OPEN FOR FEEDBACK

Transport data in the UK and France

A series of transport data case studies and ideas for cross-country collaboration

Open Data Institute

Contents

About

This report has been researched and produced by the Open Data Institute, and published on 5 July 2018. Its lead authors are Tom Hunter and Lucia Chauvet. If you want to share feedback by email or would like to get in touch, contact tom.hunter@theodi.org or lucia.chauvet@theodi.org.

To share feedback in the comments, highlight the relevant piece of text and click the ‘Add a comment’ icon on the right-hand side of the page.

This is work in progress. It is likely to be updated as we continue our work. Keep an eye out for updates!

How can it be improved? We welcome suggestions from the community in the comments.

Executive summary

Cross-country collaboration on transport data offers opportunities to address common challenges such as ticketing, conversion of data standards, and procurement best practice

As part of its innovation programme, the Open Data Institute (ODI) has been building on the recommendations of the UK–France Data Innovation Task Force[1], to connect data innovators and data innovation across both countries.

The ODI is exploring data innovation at sector level, with **transport** emerging as a priority sector. Arguably, France and the UK are leading the way in mobility and transport innovation, with the UK government aiming to be at the forefront of connected and autonomous vehicles research and development[2], and France leading and providing expertise in driverless metro technology[3].

Both countries also have sophisticated open data ecosystems[4], and are ranked in the top five worldwide in the Open Data Barometer rankings.

In this report we summarise the findings from our full day *UK–France transport data workshop*[5], which aimed to share stories of data innovation in transport across both countries, and to identify ideas for cross-country collaboration with transport data.

In total, **twelve case studies** were presented and helped reveal similarities and differences between the countries. Etalab[6], for instance has recently begun work on a National Access Point[7] – a mechanism for accessing, exchanging and reusing transport-related data – a task that the Department for Transport is replicating for the UK. The Lille case study describes the process of including open data requirements in franchise contracts, providing fascinating insights for both French and UK cities.

These case studies also revealed shared challenges: from the difficulty of converting and working with different data standards and formats; to the poor customer experience of ticketing outside large cities; to evaluating the correct users of Open Database Licenses[8]; to addressing the concerns around 'GAFA'

[1] UK government: Department for Digital, Culture, Media and Sport (July 2016), 'UK-France Data Innovation Taskforce Report', gov.uk/government/publications/uk-france-data-innovation-taskforce-report

[2] UK government: Department for Transport (June 2018), Centre for Connected and Autonomous Vehicles, gov.uk/government/organisations/centre-for-connected-and-autonomous-vehicles

[3] Wavestone (2017), 'Smart Cities and Mobility: France is at the cutting-edge in the strategic market for driverless metros' wavestone.com/en/trade-report/smart-cities-and-mobility-france-is-at-the-cutting-edge-in-the-strategic-market-for-driverless-metros/

[4] Data ecosystem: a mapped data infrastructure detailing how data is stored, accessed, used and shared, showing interactions between the data, its users, and related services and apps

[5] See: theodi.org/topic/transport

[6] See: etalab.gouv.fr

[7] National Access Points can take various forms, such as a database, data warehouse, data marketplace, repository, and register, web portal or similar depending on the type of data concerned and provide discovery services, making it easier to fuse, crunch or analyse the requested data sets. See: ec.europa.eu/transport/themes/its/road/action_plan/nap_en

[8] See: opendatacommons.org/licenses/odbl/summary

(the four US tech giants: Google, Apple, Facebook, and Amazon).

The afternoon culminated in a series of informal discussions where participants aimed to identify the most promising avenues for transport data collaboration between the UK and France. These are included in the table below.

Executive summary: nine promising avenues for collaboration between the UK and France on transport data

1. Demonstrating the economic impact of open transport data in Europe
2. Developing open source transport data conversion tools – particularly from General Transit Feed Specification (GTFS) to Network Timetable Exchange (NeTEx) standard
3. Drafting 'Transport 101' market summaries for both countries, to help private sector operators understand key differences
4. Facilitating dialogue between politicians, transport data providers, and 'GAFA'
5. Sharing best practice on the inclusion of open data clauses in transportation contracts
6. Ensuring smaller towns do not suffer from 'transport data exclusion'
7. Evaluating the impact of different licenses for open data and innovation in transport
8. Making ticketing (particularly in smaller cities) more user-friendly to work across multiple providers
9. Including a wider range of European countries in transport data collaboration

The final section of this report contains further details on these ideas and how they emerged. Workshop participants have already started work on some of these. DataCity[9] has developed an open source tool that converts UK public transport timetables from TransXChange format to General Transit Feed Specification (GTFS) format[10].

