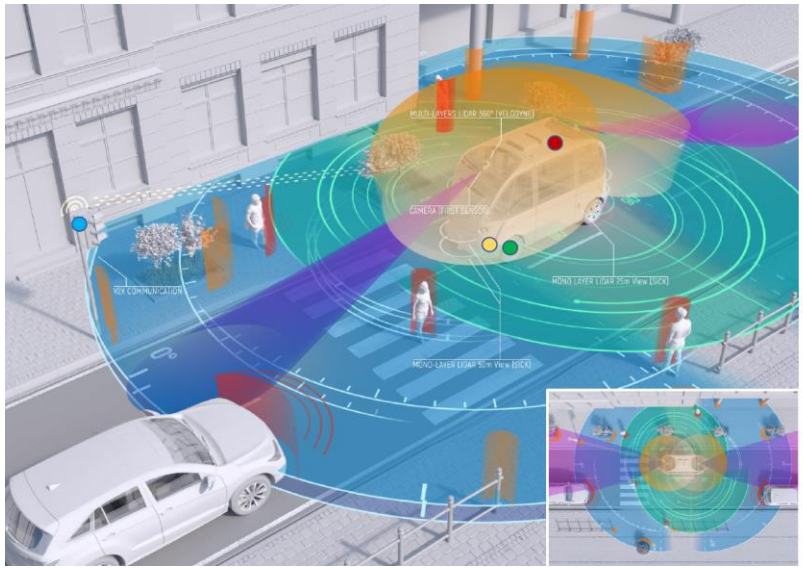
Source: Digibus project

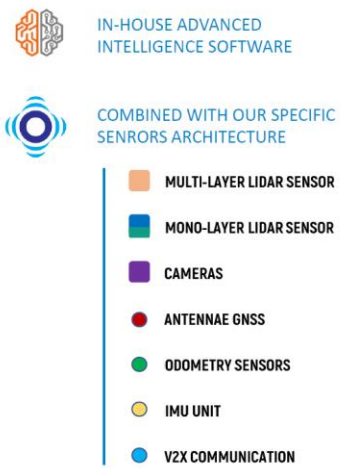
- Electric autonomous (SAE-4) shuttles, first / last mile services
- Several pilot demonstrations on-going to advance the technological state-of-art, increase user acceptance and find viable business models
- Current technological challenges: increase of ODD, complex use cases (V2X), on-demand functionality, remote control

Presentation of the good practice

Objectives of the pilot

- Check the **maturity of the technology** for «basic» first/last mile services in an alpine environment
- **Demonstrate** a possible **«on-demand» public transportation service** of the future
- Evaluate the **acceptance level** of local users of autonomous vehicle technologies / services





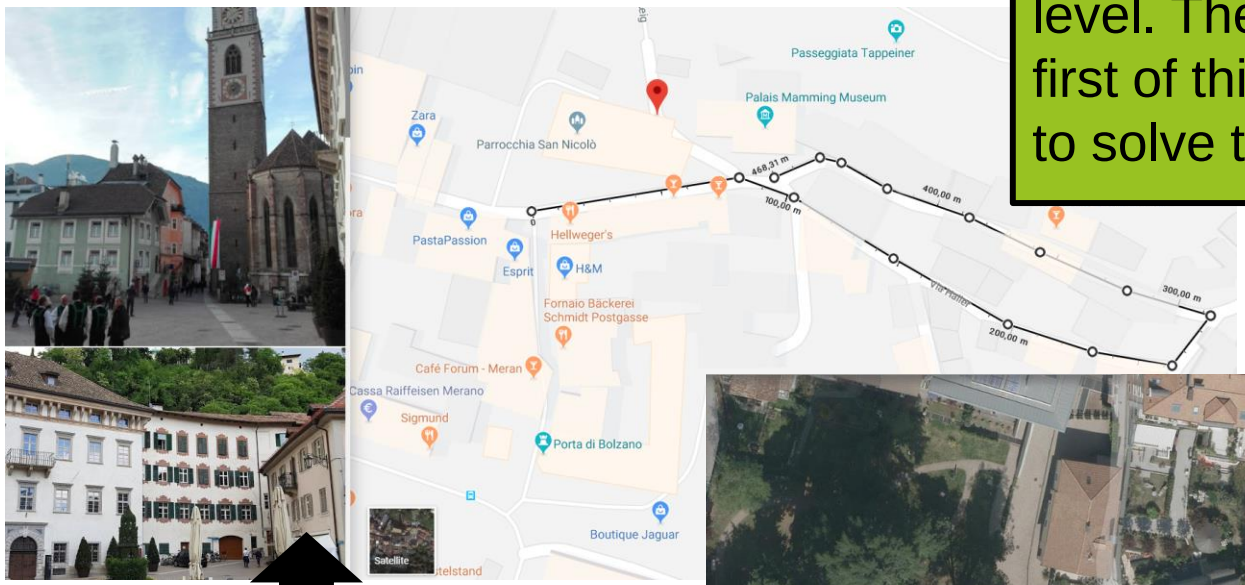
Supplier chosen for the demonstration:

- Navya (FRA)
- i-Mobility Garage (ITA)

Source: Navya

Route choice

At the time of the pilot, no legislative support at national level. The pilot execution (the first of this kind in Italy) helped to solve this gap



- Initial idea: longer test route, in mixed traffic
- Final choice: much smaller route, street closed for the demonstration

Additional organizational aspects

Vehicle charging and secure parking: at a depot of a local PTO (charging at night). To be highlighted: transport of shuttle through a tow truck before and after the daily service execution!

