

Interreg
Alpine Space
 melinda



MELINDA Output O.T2.1

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1. Introduction

The main objective of Melinda project is smoothing the way to citizen awareness and engagement in alternative/innovative mobility modalities in order to support policy making on mobility, air quality and territorial development, contributing to EU/local strategies. Melinda project bases on six pilots that are presented in the following sections.

Greater Lyon & Greater Annecy (France): Health as an incentive for behaviour change in mobility

The greater Lyon and greater Annecy are metropolitan areas with a total population of 1.35 and 0.25 million people (in 2017) respectively. These regions have a high share of travel by private cars and a low share of travels by bike and by walking (so-called human powered mobility). Therefore, the main goal of this pilot is to boost human powered mobility. The main stimulus for encouraging people to shift to this sustainable mobility is health improvement. The focus of the pilot will be the employees of the administrative bodies. A sample of 100 people will be selected for the pilot.

City of Maribor (Slovenia): The way to attractive and sustainable city

Maribor is located in the north-eastern part of Slovenia and it is the second largest Slovenian city with approx. 110.000 inhabitants and a high number of daily migrations (approx. 44.000 people). The number of the active population in Maribor is ca. 63.000 and the number of passenger cars approx. 54.000.

The key challenge of the pilot project is to prepare good databases for city management and other policy makers to be able to undertake appropriate measures to increase sustainable mobility in the city and measures to raise public awareness about the importance of sustainable mobility.

Key goals of the pilot are to establish an efficient system for collecting data on sustainable mobility in the city, to put the collected data on disposal as open data, to establish a transparent interface for reviewing sustainable mobility data for both citizens and decision-makers, to examine the travel habits of citizens and by that, indirectly to motivate the inhabitants of Maribor to use more environmentally friendly means of traveling around the city (on foot, by bike or by bus).

Landkreis Ebersberg (Germany): Intermodal mobility options in rural areas

The county Ebersberg consists of several periurban settlements, with a total population of 140 thousand people (in 2017). The region has a rapid growth of population that causes a great pressure on road capacity and public transport (especially regional trains to Munich). Thus, use of private cars dominate in this region. The goal of the pilot is to improve intermodal mobility options with a focus on the rural areas of the region through a network of hitchhiking benches, supplementing the existing mobility network and acting as infrastructure promoting organized car-pooling. The target group of the Pilot is the general population living in the region.

Vorarlberg (Austria) V-Mob: Cross-border smart mobility within the greater region of Vorarlberg

Vorarlberg is one of the nine states of Austria and is its the most western part. It consists on four districts (Bregenz, Dornbirn, Feldkirch & Bludenz) that are surrounded by Tyrol (in the East), Liechtenstein & Switzerland (in the West) and Baden-Württemberg & Bavaria (in the North). Vorarlberg has a total population of around 389 thousand people (in 2017). The region faces increased traffic volume and road congestions, partly due to a lack of digital, interconnected information about seamless cross-border mobility. The goal of the Vorarlberg pilot is to automatically track the

movements of the citizens within Vorarlberg. In the centre is the development of a “Smart Mobility” App to collect data on mobility behaviour and patterns, incl. the citizens of Vorarlberg, citizens of the neighbouring countries, commuters, and tourists visiting Vorarlberg. The target is to design, engineer and manage innovative mobility services that promote sustainable mobility within the greater region of Vorarlberg.

Due to Covid-19 crisis and the closing of the borders to Liechtenstein, Switzerland, Germany and - temporarily- Tyrol, the pilot and data collection is limited to the region of Vorarlberg. Additional, the piloting phase was accompanied by several hard- and soft-lockdowns, quarantine of villages (Nenzing, Lech, Warth, etc.) and regions (e.g. Leiblachtal) and all-day curfews and night-time curfews

Municipality of Pordenone (Italy): Melinda Master Biciplan –MMB

The pilot area includes the Municipality of Pordenone, project partner, and 9 other surrounding Municipalities (Azzano X, Cordenons, Fiume Veneto, Fontanafredda, Pasiano, Porcia, Roveredo in Piano, San Quirino, Zoppola), for a total area of 439 square km and a total population of around 160.000 inhabitants. In such an interconnected society, working on mobility autonomously and independently in small and contiguous Municipalities like these ones, can lead to scattered and not significant interventions. We want to prevent this from happening with the Melinda Master Biciplan, which will analyze the cycling situation in the various Municipalities, to determine where to plan or improve cycle routes on inter-municipal connection roads, in order to guarantee sustainable, easy and safe access between neighbouring Municipalities.