The findings summarised in this report sit alongside a broader set of activities conducted to connect data innovators across the UK and France. These include: three bilateral projects[11] involving stakeholders from Leeds, Lille, Manchester, Rennes, Bordeaux, and Bristol; interviews with data practitioners; and activities related to the UK–France Digital Conference.

[9] See: datacity.org
[10] Github (2018), TransXChange to GTFS translator, github.com/danbillingsley/TransXChange2GTFS
[11] Open Data Institute (2017), 'The ODI launches three collaborative data innovation projects between the UK and France', theodi.org/article/the-odi-launches-three-collaborative-data-innovation-projects-between-the-uk-and-france/

Introduction

How are the UK and France using transport data, and what are the promising avenues for collaboration between both countries?

On Thursday 15 February 2018, the ODI brought together 24 leading organisations working with transport data in France and the UK to share and explore areas of data innovation in transport across the two countries.

This piece of work fits into a wider project to connect data innovators across the UK and France. The ODI has taken a sector-based approach, with transport identified as a key sector. Previous exploratory research by the ODI has shown that France and the UK are leading innovation in mobility and transport, and both have sophisticated open data ecosystems[12], often with complementary skill sets. The UK, for example is praised for its active community engagement, while France is noted for its technical excellence.

Participants in the workshop included representatives from organisations such as Transport for London[13] (TfL), Transfermuga[14], data.gouv.fr, Trainline[15], and city councils in France (Lille Metropole[16]) and the UK (Birmingham City Council[17]), amongst many others. A list of all the participants, and the organisations they represent, is available in the appendix.

This report summarises the workshop findings, and aims to:

- share stories and areas of data innovation in transport in the UK and France
- suggest promising ideas for collaboration on transport data between the UK and France (and potentially more European countries)

This workshop and research form part of the discovery phase of a project designed to understand opportunities for cross-country collaboration on transport data. In the longer term, this will help inform the ODI's work on global data infrastructure for trade.

[12] Data ecosystem: a mapped data infrastructure detailing how data is stored, accessed, used and shared, showing interactions between the data, its users, and related services and apps.
[13] See: tfl.gov.uk
[14] See: transfermuga.eu
[15] See: thetrainline.com
[16] See: lillemetropole.fr
[17] See: birmingham.gov.uk

Transport data case studies: France

Jean Gabriel Audebert-Lasrochas from Trainline presenting the challenges of working with open transport data in France and the UK

This section presents summaries of the case studies presented by transport professionals based in France. Each case study includes:

- a summary of the presentation
- key takeouts from the presentation
- a link to the presentation slides
- contact details of the presenter for further details

Please note that the views expressed in the case studies and presentation are the views of the presenters, and not necessarily the views of the ODI.

Building a digital common and social network with national transport data

Ishan Bhojwani – Etalab

Summary:

Ishan Bhojwani presented Etalab's current work on creating a national access point[18] for all type of transport data in the country, which he described as "an aggregation of platforms to aggregate data from everywhere in France". It was then mandated by a 2017 European Union (EU) directive[19] for all EU member states.

Etalab's vision is to produce an access point, and gather and improve the data quality from 320 territories in France, while driving adoption of the NetEx standard to improve interoperability of transport data across the EU member states. The access point will be available on transport.data.gouv.fr.

Ishan's work involves seeking and openly publishing the data about each territory, but also approaching expert technicians to provide support for each access point (which is more challenging). By doing so, Etalab hopes to create not only a national access point, but a transport data social network that connects producers and users of transport data across Europe.

> *The idea is that transport.data.gouv.fr acts not only as an access point but as a social network. So for each data point you've got the data file but also the ability to ask questions to the person from that territory that can best answer them.*

Key takeouts

- In the UK, transport data is gathered by operators at a national level, authorised by the government, whereas France data gathering is decentralised between 330 distinct territories
- Transport Systems Catapult (TSC), who also attended the workshop, has been tasked by UK Department for Transport with developing a national access point for the UK. Etalab's experience has learnings for TSC.

Slides: view Ishan Bhojwani's presentation here.

Want to find out more? Please contact Ishan at ishan.bhojwani@beta.gouv.fr

[18] National Access Points can take various forms, such as a database, data warehouse, data marketplace, repository, and register, web portal or similar depending on the type of data concerned and provide discovery services, making it easier to fuse, crunch or analyse the requested data sets.
[19] European Commission (2017) 'National Access Points' ec.europa.eu/transport/themes/its/road/action_plan/nap_en

Working across borders in France and Spain – and what this could mean for the UK and France

Julien de Labaca – Transfermuga

Summary:

Julien de Labaca presented the story of Transfermuga, from a portal for cross-border mobility between France and Spain (in the Basque Country) to a cross-border planner, to an open data project.

