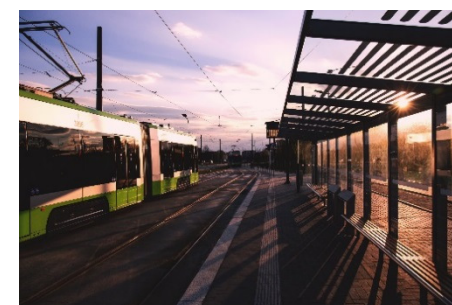


# Innovative Mobility Solutions: An Overview of Best Practice in Europe

## Smart Villages: A Common Perspective Through Different Visions

Courmayeur, Italy: 23 May 2019



# Agenda

- Introduction KCW
- Introduction of the Project ‘Cross-border mobility’
- Mobility and Digitalization
  - Digital Solutions (Example : E Ticketing)
  - Shared Mobility (Example: Carpooling, Autonomous Shuttles, On Demand Transport)
- Conclusions

# Introduction KCW



- We are the largest consulting firm for strategy and management consulting for public transport in Germany. We've been here since 1998.
- We provide interdisciplinary and independent advice on all organizational, economic and legal aspects of public transport.
- Our customers are municipalities, public authorities, transport associations and ministries on a national and international level.

# WP4 of the Cross-Border Project

## **Title:**

“Improvement of cross-border mobility and passenger flows –  
Innovative solutions for public authorities and transport operators”

