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# State of Play: Re-use of Transport Data

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## Keywords

Open Data, Transport Data, Traffic, Public Transport, PSI re-use, Europe, Cases, Apps

## Abstract

This Topic Report focuses on the re-use of transport data in European Union member states. The research includes an assessment of the state of play in terms of re-using transport data and highlights applications and services. The author has conducted a survey and interviews with both transport data re-users and apps developers. The report highlights best practice for both transport data producers opening up their data as well as projects re-using transport data. To conclude the report identifies possible barriers for the re-use of transport data in EU member states.

The findings of this Topic Report suggest that there is growing demand for transport data. Whilst many transport data producers have yet to respond properly to the growing demand for transport data from citizens and developers, there are also success-stories where data providers have opened up transport data, leading to the creation of new and innovative applications.

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## 1 Executive Summary

This Topic Report focuses on the re-use of transport data in European Union member states. The research includes an assessment of the state of play in terms of re-using transport data and highlights applications and services. The author has conducted a survey and interviews with both transport data re-users and apps developers. The report highlights best practice for both transport data producers opening up their data as well as projects re-using transport data. To conclude the report identifies possible barriers for the re-use of transport data in EU member states.

The findings of this Topic Report suggest that there is growing demand for transport data. Whilst many transport data producers have yet to respond properly to the growing demand for transport data from citizens and developers, there are also success-stories where data providers have opened up transport data, leading to the creation of new and innovative applications.

## 2 Introduction

Transportation is a major metropolitan issue, which has a direct impact on economic strength, environmental sustainability, and social equity. When is the next tube coming? How long does it take to travel from A to B? Is it better to take the train or the Bus? To answer these questions we need access to transport data. Transport data is highly relevant to citizens' everyday lives, whether they are using private or public transport, or a mixture of both. Businesses and industries are highly dependent on having access to information about transport and traffic to improve logistics and planning. One of the types of Public Sector Information (PSI) which is most in demand is transport data.

The evolution of Web 2.0 technologies and the increasing dissemination of smartphones have enabled developers to create a variety of new apps and services which re-use transport data.

As a result, the demand for high quality transport data which is in a machine-readable format and is openly licensed to allow for re-use in commercial and non-commercial products and services is rapidly rising. But all these Apps rely on one thing: that transport data is technically and legally open, allowing it to be re-used. Whilst some transport services providers (both Public Sector Bodies and private companies) have been reluctant to make their data available, others are slowly adopting a more flexible approach to making their data available to developers outside of the public sector.

## 3 What is transport data?

Transport data includes any information about transport systems such as aircraft, marine vessels, railways, metros, buses, as well as traffic information on highways and roads. Transport data includes but is not limited to statistics about accidents, casualties and safety, traffic levels and congestion, and information about infrastructure such as stations, roads and bicycle trails as well as travel times, time tables, maps and the like.

## 4 Is transport data PSI?

Transport data cannot be considered PSI in all cases. In some countries, public transport such as railways, metros and buses are not run by Public Sector Bodies (PSB) but by private or semi-private companies. In some cases public transport services formerly run by PSBs have been outsourced and privatised. As a result, the question of whether data about transport services is PSI (and thus a matter for the PSI-Directive) is not easy to answer and depends on the specific legal framework and on specific contracts between government authorities and the private companies undertaking the transport services. Whilst transport

data produced by PSBs is considered PSI, the same data produced by a private company might not be considered PSI but as an asset and intellectual property of the business in question. However, one could argue that if public transport is a public task of government authorities which is simply delivered by a company acting as a contractor, then the transport data produced should be considered PSI and thus be available for re-use under the rules of the PSI-Directive.

## 5 Who is producing transport data?

Transport Services are often organised and run by local administrators of municipalities, urban districts or of rural areas, as well as by national governments and the transport industry. As seen above, there are different players producing transport data and these different players have different interests and needs. Whilst some transport services providers (both Public Sector Bodies and private companies) have been reluctant to make their data available, others are slowly adopting a more flexible approach to making their data available to developers outside of the public sector.

## 6 Who is opening up transport data?

Given the scope of this topic report, it is not possible to give a comprehensive overview of all of the local government authority initiatives in the European Union for opening up transport data for re-use. The following examples show the variety of levels and approaches.

### 6.1 UK: HM Treasury

On 29<sup>th</sup> November 2011 the UK government announced further details on Open Data Measures. According to the Autumn Statement 2011,<sup>1</sup> the UK Government is to release vast quantities of train and bus data as well as data about rail fares in machine-readable formats and under the Open Government Licence (OGL), allowing for it to be re-used:

*Train and bus data - The Government will work with the transport industry to make available by April 2012 timetable and real-time train and bus information to support the development of innovative applications to improve passenger journeys. This measure will support the development of a real-time transport information market, helping passengers make better travel decisions and businesses to better predict logistics and travel needs. This measure will release under the Open Government Licence (OGL) comprehensive timetable and real-time train and bus information as machine-readable and machine-processable data, as well as locational information about the rail network and its railway stations. Unless otherwise stated, the commitments to release this data will be for April 2012.*