Switzerland: Ridesharing and Carpooling

There are two types of pilot projects in Switzerland. They focus mainly on rural areas whose public transport are characterized by poor accessibility with low frequencies, limited operating hours and indirect routes and therefore, the car ownership rate is very high. The goal of pilot 1 in Maladers (Chur) is to implement and test the viability of a ridesharing scheme, while the goal of the pilot 2 in Naturpark Thal is implement and test the viability of hitchhike mobility services. The ultimate goal of these pilots is to increase the accessibility in rural areas and reduce reliance on private cars. The target group of these pilots are local population.

2. Description of the framework

Taking into account the MELINDA objective and the heterogeneity of pilot sites the framework implemented is composed of a Transnational DataLab, on which is possible to use Power BI tool to represent the data analysis

The **Transnational Data Lab** (TDL) is aimed at providing to MELINDA’s pilots with a unique and centralized database infrastructure, where each stakeholder can publish, retrieve and share its own data. TDL will represent, by providing a complete set of solutions and methodologies devoted to data security, a safe place for data conservation, aggregation and analysis. Each stakeholder will access the TDL by means of a personalized access, defining her/his permissions and grants on different data.

Several sources will provide the set of data used by the TDL, such as:

- Data collected by means of the Melinda APP;
- Historic data provided by each pilot;
- Data generated by the Awareness Campaign.
- Other data coming from additional source.

The structure of the database is dynamic. The starting point is defined by the data coming from MELINDA requirements, and based on specific needs the DataLab can be enriched by other type of data.

The following images describe some of the data set implement on the Daalab.

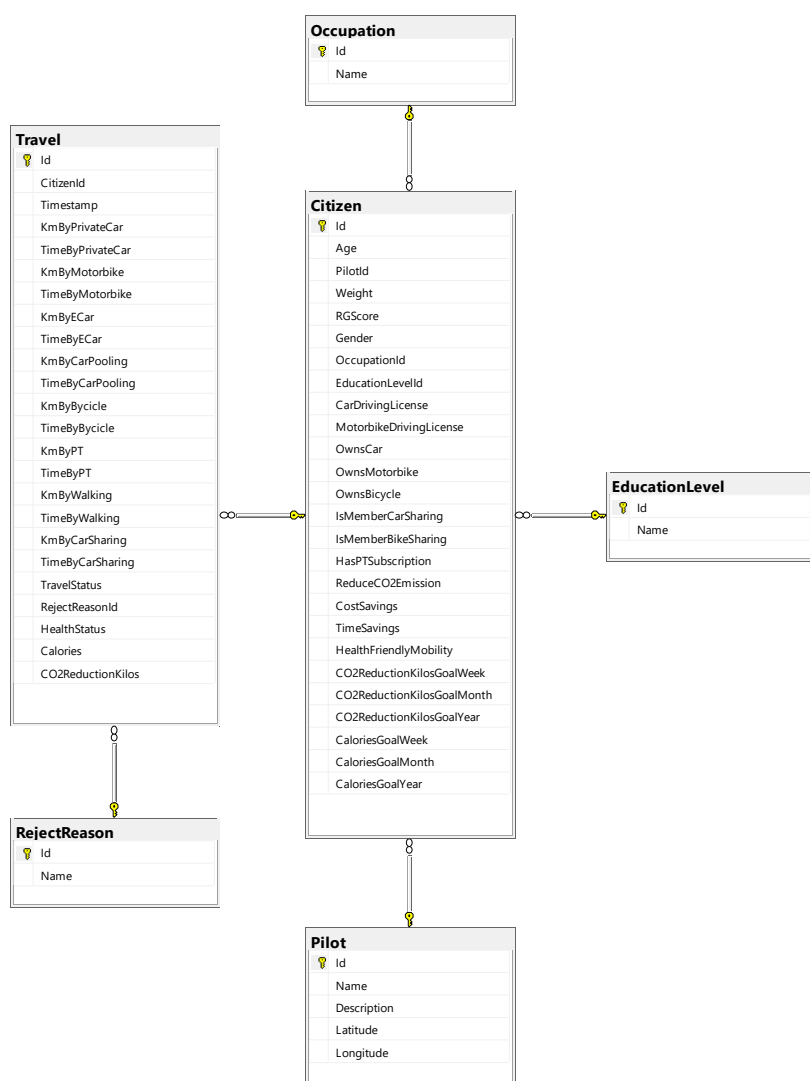


Figure 1: Citizens Requirements.