The project started with a simple idea: a portal as a 'single location' for information on cross-border travel that would redirect to existing sites if the user needed more information. This portal launched in 2015.

However, Transfermuga quickly realised that a portal would not be enough and that users needed a route planner. For scoping reasons, this route planner was limited to certain provinces in the south of the Basque Country. The open route planner was open to all actors, who all adhered to a framework agreement, which committed them to joining a central purchasing group, and importantly to joining a 'medium-to-long term open data project'.

Julien mentioned that the creation of the route planner was mainly an opportunity to lead a project based on transportation open data. The actors involved included two railways, three long distance bus lines, and five urban bus lines. The process for opening data was phased, with a simplified choice of licences (owner, Open Database License (ODbL), and Etalab) that nudged towards the most open of those three (Etalab). Julien concluded his presentation by discussing the future of Transfermuga, which includes moving towards the European NeTEx standard, and a common data feed.

Key takeouts:

- The biggest challenges of the opening data process were not technical, but related to the management of data, and the organisational approach of the project.

- Do not neglect the political arena. Even if the projects are essentially technical, political intervention (at the local or national level) often has a very strong impact on the calendar for the different tools.

Slides: view Julien de Labaca's presentation here.

Want to find out more? Please contact Julien at julien.delabaca@naen.eu

Five reasons developer experience (DX) matters for open transport

Eugena Ossi – Five by Five

Summary:

Eugena explained why the developer experience matters in the transportation sector. She defined the developer experience as “anything that a developer touches, from using a product to source library codes, raw data, open source code.” Since developers are primary users, their experience of using code, data or portals is very important.

Eugena presented five reasons why developer experience is important for open transport:

1. First, developers are humans. Understanding why they use the data, why it is important and what they can get out of it are key elements to consider. Eugena stated that no matter how good the data is, “if you don’t have developers using [it], you have nothing.”
2. Giving access to documentation is also crucial because this will help developers use the product.
3. Transparency is the third reason: being honest and having reliable software and data helps gain credibility.
4. Maintaining the developer community is an important asset because the more involved developers are, the more likely they will contribute to the community.
5. Finally, developers sustain innovation. Indeed, once developers start using a product, they will iterate and improve it, which fosters creativity and the emergence of new products.

Key takeouts:

- Developer experience is important because the easier tools used to design, test and maintain software programmes are, the more they will be used.

- Presenting transport data in a developer friendly way will lead to more innovation in the transport sector.

Slides: View Eugena Ossi’s presentation here (from slide 26).

Want to find out more? Please contact eugena@fivebyfive.io

Mobility-related projects at OpenDataSoft

Fanny Goldschmidt – OpenDataSoft

Summary:

Fanny presented examples of how OpenDataSoft clients are using open data platforms and portals to share and encourage the reuse of open transport data. Her key message was that mobility-related data can be useful outside of the mobility field, and that sharing it openly can lead to unexpected uses by a diverse range of organisations and individuals.

One of the examples Fanny shared is Waze[20] – a global community-based traffic and navigation app – and the city of Seville, who are working together to implement a two-way data exchange. The city of Seville is using the service to identify and address traffic jams more quickly and efficiently.

Another is a pilot project in Paris: the city has set up pedestrian and bike counting sensors; air quality sensors; noise pollution sensors; and car traffic data (a mixture of mobility data and non-mobility data) to think about traffic redeployment around one of the busiest roundabouts in the city.

A final example she gave is that of the city of Rennes, whose open data portal, also powered by OpenDataSoft, has allowed Handimap to develop a journey planner for disabled citizens. Sharing transport data openly can lead to unexpected benefits!

Key takeouts:

- Mobility data can be useful to organisations who operate outside of the mobility field.
- The operation of motorways in the UK is by a government-owned company (Highways England) whereas in France operators are private. This has implications for the release and availability of open data**.**

Slides: View Fanny Goldschmidt's presentation here.

Want to find out more? Please contact fanny.goldschmidt@odsoft.com

[20] See: waze.com

Open Transport as a platform for open innovation ecosystem

Bertrand Billoud – Kisio Digital

Summary:

Bertrand, the Head of Marketing and Communication at Kisio Digital, introduced Navitia, an open source software that "builds cool stuff with locomotion". Navitia technology, Kisio's core open reactor, allows: download of a open source software with six features (eg journey planner, timetables); download and usage of an API; and access to 400 datasets and a community of over 10,000 developers from 25 countries on the OpenDataBar.