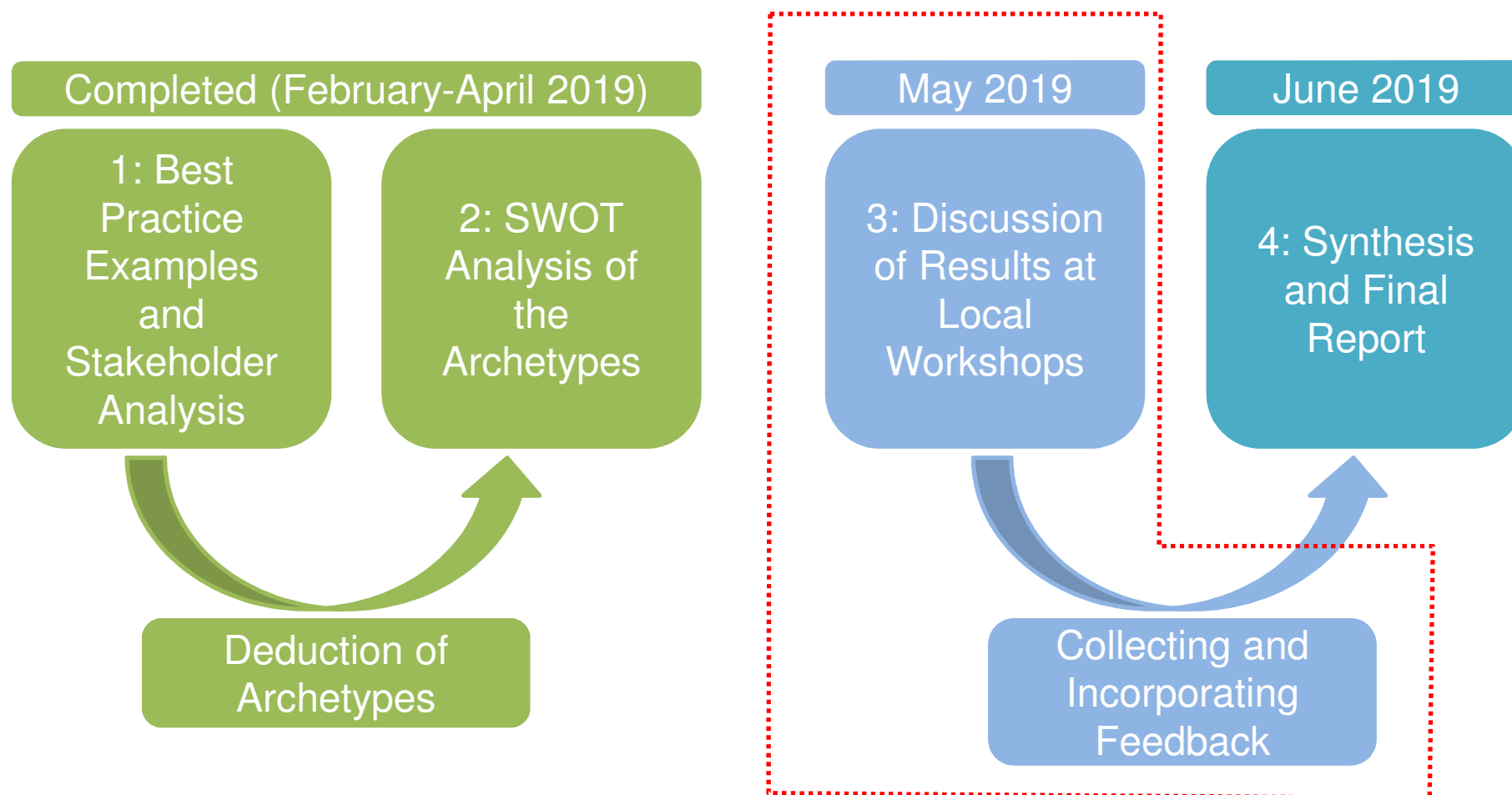
## **Project Duration:**

January 2019 - July 2019

## **Project Working Steps:**


1. Best Practice Examples and Stakeholder Analysis
2. Innovative Solutions (SWOT Analysis)
3. Test Run: Participation and Discussion in Workshops
4. Synthesis and Final Report


