DIGITAL DIVIDE

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The journey of open data in mobility : exploring how public authorities have navigated progress, hurdles, and the promise of a data-driven future.

The sharing of mobility data by public authorities took off with the open data movement starting in the late '90s. Since then, open data portals and other data-sharing channels have abounded among city and regional authorities. Some public authorities have even adopted a policy of open data by default unless there are good reasons not to (in the case of personal or personally identifiable data for instance).

Between 2010 and 2013, POLIS worked extensively with its members on the topic of open data, notably reflecting on why and how this is being implemented, which culminated in a policy paper in 2013.

In it, it emerged that the main drivers for opening up transport data are transparency and the potential for new information services, economic development, wider public outreach, and cost savings.

Ten years down the line, substantial progress has been made, although the picture across Europe is mixed, with some public authorities (particularly the larger ones) being more advanced than others due to resource and skills availability. Without the financial means and technical know-how to open up data, many smaller authorities are lagging. This is starting to be recognised, not least in the Netherlands where regional data teams have been formed to guide and support authorities in making 15 common transport data sets available on the national mobility data portal (the National Data Warehouse/NDW). Within these regional teams, the larger public authorities are lending support to the smaller bodies.

Emerging data needs

If public authorities are opening up their mobility data, does that mean the job is done? Not at all, actually.

Firstly, the level of reuse of mobility data leaves much to be desired. The Local Transport Data Discovery report (2018), commissioned by the UK government, found that the reuse of mobility data opened up by UK local authorities had been limited and unevenly spread, with larger authorities like Transport for London enjoying good take-up of its data. Anecdotes from other cities in Europe have confirmed a similar trend. The 2018 report goes on to make several recommendations related to improving the quality, machine-readability and discovery of open transport data, among others. In essence, these recommendations align with the FAIR principles — that data should be easily Findable, Accessible, Interoperable and Reusable. FAIR is the rationale behind and the guiding principle of the EU project MobiDataLab, which is building tools to facilitate data sharing. Interestingly, the UK government recently (March 2023) issued guidance about local authority transport data sharing.

Secondly, many technological developments are generating new demands for data and increasing societal expectations for data-driven services. It is common knowledge that transport data is among the domains with the highest potential value for reuse. This has led to a massive growth in the traffic and travel information services market, particularly real-time information services, including journey planners and other MaaS-type services and driver information services. The move towards connected and automated transport is placing ever-increasing demands on public authority data, particularly data that can improve the quality and reliability of digital maps. An accurate digital representation of the road network, including its physical infrastructure as well as the applicable road and traffic rules and regulations, is an important building block of highly automated driving.

Thirdly, public authorities have data needs, too — they are not only providers of mobility data, but use it for many different transport tasks, not least to support transport planning, enforcement purposes, and real-time transport operations, such as traffic management. While public authorities do already have much data at their disposal, some of it may be limited in scope or size and is typically costly to generate or gather. There is widespread acknowledgement that the private sector may have more and/or better quality data in certain cases, particularly traffic flow, which is expected to grow as vehicles become equipped with more sensors and people to make ever greater use of transport apps. As public authorities increasingly prioritise active modes (walking and cycling) in their transport strategies, the demand for data about pedestrian and cyclist flows is naturally growing, going hand in hand with the realisation that public authorities are relatively data-poor regarding these modes.

The final imperative relates to the EU policy context, which has ambitions to make the EU's data economy a global leader and has resulted in ambitious legislative proposals seeking to remove obstacles to data sharing and reuse, such as the EU's Data Act and the Data Governance Act. These horizontal pieces of legislation are complemented and preceded by vertical legislation in the transport data domain, specifically, the EU's ITS Directive (and its suite of delegated regulations) adopted in 2010. Two of the delegated regulations — RTTI and MMTIS — are of particular relevance to transport authorities and mobility service providers since they require a long list of transport data sets to be made available in a machine-readable and standardised format on national access points (NAPs).

Gaps and challenges

To respond to these developments, public authorities acknowledge that they must become data-driven, and to achieve this, they must strengthen their capacity to work with transport data. The EIB Technical Note on Data Sharing in Transport explores some of the issues and challenges facing public authorities in their quest to build transport data capacity and expertise. Notwithstanding the availability of financial resources, the EIB study notes that 'recruiting and retaining data specialists is not an easy feat for local governments, due to rigid recruitment and career development policies and an inability to compete salary-wise with the private sector.'

Some city authorities have nonetheless found innovative and cost-effective ways of enhancing their data skills, including Lisbon which partnered with and placed staff within local universities to enable them to learn from data experts on how to work with the city's data sets. Another interesting case is the Brussels public transport operator, STIB/MIVB, which recruited a data expert from outside the transport domain who succeeded in convincing the management of the value of data analysis, through practical examples (ticket machine operations, bus breakdowns, transition to electric buses, among others), which ultimately led to the creation of a data team situated in the strategy department.

Further impetus for becoming data-driven and accelerating the digital transition is coming from recent EU legislation requiring public authorities to provide access to a large swathe of data about the transport infrastructure and services, traffic regulations and the state of the network. While public authorities do not disagree with the principle of putting this data in the public domain, the cost and lack of know-how are a concern for many, particularly as the benefits for public policy are not clear. To fulfil these obligations, public authorities are looking to the national level for technical and financial support.

The national authorities themselves are being supported and guided by the EU-funded NAPCORE project, set up by all Member States to coordinate and harmonise their ITS Directive-related activities.

The role of POLIS

POLIS has been working on the topic of data and its many facets since the early days of the open data movement. Over the years, our data work has shifted towards EU policy given the ambitious EU regulatory framework for data access/sharing developed over more than a decade. In recent years, we have introduced 'Member in the Spotlight' webinars to facilitate knowledge sharing among POLIS members about their data projects and general endeavours to build a data culture. Involvement in EU projects like MobiDataLab is giving us the knowledge and the tools to support further our members on their data journey. In 2023, we are commencing exploratory work on two new provisions of the EU's revised Real-time traffic information delegated regulation, adopted in 2022: access to in-vehicle data under FRAND conditions and cooperation with ITS service providers on navigation/routing services.