Bertrand explained that although the data is 'official data' and originates from transit agencies, it may not always be high quality. To help address this, Navitia continues to do more work with crowdsourced open data from OpenStreetMap. For example, the team ran projects in Ghana and Nicaragua, where they cleaned and redistributed data on the portal. It is necessary to provide clean data because "all the re-users are asking for good data".

However, the platform doesn't produce data: it acts as a middle-man between the producer and the user. The teams often hears back from the users asking for better quality data, but rarely get feedback from producers, which is why it is crucial to connect data users with data producers.

Bertrand disclosed that when they first built the platform they were not sure who the users would be, and in the end, examples he gave were very diverse and ranged from SNCF's passenger mobile information application to Facebook's conversation web services application.

> *...we didn't know what kind of people would use the data, the software, the API – and first we thought is was only in the mobility sector but now we see that there's a lot of usage in different kinds of sectors like real estate and recruitment.*

Key takeouts:

- Navitia's objective is to enable the creation of simple mobility digital services while providing the open source software (with six key features), an API and the access to the OpenDataBar.
- Transport data benefits the transport sector as well as other sectors, such as....

Slides: View Bertrand Billoud's presentation here.

Want to find out more? Please contact bertrand.billoud@kisio.org

The history of open data in France and the UK: differences and similarities

Samuel Goëta – Datactivist

Summary:

Samuel, the co-founder of Datactivist, presented his views on the background of open data in the UK and France, and explained how it relates to the transport sector. He described how, in the UK, the open data journey began in 2004 with OpenStreetMap. To avoid misinterpretation of what can be open and what cannot, the Open Knowledge Foundation and Rufus Pollock then put together a definition. In Samuel's view, the official birth of open data happened in the US in December 2007, where a group of leaders gathered to discuss and define the term 'open data'. Then, Sir Tim Berners-Lee worked on the launch of data.gov.uk as well as the Open Data Institute with Sir Nigel Shadbolt. You can read more about the history of open data in the UK here[21].

France has a different background, as described by Samuel: "Open data appeared in France in a very peculiar setting" – explaining that the French government used to sell data, but stopped this practice inline with European Union regulation[22]. With the open data movement growing in the UK and the US, at the end of 2010, the French government created Etalab, to coordinate the sharing of public data.

Samuel said that another difference between the two countries is that the Freedom of Information (FOI) law in the UK is much stronger than in France. The UK responds to more than 300,000 requests every year from citizens via the government platform. Whereas in France, the law is "quite old and quite weak as well". The French government does not have this same requirement to address citizens' requests for information.

Regarding the transport sector, Samuel highlighted that he finds most issues originate from the supply side, such as government: "Governments tend to often open the data without consulting the public, without replying to the freedom of information request, without really listening to what the public wants."

> *Governments tend to often open the data without consulting the public, without replying to the freedom of information request, without really listening to what the public wants.*

He then presented a new initiative: 'Dodo Data', which will aims to radically improve the way Freedom of Information requests on specific datasets are dealt with. Samuel's clear message is that he believes that France and the UK have strong open data communities and that there is huge potential for collaboration.

[21] Wikipedia (2016), 'Open data in the United Kingdom', en.wikipedia.org/wiki/Open_data_in_the_United_Kingdom
[22] Transparency International (2017). OPEN DATA AND THE FIGHT AGAINST CORRUPTION IN FRANCE. webfoundation.org/docs/2017/04/2017_OpenDataFrance_EN-3.pdf

> *Something that unites France and the UK is that we have vibrant open data communities across all channels , with many stimulating discussions.*

Key takeouts:

- Although the UK and France did not start the open data movement at the same time, nor have reached a similar maturity, they both have driven communities eager to take the movement forward.

- Freedom of Information (FOI) laws are more powerful and widely used in the UK.

Want to find out more? Please contact samuel@datactivi.st

Catalogue

Zakaria Bouziane – Transdev

Summary:

The aim of Transdev's Catalogue[23] is to create a global open data platform in the transport sector, and build a community around it, where users exchange and consume data.

Zakaria, Lead Developer at Transdev, explained that the aim is to give data ownership to publishers who upload data to the platform. As the platform neither controls nor edits data, full responsibility is given to the publisher. When users spot errors, they can inform the platform which then notifies the publisher. The platform has several features such as notification features, enabling the subscriber to receive news and/or updates about a specific dataset. The code is open source and people are encouraged to contribute, copy, learn from and use the code and data.