# Project Status - Where do we stand today?




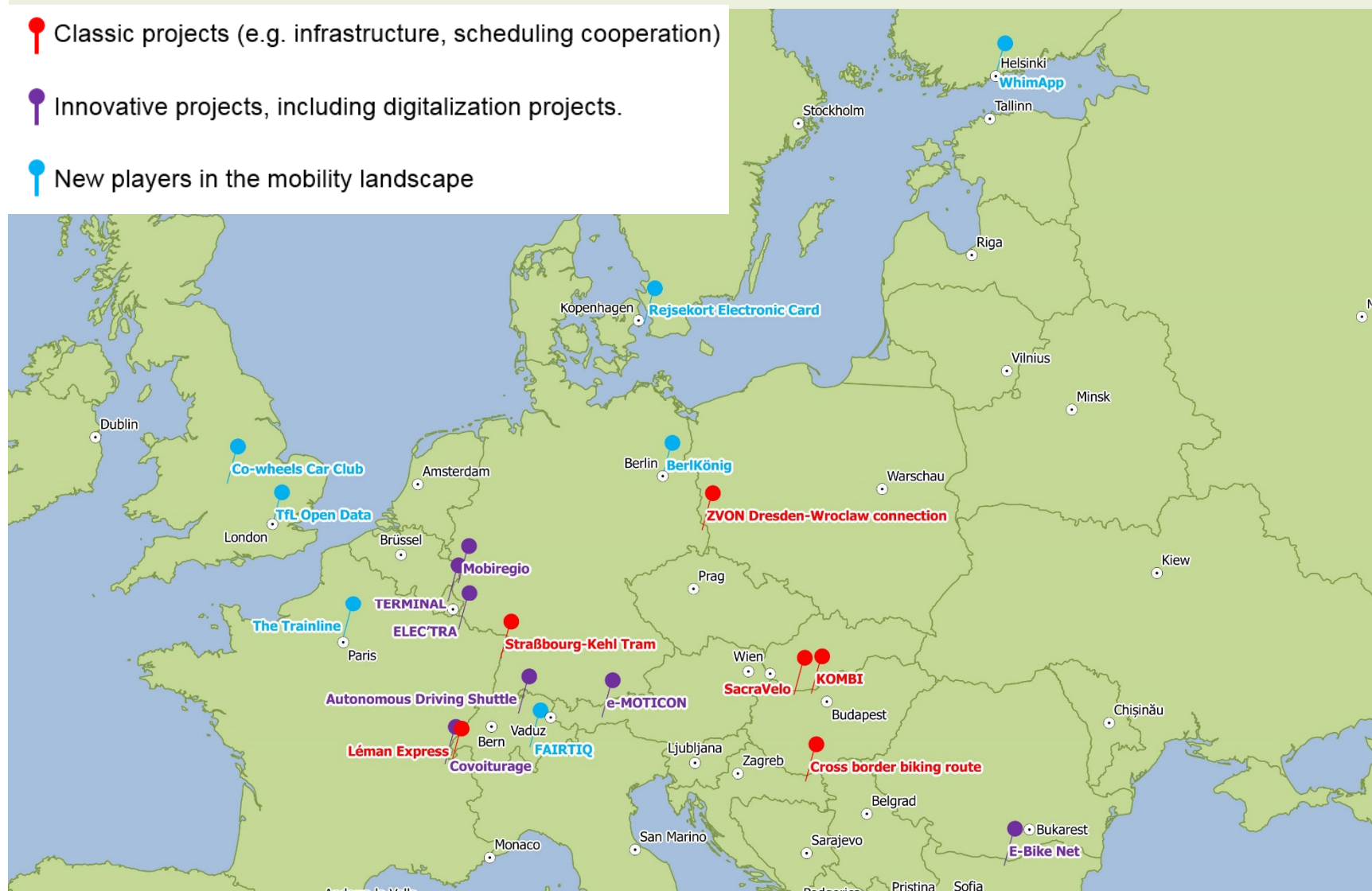


# Location of Best Practice Projects

 Classic projects (e.g. infrastructure, scheduling cooperation)

 Innovative projects, including digitalization projects.

 New players in the mobility landscape



# Cross-Border Mobility Archetypes

1. Physical Link
2. Physical Link +
3. Public Transport Cross-Border Cooperation
4. Experimental / Research Projects
5. Shared Mobility in Urban Areas
6. Shared Mobility in Rural Areas
7. Digital Solutions
8. Harmonizing Standards
9. Multimodal Hubs
10. Joint Ventures (Cross-border)

# Cross-Border Mobility Archetypes

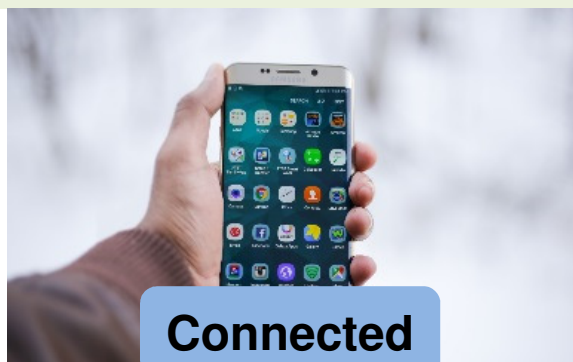
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- 6. Shared Mobility in Rural Areas**
- 7. Digital Solutions**
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10. Joint Ventures (Cross-border)



# Mobility and Digitalization



**Autonomous**



**Connected**



**Electric**



**Shared**

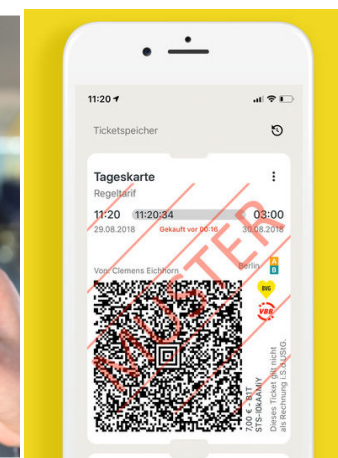
C: Image by Pexels from Pixabay

A: Image by Christian Mehlert, KCW

S: Image by Carlos Pernaleté Tua from Pexels

E: Image by KvLoon from Pixabay

# Example: Digitalization of Ticket Sales





# FAIRTIQ



Quelle: <https://www.datatrans.ch/en/know-how/news/detail/seamless-payment-innovation-purchasing-process/>