*Department for Transport (DfT) will work with the Transport Industry to make*

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[http://www.cabinetoffice.gov.uk/sites/default/files/resources/Further\\_detail\\_on\\_Open\\_Data\\_measures\\_in\\_the\\_Autumn\\_Statement\\_2011.pdf](http://www.cabinetoffice.gov.uk/sites/default/files/resources/Further_detail_on_Open_Data_measures_in_the_Autumn_Statement_2011.pdf)

available the following rail data sets:

- Rail timetable information on a weekly basis (December 2011)
- Real-time running data from Network Rail
- Location data about Great Britain Rail network
- Location data about GB rail network stations

DfT will also work with Traveline to release the following data relating to buses:

- Traveline National Dataset on a weekly basis (Great Britain buses); and
- Next Buses API of planned and real-time information at 350,000 GB bus stops (April 2012).

**Rail fares data** - The Government will consult in early 2012, through the Fares and Ticketing Review, on providing open access to rail fares data, giving passengers and business better information and enabling them to make the most cost-effective travel choices. DfT will work with the rail industry to ensure that full data on rail fares is made available to passengers and business. DfT will consult as part of its Fares and Ticketing Review on how the rail industry could provide this data in a way that protects passengers against potential misinterpretation of complex data on fares levels and restrictions. In addition, DfT will set out a way forward for Rail Transparency including Open Data in the forthcoming Rail Command Paper. Releasing this data will boost the market for fare finding and comparison services such as online search engines or mobile apps. This could also include comparisons between different modes of transport. We would expect this to result in savings for passengers and business.

## 6.2 France: Conseil général de la Gironde

In July 2011 the local public administration of the French Département Gironde launched a project called “Datalocale” opening up public data - including transport information - in standardised and machine-readable formats.

The project re-uses transport data, which is exported from a proprietary application and processed in an open source tool<sup>2</sup> developed by the Centre for Studies on Networks, Transport, Urban Planning and Public Buildings (CERTU). The data is then published in XML-Trident and GTFS format to contribute to the development of new services and promote the use of interoperable formats. In developing their policy of opening up public data, the Gironde and Aquitaine regions have chosen the Open Data Base License – ODBL for the data published at Datalocale. The aim of the project is to get an automated update process and to aim for the publication of real-time transport data.

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<sup>2</sup> <http://www.chouette.mobi/>

Technology used: Oracle, Java, PHP. Website: <http://www.datalocale.fr>

### 6.3 French Railroad Company, SNCF opens the dialogue

Another remarkable initiative has been undertaken in January 2012 by the French Railroad Company SNCF, by starting an online dialogue<sup>3</sup> with the open data community to find out what developers are asking for and what should be done. At first sight, one might think that [data.sncf.com](http://data.sncf.com) is the new open data website of the SNCF, the National Corporation of French Railways. Not yet. The company preferred to launch a consultation website before opening up its data. Anyone can add their thoughts on open transport data to [data.sncf.com](http://data.sncf.com). Although SNCF seems to be ready for open data, other public transport operators in France are still reluctant. RATP, the state-owned subway operator for the Paris area, recently refused to let other app developers use its map for free. This inspired CheckMyMetro,<sup>4</sup> a startup that was forced to remove the RATP map from its smartphone application, to organize a subway map design contest.<sup>5</sup>

### 6.4 Greece: Athens Urban Transport Organization

As of September 2011 the Athens Urban Transport Organization<sup>6</sup> announced the availability of the public transport data (routes, schedules) for the City of Athens under a CC-BY-v3.0 license. The data is currently provided through the Geodata Portal<sup>7</sup> of the Greek Government and follows the GTFS format.

Interestingly enough one of the first users of the data is Google Transit, whilst numerous Greek companies are working hard to integrate the data in their products and services.

“We expect that the immediate gains for the public and the visitors of Athens will serve as another solid example of the importance of open data.” Mr. Athanasiou, a member of the [geodata.gov.gr](http://geodata.gov.gr) team said.

According to Mr. Athanasiou the trigger for the release of the data was the ongoing demand from the re-user community, as first expressed at the GeoDataCamp<sup>8</sup> in 2010.

### 6.5 EU: Looking for pan European multimodal travel planner

On 6 June 2011, Vice-President of the EU Commission Siim Kallas, EU Commissioner for transport, launched the First Smart Mobility Challenge<sup>9</sup> to the industry and the general

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<sup>3</sup> <http://data.sncf.com/>

<sup>4</sup> <http://www.checkmymetro.com/>

<sup>5</sup> <http://checkmylabs.tumblr.com/>

<sup>6</sup> <http://oasa.gr>

<sup>7</sup> <http://geodata.gov.gr/geodata/>

<sup>8</sup> <http://www.geodata.gov.gr/geodatacamp/mediawiki/index.php/GeoDataCamp2010>

<sup>9</sup> [http://ec.europa.eu/transport/its/multimodal-planners/index\\_en.htm](http://ec.europa.eu/transport/its/multimodal-planners/index_en.htm)

public to get Europeans moving differently by developing or submitting ideas for Europe-wide journey planners.