Regarding community building, Zakaria shared that publishers often express their annoyance that data consumers take advantage of 'their data' and generate commercial value, while the publishers do not benefit from it. He emphasised that it is important to make clear that value sits in the growth of the transport sector, such as tourism, and not specifically in the data itself.

Key takeouts:

- Catalogue invites data owners to publish data using the most open licences to help foster innovation the transport sector.
- Even in a sector like transport, which has produced many successful case studies, it can be difficult to 'sell' the value of 'open' to data producers.

Slides: View Zakaria Bouziane's presentation here (from slide 139).

Want to find out more? Please contact zakaria.bouziane@transdev.com

[23] See: catalogue.global

Transport data case studies: UK

Tom Forth from ODI Leeds, Vincent Lara from Etalab, and Christopher Barnes from Highways England during the UK France Transport Data Workshop's afternoon Unconference.

This section presents summaries of the case studies presented by transport professionals based in the UK. Each case study includes:

- Summary of the presentation
- Key takeouts from the presentation
- Link to the presentation's slides
- Contact details of the presenter for further details

Please note that the views expressed in the case studies and presentation are the views of the presenters, and not necessarily the views of the ODI.

Examples of collaboration on transport data: Lyon and Birmingham

Andrew Radford – Birmingham City Council

Summary:

Andrew shared his experience of working on EU-funded projects (Opticities), and particularly the close relationship between Birmingham and Lyon that had developed through a project on multimodal journey planning.

Working on this project (and other European ones) has unearthed interesting anecdotes and illuminating insights on the differences between the UK and France. For example, while the UK excelled at data strategy work, European partners often excelled at the implementation stage. He gave the example of an EU project where a team from Gothenburg (Sweden) were introduced to the Electronic Transfer of Notifications (ETON) standard[24] which had already been developed in the UK, and then built a system for roadworks which improved on the UK version.

Another interesting difference was that because of the emphasis on different standards/metrics, different data is collated. In the UK, local authorities hold/steward data on bus stop locations, but do not collect data on the number of people on the bus. In France, the situation is reversed.

Andrew concluded his presentation with a reflection on the nature of European projects and how projects and collaboration often stop when the funding ends. These abrupt conclusions illustrate one of the key challenges: sustainability.

> *My experience is that the UK did a lot of the beard-stroking thinking, but the French partners and some of the other European partners were better at implementation and actually getting on with it and delivering.*

Key takeouts:

- In Andy's experience of EU-funded projects, British partners are very good at the reflective data strategy, and French partners very good at the implementation stage.
- Collaboration between cities funded through EU projects often grinds to a halt once the funding ends. Ensuring the sustainability of these partnerships is a key challenge.

Slides: View Andrew Radford's presentation here (from slide 137).

[24] UK Department for Tranport (2013), 'New Roads and Street Works Act 1991. Technical Specification for the Electronic Transfer of Notifications (EToN) assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/181675/eton-6-technical-specification.pdf

Want to find out more? Please contact andrew.radford@birmingham.co.uk

Public transport open data in the UK, and what ODI Leeds has done with it

Tom Forth - ODI Leeds

Summary:

ODI Leeds is one of the ODI Nodes (ODI Nodes are franchises of the ODI, hosted by existing organisations). Tom explained that in the UK, most of the transport power is currently centralised in London and speculated that Manchester and Birmingham would be the next major cities to become centres of transport power. He noted the current problem that, while the number of bus journeys and use of open data in transport has doubled in London over the last 25 years, it has halved in other big English cities[25].

What has been done in the UK?

- All stops are open and accessible through the National Public Transport Access Nodes (NaPTAN). They are well maintained, correct, available on open licence and cover all of Great Britain. However the challenge is linking postcodes to addresses, which requires a fee and a licence.
- There are weekly-updated and high-quality timetables for buses, trains, trams, ferries, and coaches in Great Britain.
- Fares are available as open data only in London, whereas fares are unregulated and not always available openly elsewhere.
- Usage of public transport can be tracked but most of the details are commercially sensitive and not shared.

Key takeouts:

- The number of bus journeys and use of open data in transport has doubled in London over the last 25 years, but has halved in other big English cities.

- All bus stops in the UK are openly available through NaPTAN; in France bus stop locations are not openly available.

Slides: View Tom Forth's presentation here (from slide 50).

Want to find out more? Please contact tomf@odileeds.org

[25] Department for Transport (2018), 'TableBus 0103' gov.uk/government/statistical-data-sets/bus01-local-bus-passenger-journeys#table-bus0103

Engaging with your community of open data users

Rikesh Shah - Transport for London

Summary:

Rikesh presented the work Transport for London (TfL) does to engage with its community of open data users. The numbers are impressive, illustrating why TfL is seen as a worldwide leader in the field. Around 14,000 developers are registered to access data, and 42% of Londoners use an app powered by TfL data. Nearly 700 apps are powered by TfL data. The value of open transport data is £130 million per year according to the latest report by Deloitte[26].