# TRAINLINE



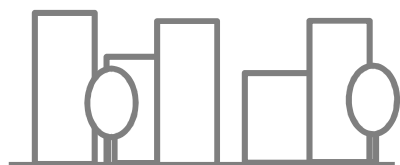
Quellen: [https://www.trainline.no/static\\_assets/uploads/trainline-tradedoubler-guide.pdf](https://www.trainline.no/static_assets/uploads/trainline-tradedoubler-guide.pdf); <http://wroclawuncut.com/2019/04/02/uncut-travel-hacks-2-international-train-offers/>



# Digital Solutions

A digital service or solution acts as a connector between the user and the transportation service provider.

It generally does not need any extra infrastructure investment by the public sector.



Urban



Suburban



Rural



# Digital Solutions

## Strengths

- No physical infrastructure needed, low operating costs
- Quick implementation (if solution available on the market)
- Improved service/ information access
- Modal shift, multimodal journeys

## Weaknesses

- Custom solution / in-house development in the public sector can have high costs, take a long time, and require intense cooperation
- Provider may not need to cooperate with public sector
  - Does not share data
  - Exploits loopholes

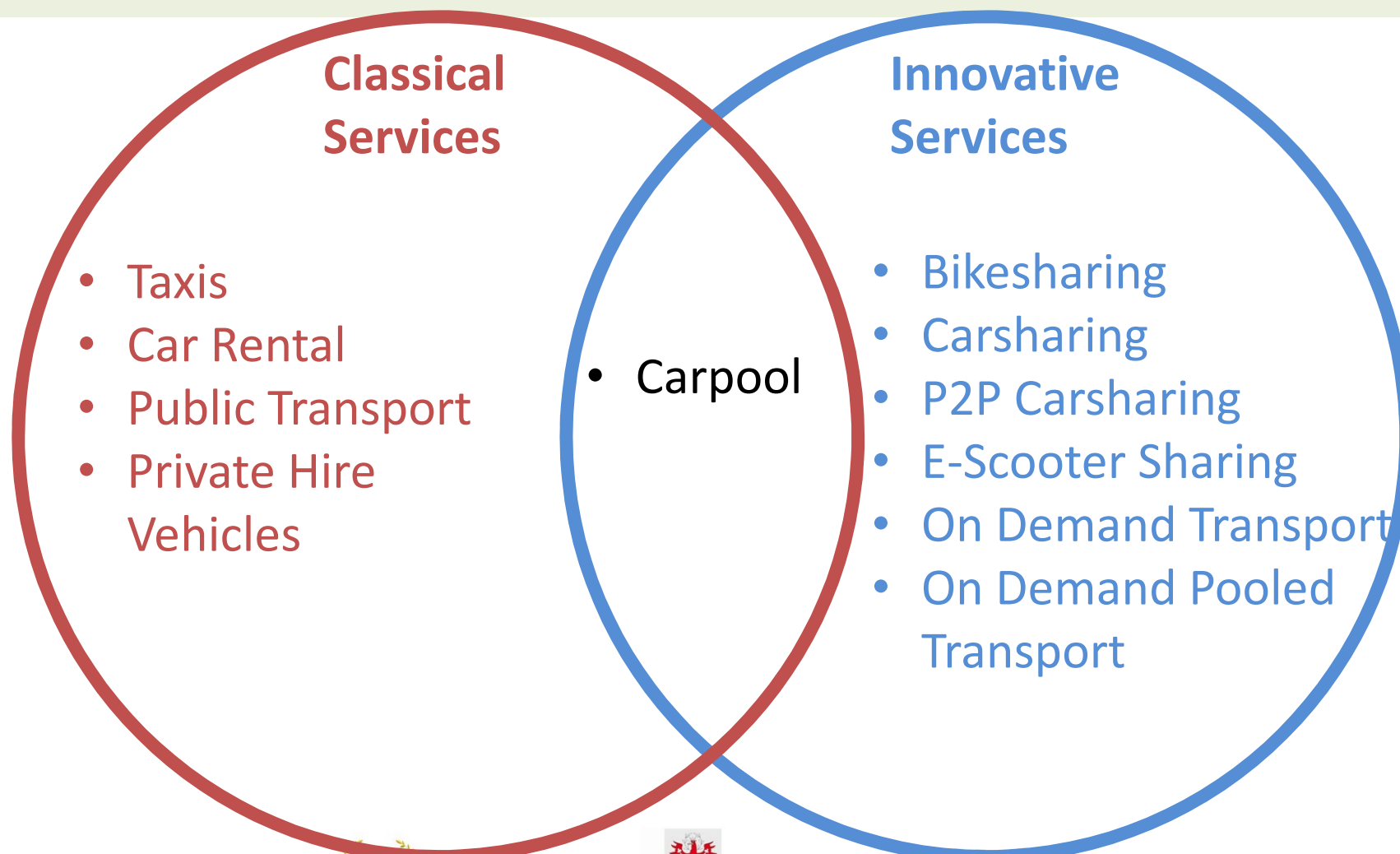
## Opportunities

- Improved access to information
- Personalizing and/or reducing complexity of information available
- Bundling (Whim) and best price (Fairtiq) lead to customer cost savings

## Threats

- Not accessible to everyone (need to own smartphone, roaming, extensive data package)
- Variety of apps confusing customers

# Shared Mobility



# Covoiturage Bassin Lémanique

What are you looking for?



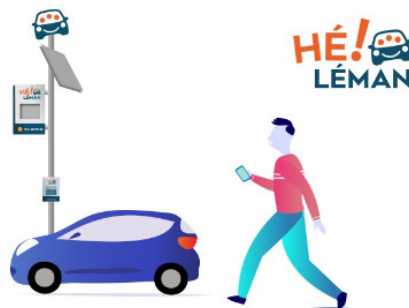
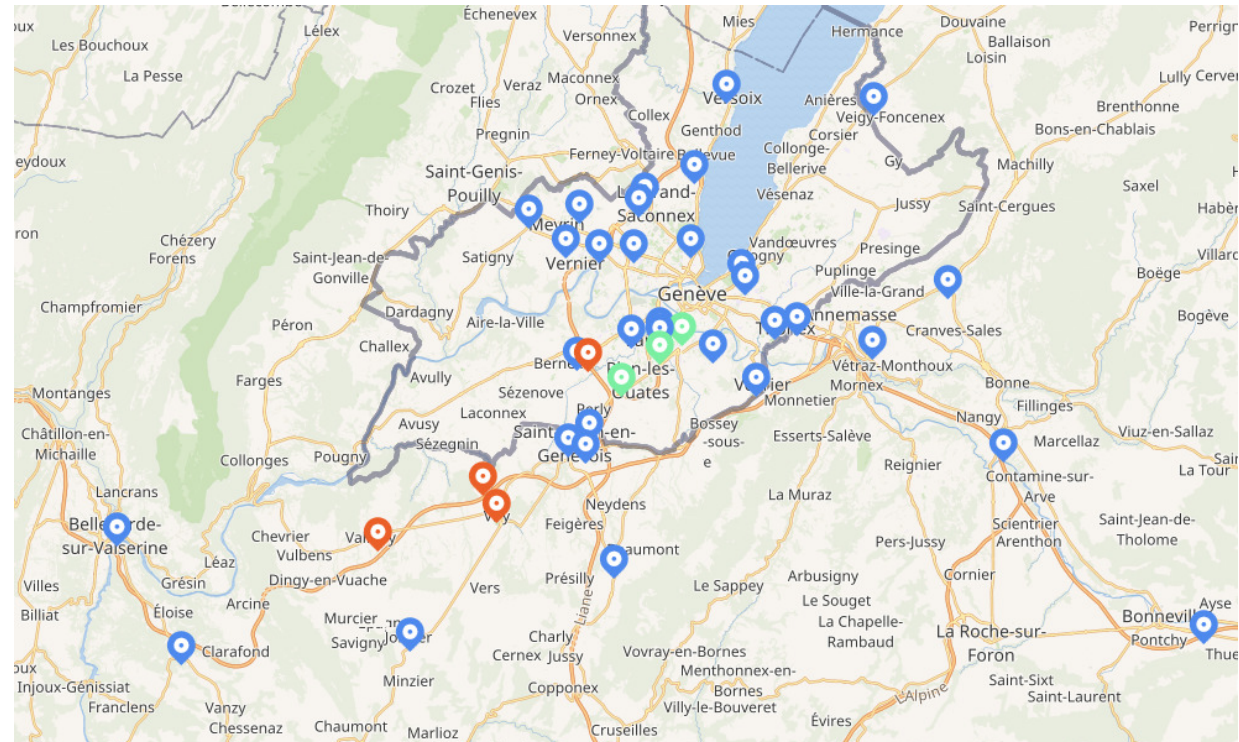
Carpool Terminals



