Implementation of a Digital Infrastructure along the Brenner Corridor

Autostrada del Brennero is implementing a Digital Infrastructure based on a Mobility-as-a-Service concept to manage traffic not only along the Brenner motorway, but also in the surrounding area all along the Brenner corridor.

Within this project the information concerning the motorway is enriched with information on the mobility of the suburban network of the territories that the motorway corridor crosses (information on service levels, emergencies, etc.). The project is therefore unique in that it aims at the construction of a European digital motorway corridor, bringing together infrastructures and services of different geographical areas and spatial competences, both national and cross-border, ultimately making the data and information accessible to third parties for the creation of services user services, or other purposes.

The various users would find in the digital corridor a single point of reference for reliable information covering both private and public mobility in intermodal form, as is not the case for any other geographical area to date.

Furthermore, the data that will be processed within this project can then be made available to the National Access Point (NAP) in line with European developments in mobility and digitisation.

More generally, it would be possible to use this project for the creation of a first example of a Corridor Access Point. The specific focus of the data aggregation would in this case be the motorway and the arterial roads that surround it in the territory (whether municipal, provincial or regional jurisdiction) and the information concerning these stretches of road.

Corridor Access Points would make available the information collected to higher-level data aggregation layers. The data in the layer could be available to various stakeholders including, but not limited to and not exhaustive, policy makers. This would then support the development of policies and/or regulations in the field of motorway mobility that part of a broader vision of innovation, digitisation and paradigm change for a paradigm for a mobility that is more sustainable and tends towards the MaaS vision.

The system is in fact also conceived as a way of supporting more sustainable paradigms of mobility, to strive more and more towards achieving the goals of the Green Deal. It is a strategically important first step towards a MaaS system for motorway mobility, as MaaS envisages precisely the development of digital platforms that collect data on mobility and users.
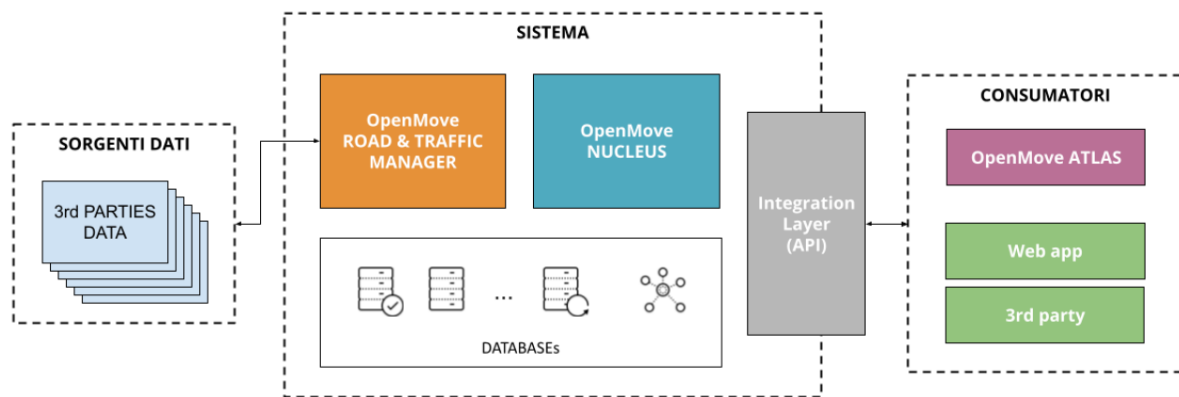
At present, two thirds of the projects have been accomplished, i.e.:

- the software architecture;
- the Input Manager, which is the component responsible for collecting data from third-party providers;
- The Data Driver, which is the component that manages the data collected, processes it and makes it available to the dedicated modules via a non-relational database;
- The OpenMove NUCLEUS that provides functionality for calculating the route;
- The different mobility modules of the system (sharing mobility, e-chargers, webcams, traffic, parking, etc.);
- A non-relational type database, which therefore allows the storage of documents heterogeneous documents.
- and the multimodal/intermodal trip planning engine that, by using the available data, exposes trip planning functionalities to third parties, useful e.g. in case of calculation of alternative routes in the presence of disruptions.

The management web dashboard that allows to manage A22's internal administrative users, manage API authorisation for secure access to data only by the authorised parties, manage third parties, monitor the API usage counter, manage traffic data, display data on a map, etc. is being implemented and will be finalized by beginning 2025.

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