TfL is now using third-party data for its API as opposed to creating its own datasets independently. For example, the team work with Kings College, whose sensors collect air quality data across London. They also partner with organisations such as National Car Parks and are making concerted efforts to bring other relevant datasets into the data ecosystem. To Rikesh, this level of impact is achieved more through culture change, than through technology. He noted that it needs: championing at board level; to be presented as a customer project, rather than a technological one; and requires early engagement at the design stage, ideally with champions across the company.

TfL is moving towards new challenges around data partnerships:

- How to ensure tech players not only use TfL data, but that TfL starts getting (enhanced) data back from some of them?
- How to crack the issue around procurement, so that the smallest innovators are well positioned to bid for certain contracts and operate in a more corporate environment?

> *There's an argument that says: I can't make 'my data' available because if I do I might go out of business. Well, it's completely a false argument. If you give the customer the information they need, and they want, that will create a better journey which will support your revenue lines*

Key takeouts:

- Use different techniques to engage with different types of users.
- As a large corporate, it can be difficult to procure from the smallest, most innovative organisations in the field.
- Academics can be as useful as (and cheaper than) management consultants when looking at the possibilities of open transport data.

Slides: View Rikesh Shah's presentation here (from slide 93).

[26] Transport for London (2017), 'New study quantifies value of open data to London'. https://blog.tfl.gov.uk/2017/10/13/new-study-quantifies-value-of-open-data-to-london/

The role of ‘open’ in the development of new mobility services

Giles Bailey – TravelSpirit

Summary:

TravelSpirit is a community which aims to develop an open approach to the future of mobility, and in particular looking at how to make ‘open’ work for smaller cities in the UK (ie beyond London).

Giles discussed TravelSpirit’s ‘openness index for cities’, one that and captures good and challenging practice in a range of cities. This methodology is openly available on TravelSpirit’s website and the company is keen to test it in other international cities.

The presentation concluded with a discussion of TSio Protocol[27] and thoughts on how blockchain could potentially solve some of the biggest issues facing transport, and particularly around transport ticketing. This is a particular issue in smaller cities, that often have multiple operators, and thus multiple ticketing options. The benefits of blockchain around data maintenance, and data exchange should not just be solely for the financial world or the gaming world, but could also brought into the transport context.

> *Blockchain potentially provides a route to solve a lot of the problems that we’ve had around the country – making ticketing work across different operators particularly with private bus networks.*

Key takeouts:

- Blockchain technology could be used to tackle some of the challenges of new mobility, particularly the challenge of making ticketing work across many different operators (see TSio Protocol[27]).
- There is a need to be cautious about new mobility solutions simply enabling new monopolies or oligopolies. An open approach to the future of mobility could help address this concern.

Slides: View Giles Bailey’s presentation here.

Want to find out more? Please contact Giles at giles.bailey@travelspirit.io

[27] TSio Protocol (2018), TSio Protocol, tsioprotocol.com

Challenges of working with travel data in the UK and France

Jean-Gabriel Audebert-Lasrochas, Trainline

Summary:

Jean Gabriel presented the challenges of working with transport data from the perspective of a private sector user: Trainline, Europe's leading train and coach app. His presentation focused on the challenges of working with French transport data.

The first barrier is that there can be a confusion between open data, and simply publicly available data. Some transport data producers in France publish in a format that is not machine readable.

Another barrier is the charges made for API queries: in the airline industry for example, there is a charge for excessive transactions (exceeding 1,000 queries) that don't lead to a booking. There are similar restrictions when dealing with rail data in France. A final barrier is the fear factor associated with Big Tech and GAFA (Google, Apple, Facebook, and Amazon): concern that this (non commercial) data in an open format will only benefit large (US) companies.

Jean-Gabriel concluded his presentation by stating that public undertakings are often referred to as "a piece of their country". His hopes are that the next reform of French and European mobility will provide an opportunity for 'truly open rail data'.