Park-and-ride Facilities



Public Parking



The latest innovation is the HÉ!Léman solution  
(inaugurated on 21 March 2019).

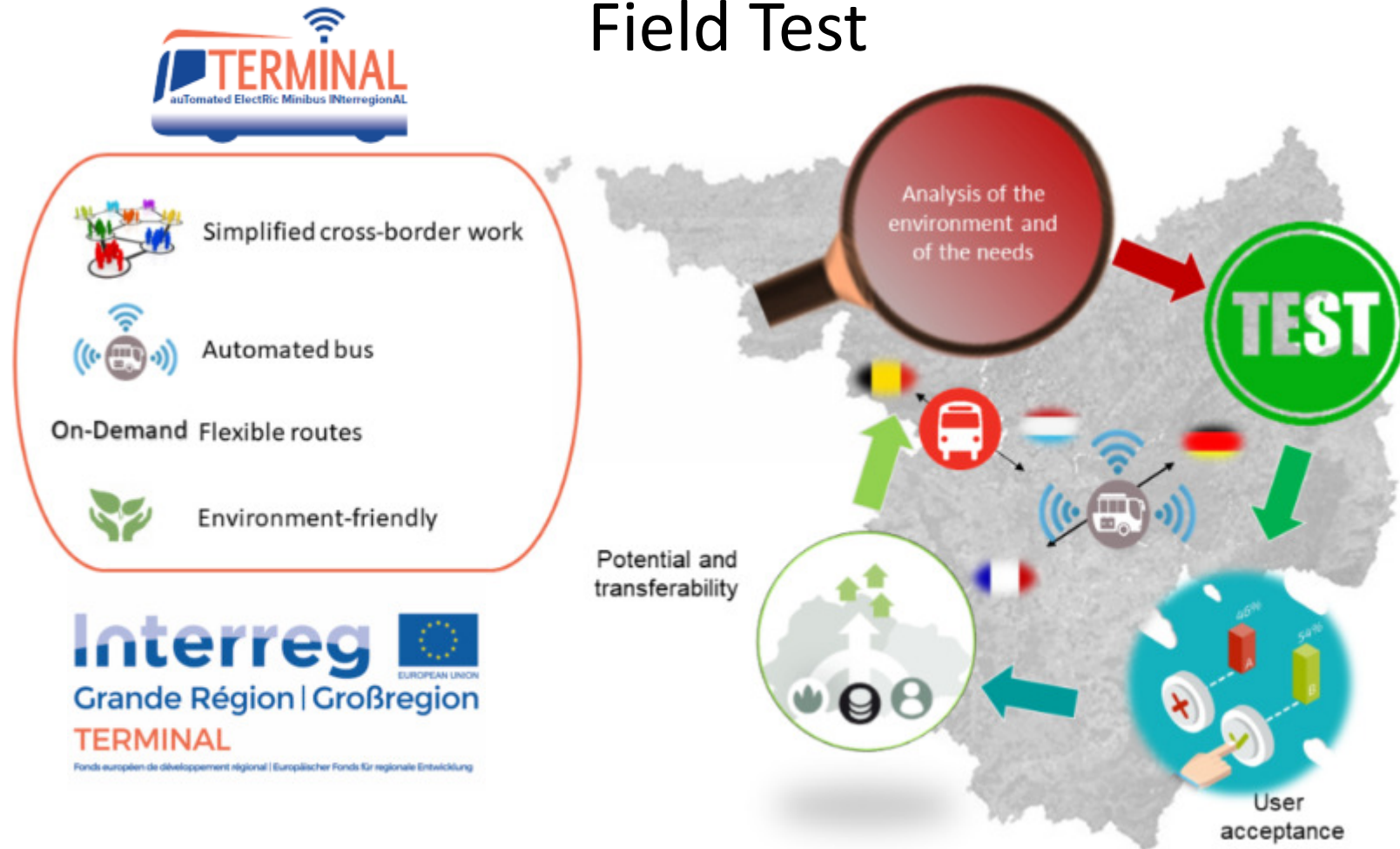


# Autonomous Shuttle (Zug, CH)



Photo: <https://www.mobility.ch>

# TERMINAL – Cross Border Autonomous Shuttle Field Test





# Shared Mobility in Rural Areas

These services usually require financial subsidies and are introduced into low density areas to provide mobility where public transport offer is either weak or non-existent (e.g: Call-a-bus). Furthermore, such services could be used to encourage tourism and stimulate the economy in rural areas

Suitable in Rural areas



Rural

Strong potential for cooperation for PTO/PTA depending on regulatory landscape and general attitude towards experimentation

# Shared Mobility in Rural Areas

## Strengths

- Innovative offer, multimodal when included in PT
- Promotes sustainable travel to/in the touristic destination
- Need for cooperation
  - Services can be tailored to specific locations and needs

## Weaknesses

- Cost for implementing, operating subsidies for private partner needed
- Not accessible to anyone (license, credit card, etc.)

## Opportunities

- Increased mobility options/accessibility