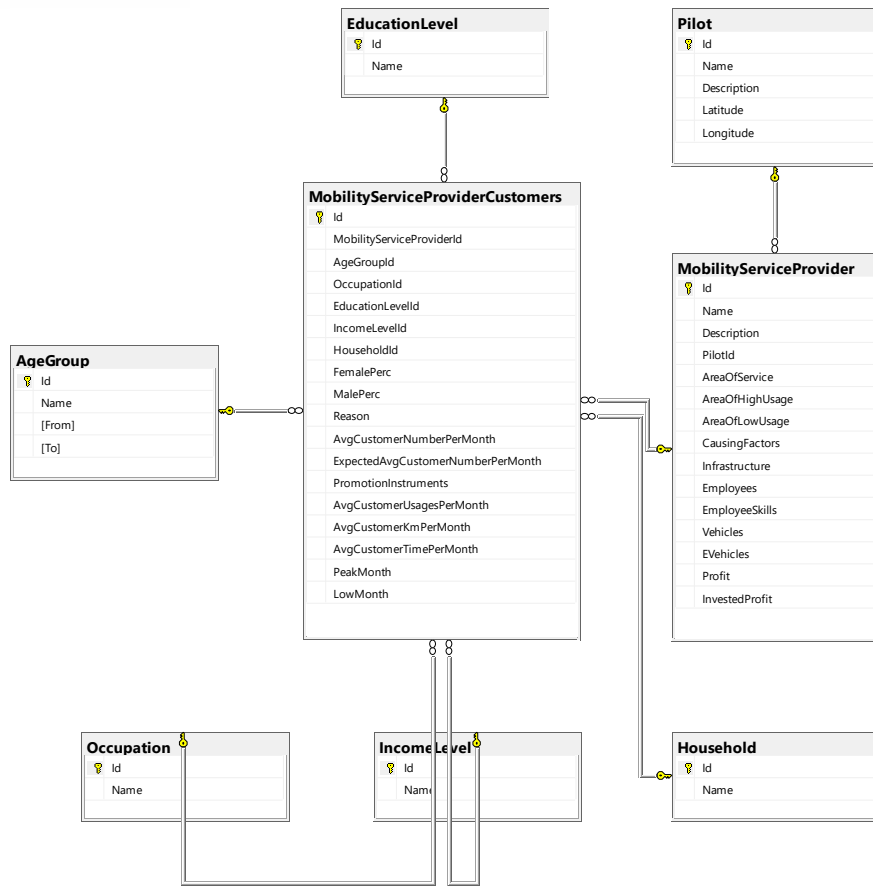


Figure 2: Stakeholder Requirements.

