Project MERLIN

"Multimodal Electrified infRastructure pLannINg"

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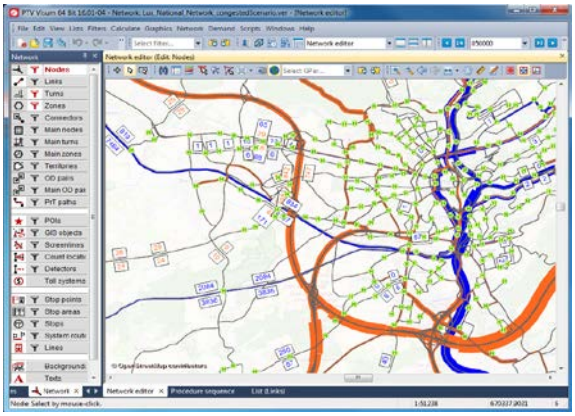
These systematic changes, observed in the transport and mobility systems, and, on a broader perspective, in the land use developments of the country, are creating major challenges for the future planning of our networks. The complex urban dynamics caused by the fast growth of the population, the workplace relocation of major firms to the ourtskirts of the capital city, together with the strong development and implementation of innovative transport and mobility services make any forecasting model based on past trends inadequate. There is therefore the need to move to new and more sophisticated modelling approaches which make use of all possible types of data, such as those being collected and, for a large part, offered by the government in an open legacy framework.

The MERLIN (Multimodal Electrified infRastructure pLannINg) project fits well in this context as it aims at developing a platform to investigate the impact of different mobility solutions for the country. More specifically, our goal is to provide a decision support tool for the government and for the info-mobility operator, which will enable the following assessment opportunities:

- It will allow estimating and modelling current and future mobility patterns, in terms of demand flows for different modes and their combinations. This will allow identifying both planning and (dynamic) management solutions (e.g. optimising traffic lights and public transport schedules);
- It will allow assessing the environmental impact of the proposed planning and management solutions through the coupling of transport modelling and emission and fuel/energy consumption modelling approaches;
- It will provide a decision support expert system able to suggest how to redesign the future public transport network, taking into account the urban dynamics and the major infrastructure changes, as well as it will indicate where to replace conventionally fueled Public Transport services with electrified systems and where to locate charging points.



In other terms, multimodality, shared and electro-mobility are the central elements considered in this project. This will enable to put into practice alternative forms of mobility, with a specific focus on emerging technologies in sustainable transportation. The MERLIN project will moreover provide a flexible modelling platform, which, in the future, could also be extended towards novel Mobility-as-a-Service systems, which are currently under investigation by researchers and policy makers worldwide.