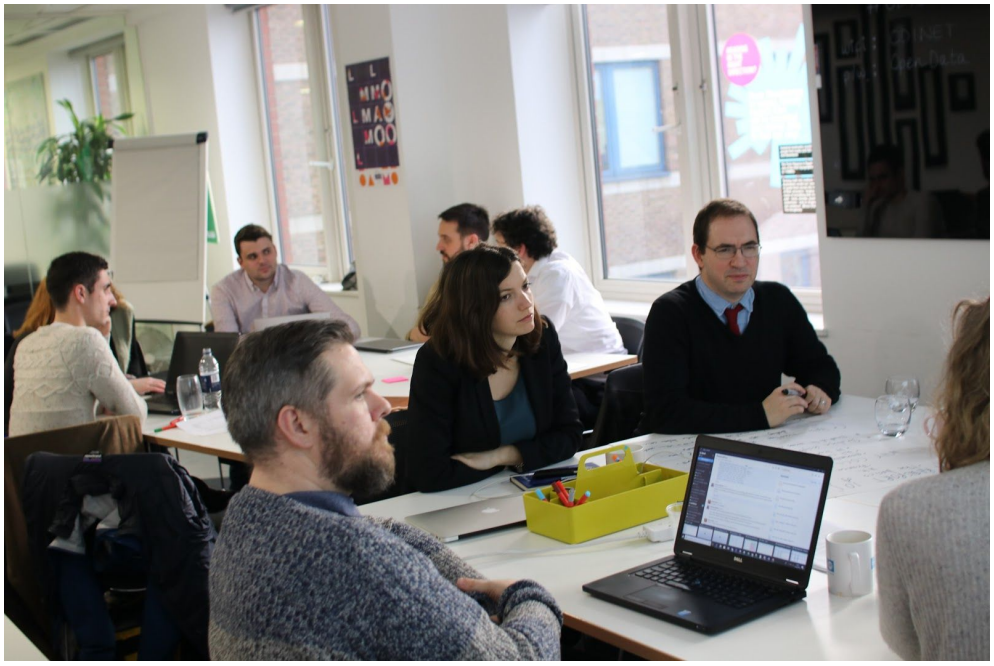
> *What we need is mandatory fair, reasonable and non-discriminatory access to raw (non commercial) data and the right products to allow us to build customer centric tools. In France there are still some limitations that prevent us from offering real value to our customers*

Key takeouts:

- Publishing open transport data doesn't just benefit GAFA, but a much wider set of data users.
- Open data in transport is not just about train timetables: delays etc are also important.

Slides: view Jean-Gabriel's presentation here (from slide 122).

10 ideas for cross-country transport data collaboration



Fanny Goldschmidt from Opendatasoft, Andrew Radford from Birmingham Council and Rick Bruce from ITO World prioritising ideas for cross-country collaboration between France and the UK

What are promising avenues for collaboration between the UK and France?

The workshop concluded with a series of 'unconference' group discussions, culminating in a discussion on the most promising avenues for collaboration. (An 'unconference' is a participant-oriented meeting where the attendees decide on the agenda, discussion topics. The informal and flexible program allows participants to suggest topics of their own interest and choose sessions accordingly). From these, we have derived 10 ideas for cross-country transport data collaboration:

1) Demonstrating the economic impact of open transport data in Europe

Proving the economic value of openness in transport is crucial to get politicians on board. This idea was highlighted by Rikesh Shah who noted TfL and Deloitte's economic impact report[28] which shows that the release of open data by TfL is generating annual economic benefits and savings of up to £130M a year. A

[28] Transport for London (2017), 'TfL's free open data boosts London's economy' tfl.gov.uk/info-for/media/press-releases/2017/october/tfl-s-free-open-data-boosts-london-s-economy

continent-wide equivalent could be valuable.

Some workshop participants mentioned the danger of over-promising economically, particularly with respect to job creation, as it gives politicians the opportunity to shut down if the jobs don't materialise.

2) Developing open source transport data conversion tools (particularly from GTFS to NeTEx standard)

The most widely discussed 'quick win' was the creation of open source tools to quickly convert transport data from national formats to one another. In particular, looking at conversions between the TransXchange (UK) GTFS (Global) and NeTEx (European) standards.

In fact, participants from the workshop have already taken this on board and created an open source tool that converts UK public transport timetables from TransXChange format to GTFS format. The tool is available on Github.

> *There's about four or five open source conversion tools on GitHub, none are perfect but they're better than nothing. Connecting all the open source conversion tools would be valuable*

3) Drafting 'Transport 101' market summaries for both countries, that will help private sector operators understand key differences

Attending the workshop made participants realise how different the two markets are. At basic level, we know that the French market is more state owned, and the British one more market dominated. But what about centralised/decentralised? Or the number of ticketing options in particular cities? A quick summary of the markets could give smaller organisations the chance to know at a glance whether their solution could work in the other country's market. Participants also mentioned that at a local government level, the opportunity to learn from existing cities – rather than starting afresh – is an efficient use of resources at a time when budgets are stretched.