- No need for (second) car ownership (seniors-low income youth)
- Pay as you go –reduced costs for users, no ownership required
- Convenience, ease of use, door to door

## Threats

- Lack of or limited demand (eg: seasonal)
- Inability to find private partner or a willing provider for the services
- Vandalism

# Conclusions

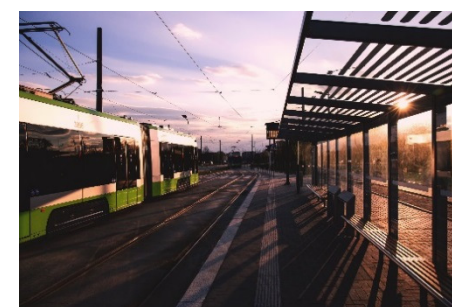
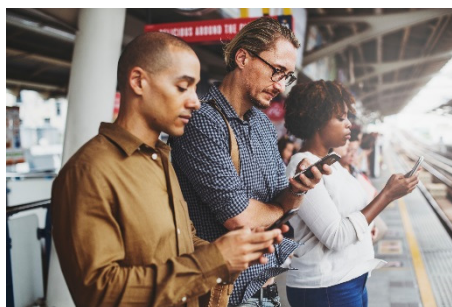
- Digitalization offers great potential for users as well as for regions and public transport companies
- Greater integration between modes is expected.
- The combination of fares and ticketing with other archetypes offers the widest range of possibilities for users.
- Digital information and sales seem particularly suitable for the implementation of mobility offers in border regions.
- Shared mobility should play a greater role not only in cities but also in rural areas.
- Authorities are advised to start with small pilot projects to test new concepts in their field. This means that authorities will have to invest money to test citizens' acceptance of new innovative solutions such as on-demand carpooling or shared electric bicycles.

# Thank you!

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