Route mapping: in order to ensure the proper functioning, the vehicle needs to "study" the route in advance. This is carried out through a **high-resolution location system** → need of installation of a GNSS antenna on a nearby roof to ensure spatial accuracy in the order of [cm].

Very difficult to complete these operations due to many onlookers on the circuit (including journalists)!

Pilot demonstration (KPIs)

Pilot demonstration (acceptance)

Interviews carried out before and after the test of the service

- 543 passengers (24.5% of the total passengers) + 220 “observing” people
- Main target group represented: > 50 years old (37%)
- Low trust level before the test: 45.1%
- Low trust level after the test: 5.1%

The pilot demonstration was fundamental to increase the trust towards the technology and new future mobility services, in particular by elderly people

Recommendations and next steps

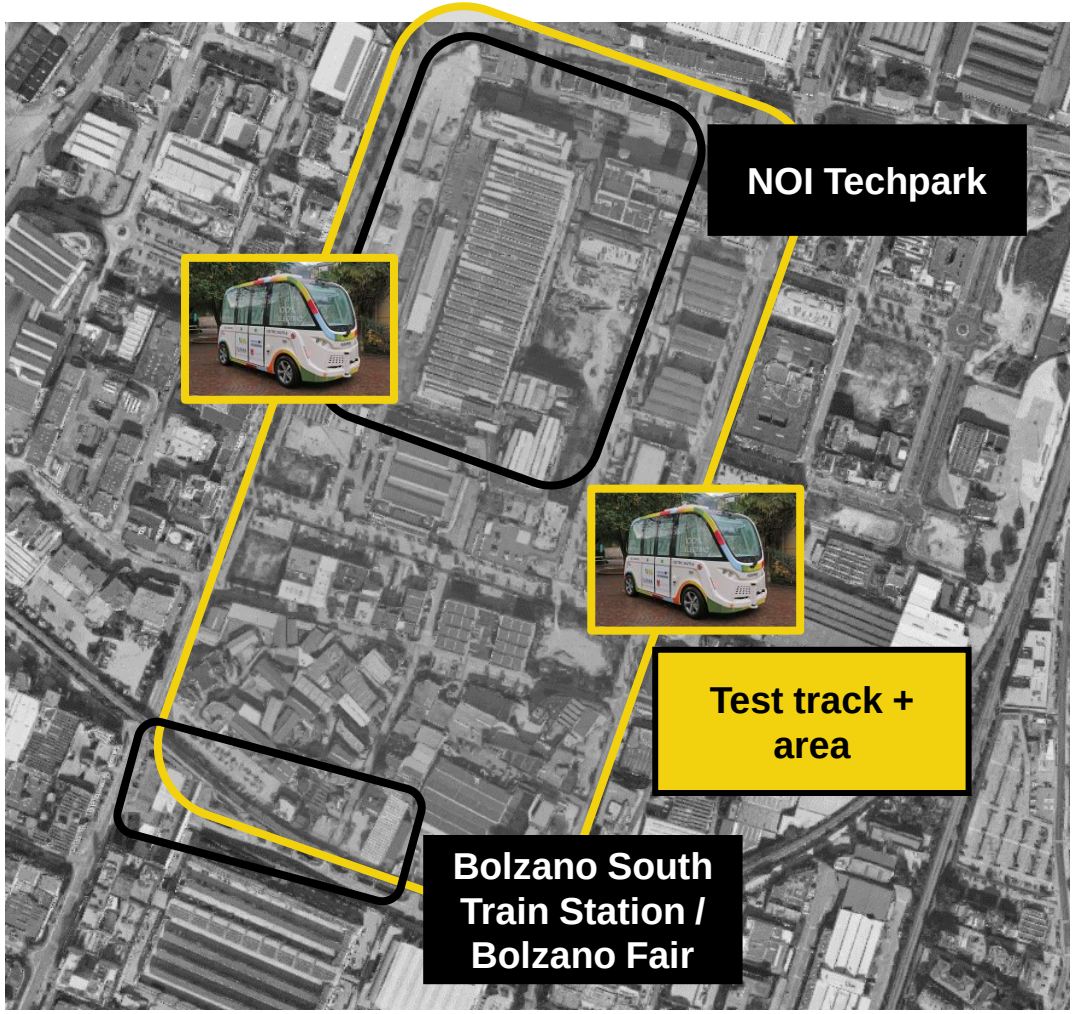
Lessons-learnt and recommendations for replication

- Autonomous shuttles are nearly **ready** to be used for very **specific and limited commercial mobility services**. The more challenging aspects are of **financial** and **organisational** nature. **Additional pilots** are needed in order to manage **more complex services** in challenging operating conditions

Once you plan a similar pilot, you should consider to:

- **clearly define and communicate the objectives of your trial**, and ensure to have the **right resources** to implement it. Our pilot had a cost of about 40 k€;
- **vehicle charging** is typically not an issue (could be carried at night), but ensure to have a **secure depot** near the test route – a cooperation with a PTO here is ideal;
- if necessary, activate and resolve all **legislative clarifications** in good time.
- be careful not to hinder **vehicle preparation activities** due to excessive **communication**!

Our next pilot project



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Thank you!

Questions welcome

Project smedia