Rheinland-Pfalz
MINISTERIUM FÜR WIRTSCHAFT, VERKEHR, LANDWIRTSCHAFT UND WEINBAU

Cooperation within public authorities and Open Street Map to improve cycling Network Data

A Policy Learning Platform peer review

18./19.9.2024

Final Report

1. Brief presentation of the beneficiary and its motivation to host a peer review

Rheinland-Pfalz has about 4 million inhabitants (5% of entire Germany) and is characterized by a mixture of semi-urban, urban and rural areas. Its largest city, the capital Mainz, ranks with 220.000 inhabitants in the middle range of the national scale.

The modal share of cycling has recently grown: the latest figures (2016) give 8% as indication in terms of trips, region-wide. However, very many E-Bikes have been sold recently (approx. 100.000 p.a., as a private invest of 250 Million €) and this type of bicycle is more heavily than other bikes. Since RP has a mostly hilly or even mountainous topography, the E-bike removes one major obstacle to cycling.

Bicycles are also often transported in trains or used to reach train stations (up to 40% of passengers in some regions get there by bike) and this opens another use-case of network management.

Cycling is also a major touristic offer, in particular along the scenic riverbanks like on the Rhein, the Mosel, the Lahn or the Ahr. Cyclists tend to spend more money on hotels, restaurants and particularly on wine as the average tourist and make up for a considerable part of the overall touristic revenue.

There is a signposted network of interurban cycling routes, about 8.000 km in length. The Land and its road agency (Landesbetrieb Mobilität - LBM) in general administer secondary roads.

The LBM is running a website, including a cycling route planner and information on the overall network (radwanderland.de). The LBM also maintains a database on cycling network information and is therefore a main stakeholder for the project.

A community of municipalities set up to foster walking and cycling as transport mode exists, membership is voluntary.

Rheinland-Pfalz is part of three cross-border regions: the Großregion (Rheinland-Pfalz, Saarland, Luxemburg, parts of the French Grand-Est, parts of Belgium), the Oberrhein-Region and the Euregio-Rhein-Maas. In a national context, it is part of the Metropolregion Rhein-Neckar, the region Rhein-Main, and the Karlsruhe region.

The Rheinland-Pfalz Ministry of Transport is active in various bodies discussing the national framework for digitisation of infrastructure and the application of EU-delegated regulations, originally derived from the ITS-directive (2010/40/EU). It is running a website (verkehr.rlp.de) comprising different kinds of information regarding mobility infrastructure.

2. Specification of the policy challenge encountered

Navigating one's way over this network often requires detailed pre-trip knowledge. In addition, different types of cyclists (recreational, commuters, families, travellers, sports people etc.) might prefer different routes. Navigation services or other smart cycling applications - public or commercial - can help, but they again often require comprehensive, accurate and up-to-date information about network elements and their properties. Roadworks or temporary restrictions add another dimension for providing information by the network operator. From a different angle, a high-quality coverage of cycling network data allows to model traffic, accessibility, unsafe spots and consequences of land-use changes.

Consequently, usage of cycling network data comprise typical use-cases:

1. Universal Routing applications like Google Maps, Komoot, etc.
2. Region-wide routing applications and information services (like Bayernnetz für Radler). These can be linked to cover entire member states (like Radroutenplaner Deutschland)
3. Specific routing advice to public transport, touristic points of interest, schools etc.
4. Setting up cycling schemes
5. Setting up traffic models and accessibility models
6. Systems to support maintenance of the cycling network, including signposting
7. SUMPS (Strategic Urban Mobility Plans).

In principle, cycling networks are part of the INSPIRE (*2007/2/EG)* datasets, however these are focused on land survey aspects and are, up to now, insufficient for smart cycling use cases at hand.

The ITS directive (2010/40/EU) and its delegated regulation cover all roads, including dedicated cycling infrastructure, but does not specify particular requirements on cycling. In addition, it is for many aspects explicitly limited to infrastructure usually used by motorised traffic.

Administrative infrastructure data (including sign posting, barriers, temporary restrictions etc.) concerning cycling networks is often scattered over many public bodies (national authorities, regional authorities, municipalities) and usually no single authority is easily able to create a full and detailed representation. Moreover, sources for existing data are not very well known to the general public and sometimes even to the experts.

Open Street Map on the other hand covers the entire public space, is easily accessible and used by very many service providers. Technically diverse tools exist to input, maintain, extract or use data and such tools are still permanently developed.

Its shortcomings are the changing level of accuracy caused by lacking volunteer contributors for some places and the limits of data sources. The paucity of strict rules in terms of necessary or possible network attribute is boon and bane: it allows a flexible approach but requires extra effort to integrate comprehensive datasets.

3. Participants

List of participants in the peer review:

- **Members of the beneficiary organisation (MWVLW):**
  Reiner Dölger (Ref. 8702), Lisa Peters (Ref. 8707), Helga Rottenau (Ref. 8702) Nils Lakenbrink (Ref. 8702)
- **Local stakeholders involved:**
  Marion Deneke (Hessen mobil), Stephanie Kleine (MUNV NRW), Henri Nolden (BALM), Lars Jolig (LBM RLP), Dr. Sascha Hofmann (AGFFK RLP/Stadt Germersheim), Armin Retterath (VERMKV RLP)
- **Peers:**
  Markku Huotari (Public Transport Authority, Helsinki Region, Finland)
  Johan Wiklund, ENTUR, Norway
  Francesca Gambarelli, Comune Reggio Emilia, Italy
  Aleksander Buczyński, European Cyclists' Federation, Belgium / International
  Emil Tin, City of Copenhagen, Denmark
- **Interreg Europe team:**
  Erwin Siweris, Katharina Krell, Thorsten Kohlisch, Magda Michalikova

4. Policy Recommendations

In principle the commendations confirm the concept of close collaboration between public administrations and OSM in the cycling domain. The peers as well as the stakeholder give several guiding elements:

Short and midterm

- Look for ways to communicate on the right level, avoiding hierarchies and non-technical aspects
- Address the community in an open-minded way and make clear the common interest
- For your own dataset, look at and for ways to publishing them OSM-friendly
- Address the issues of licensing and make sure your applications fit them. There are ways to use contents of OSM Data without duplicating all obligations
- Try a regional pilot and scale up. Visit regional or national OSM events
- Promote OSM tools towards urban data sources

Long-term

- Design data standards such that OSM and administration data can easily merge
- Give open data a more prominent and clearly described role in overall digitalisation policy
- Develop tools to support the technical reference process

5. Possible calendar of implementation

The following milestones are foreseen:

October 2024: Start of regional cooperation plot in one region

October/November 2024: Promotion of the approach towards European Projects (Meridian, Megabits, Napcore)

December 2024: Promotion of the approach towards the national cycling group

As of January 2025: Taking up the recommendations with the Cities Urban Cycling Association (AGFFK RLP)

6. Conclusions

In the current digitalisation and mobility, landscape better collaboration between OSM and administrations can improve and accelerate the development and quality of smart cycling applications, which in turn can have a relevant on sustainability of the transport system. Various pathways to go in this direction have been identified and the vehicles and framework conditions been described. The transport administration of RLP will pursue the approach further and team up with national and international partners and stakeholders.

Mainz, November 2024