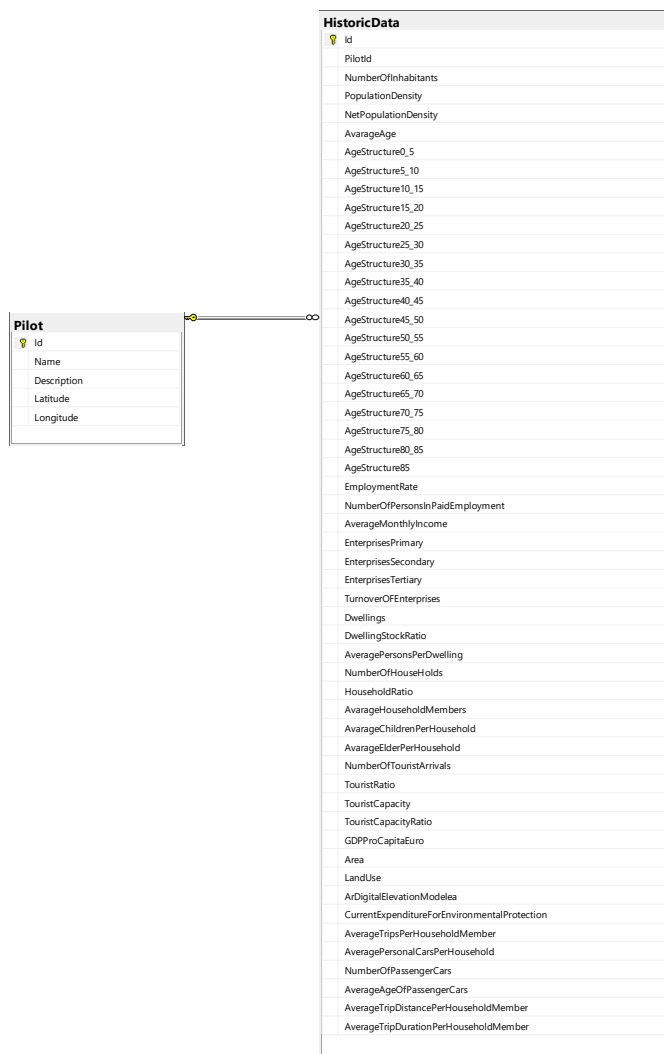


Figure 3: List and details of datasets.

Transnational DataLabL is implemented according with the following infrastructure, provided by INSIEL in its certified server farm, specialized in providing IAAS and SAAS solutions for public authorities and healthcare:

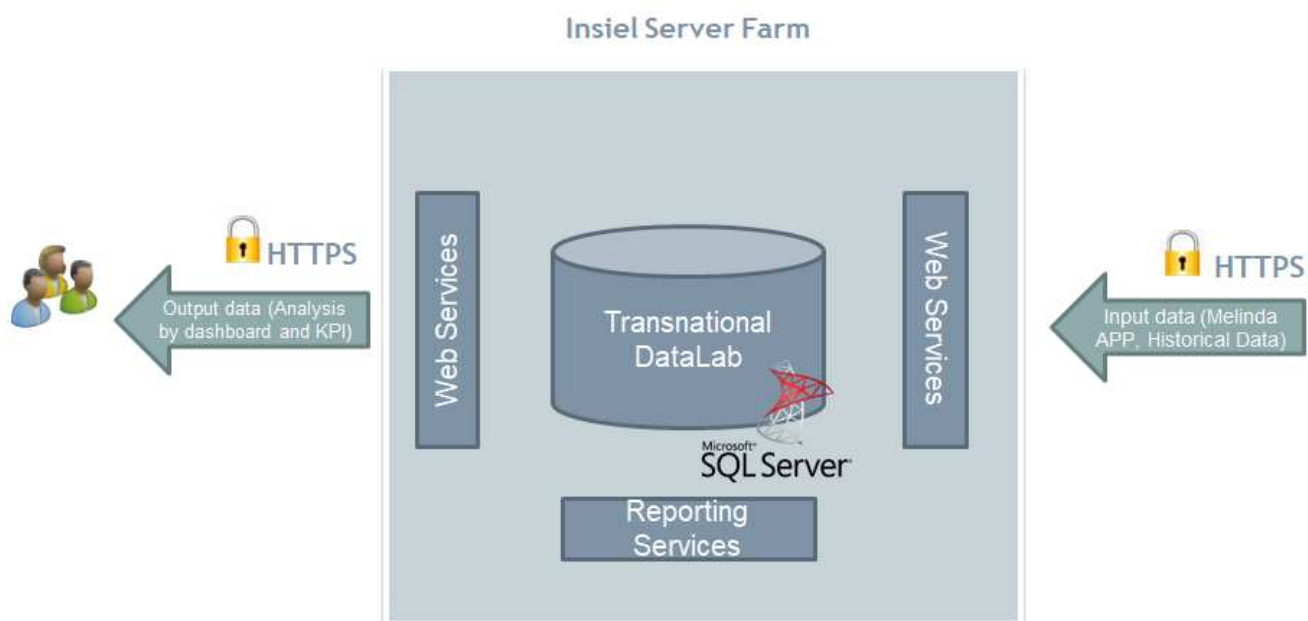


Figure 4: TDL Infrastructure.

The infrastructure which will be provided in order to expose the services of the TDL:

- Windows 2012 Server Virtual Machine with 8 GB of RAM and 200 GB of storage;
- SQL Server Standard / Express 2017;
- Internet Information Service;
- .NET Core SDK.

The DataLab will provide 3 different ways to access data:

- Direct access to DB (limited to expert users), based on SQL Permissions Management;
- Excel file, used to import historical data in bulk;
- Web Services, implemented in ASP.NET Core WebAPI, aimed at:
 - Reading currently available data;
 - Submitting or updating available data.

All actions performed by users will be logged for security and audit purposes.

For technical details and further specifications, please contact:

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