> *I'm coming from a private enterprise point of view. Something like this is a good opportunity for me to understand more about the landscape in France and whether our product could work there.*

4) Facilitating dialogue between politicians, transport data providers, and 'GAFA'

French citizens (and therefore politicians) are generally perceived as having more hostile views towards 'Big Tech and GAFA (Google, Apple, Facebook, and Amazon) than in the UK. Recent research from the European Commission[29] (2017), finds that just 53% of French citizens think technology has a positive impact on society, v 70% of British citizens.

However, our conversations revealed that the broad areas of concern are now equally shared. These include the fear that large tech players will 'crush' smaller competitors. Solutions that have been tried (for example in Lyon) include price discrimination (charging large players, but not smaller competitors) but results have been disappointing: none seem to pay. Another concern, is that Big Tech is not sharing back its use of open data. Facilitating dialogue between politicians, transport data providers, and GAFA is the best way to address these concerns.

> *A proposed solution to GAFA dominance seems to have been charge different amounts to different customers. You could offer data for free to startups and you could try to charge big players for the access to the data… but [so far] it hasn't really worked, and in many ways goes against the principles of open data*

5) Sharing best practice on the inclusion of open data clauses in transportation contracts

The group shared the example of certain municipalities in France (such as Lille) that have started including open data requirements for franchisees who win the operation of transport lines. Tracking whether these requirements are successful could create interesting lessons, not only within France, but for UK cities as well. This is particularly the case when dealing with cities of a similar size.

> *It's interesting that in Lille's new franchise for public transport they have added open data requirements. I think UK cities (and French ones) would do well to look at this and see whether it works or not.*

[29] European Commission (2017), Eurobarometer on Attitudes towards the impact of digitisation and automation on daily life (March 2017 Fieldwork). Access report here

6) Ensuring smaller towns do not suffer from 'transport data exclusion'

App developers respond to market incentives, and therefore tend to concentrate on the big cities where there are naturally larger markets. Smaller towns and rural areas can therefore face a form of digital exclusion, where because of limited market size, operators don't dedicate the required resource to develop the solutions they would for larger cities, or in certain cases even collect the data in ways they would for larger cities.

> *Sometimes, if you're a small village and your data isn't being collected, it's like you are you just kind of chopped off and not visible on the map.*

7) Evaluating the impact of different licenses for open data and innovation in transport

One key question raised on the day was how transport providers who open datasets start receiving (potentially enhanced) data back from some of the bigger players that use it.

The ODbL is used a lot in France by local authorities, and forces users to share any enhanced data that incorporates the ODbL-licensed dataset. In other areas in France, open data clauses have been inserted in franchise contracts.

On the other hand, the use of sharealike licences can slow innovation[30] as it makes it more likely people will have to consult lawyers or product managers about what they should do with data. Empirically evaluating the impact of different licences for open data use in transport was seen by participants as a valuable activity.

8) Making ticketing (particularly in smaller cities) more user friendly to work across multiple providers

Purchasing tickets can be difficult for customers – particularly in smaller cities across the UK and France, and when dealing with a succession of different operators, and multiple private bus and rail providers. Giles Bailey suggested that certain aspects of blockchain technology look promising in helping address some of the issues around ticketing. Could this solution help in France as well as the UK?

> *Go outside of London, and each bus operator had its own app, different prices of tickets on the app versus if you paid by cash. Then you have to get on a train which is another app, another unfathomable ticketing structure.*

[30] UK Authority (2018), 'Can there be reciprocity for open data?' ukauthority.com/data4good/entry/7957/can-there-be-reciprocity-for-open-data

9) Including a wider range of European countries on collaboration on Transport Data

Finally, the group mentioned that while the UK and France were ideal initial candidates given their open data expertise, this initiative could also be extended to other European countries. This is particularly the case given that operators and transport data users will be dealing with similar issues, particularly around standards and NeTEx.

Appendix

Workshop: participant organisations

Organisation	Country
OpenDataSoft	France
Transdev	France
Five by Five	France
Lille Metropole (Mobilité)	France
Transfermuga	France
Kisio Digital	France
Trainline	France
Ministre Economie (Attache Transport)	France
transport.data.gouv.fr (Etalab)	France
transport.data.gouv.fr	France
Datactivist	France
Travelspirit	UK
DEFT153	UK
Highways England	UK
Arcadis	UK
TFL	UK
ODI Leeds	UK
Transport Systems Catapult	UK
Department for Transport	UK
Ito World	UK
Birmingham City Council	UK