As the European Commission believes citizens are entitled to travel in a way that best suits their needs, it launched the challenge to stimulate the development of truly integrated multimodal and cross-border journey planners. Multimodal travel is a key part of the European Commission's strategy for the future of transport,<sup>10</sup> aimed at making transport more efficient and clean and ensuring a high quality of service.

The Challenge, which was open until 15 October 2011, was composed of two parts:

- Operational European (or at least cross-border) multimodal journey planners;
- New, bright ideas of how to develop a truly European multimodal journey planner – ideally including reservation and ticketing facilities to make sure people can also book their whole journey online.

The journey planners submitted to the Challenge were pre-selected by the European Commission. Twelve of them have now been put to a public vote.<sup>11</sup> The public vote opens on 5 December 2011 and will last until 13 January 2012. A jury of experts will judge the ideas.

The winners will be announced in Brussels in February 2012. They will be invited to take part in the ITS World Congress in Vienna on 22<sup>nd</sup> to 26<sup>th</sup> October 2012 where they will be able to present their planners and ideas at the Commission stand.

## 7 Who is using transport data?

Transport-service-providers themselves and other public authorities traditionally use transport data for better planning and to inform their customers and the general public. Transport data is also widely re-used by businesses and developers outside the public sector to build information services, tools and devices such as journey planners and navigation software.

### 7.1 The emerging re-use community

The first point of reference for anybody interested in transport data is the international Google Group "Transit Developers",<sup>12</sup> which has more than 500 members. This group is for software developers both inside and outside transit agencies who want to discuss the re-use of transit software, open transit data, and interesting things that they've built. The group focuses on the US, simply because there is much more transport data available for re-use and in consequence there are many more re-users building projects on top of the

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<sup>10</sup> [http://ec.europa.eu/transport/strategies/2001\\_white\\_paper\\_en.htm](http://ec.europa.eu/transport/strategies/2001_white_paper_en.htm)

<sup>11</sup> [http://ec.europa.eu/transport/its/multimodal-planners/vote-on-journey-planners/index\\_en.htm](http://ec.europa.eu/transport/its/multimodal-planners/vote-on-journey-planners/index_en.htm)

<sup>12</sup> <https://groups.google.com/group/transit-developers>



data.

On January 21<sup>st</sup> 2012 TransportationCamp,<sup>13</sup> a free "unconference", was held in Washington DC for the 3<sup>rd</sup> time, bringing together transport professionals, technologists, and others interested in the intersection of urban transportation and technology. TransportationCamp raises awareness of opportunities, and builds connections between disparate innovators in public administration, transportation operations, information design, and software engineering.

Compared with the size and the activity of the re-use community in North America and the quantity and quality of the Apps and services which are built by re-using transport data, the respective community in Europe appears to be falling behind. However over the last two years there are a couple of new and innovative projects in Europe which re-use transport data. Although Europe boasts more than 100 different journey planners, not one of them covers all countries and all transport modes. The technology exists and the need is there for travellers to have the practical tools which allow them to choose how to travel, be it quickly, cheaply or in a way that least affects the environment.

Inspired by all these challenges, a new Working Group on Transport Data<sup>14</sup> has been initiated at the Open Knowledge Foundation.

## 7.2 Trafiklab and TravelHack

A very interesting approach has been taken by the Swedish initiative Trafiklab,<sup>15</sup> which aims to increase the use and the quality of public transport. Trafiklab is an initiative by Interconnection,<sup>16</sup> Stockholm Transport,<sup>17</sup> and, as a research partner, the Viktoria Institute.<sup>18</sup> The aim is to offer an API with access to all of Sweden's public transport data.

TravelHack<sup>19</sup> was the first innovation competition of its kind, and had a special focus on improving how people travel in a sustainable manner. The competition took place on October 8<sup>th</sup> and 9<sup>th</sup> at the Department of Applied Information Technology, Goteborg University, Sweden. TravelHack invited teams of excellent developers, designers and creators to take on the challenge to design and implement operational prototypes which envision the future of digital services for sustainable mobility. The competition resulted in the creation of more than 20 innovative Apps. Prizes were awarded in different categories.

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<sup>13</sup> <http://transportationcamp.org>

<sup>14</sup> [http://wiki.okfn.org/Working\\_Groups/Transport](http://wiki.okfn.org/Working_Groups/Transport)

<sup>15</sup> <http://www.trafiklab.se/>

<sup>16</sup> <http://www.samtrafiken.se/Samtrafiken/>

<sup>17</sup> <http://sl.se/>

<sup>18</sup> <http://www.viktoria.se/>

<sup>19</sup> <http://www.travelhack.se/>

According to Rudmark from the Viktoria Institute, the competition was a major success in regards of community building and media attention for the topic of sustainable public transportation and transport data re-use.

### 7.3 Research: Innovation for sustainable everyday travel

“Innovation for sustainable everyday travel (ISET)”<sup>20</sup> is a four-year research program in the Västra Götaland Region in Sweden. The project aims to develop a better understanding of how digital information infrastructure and related services can contribute to the expansion of sustainable travel in the transport system. The project brings together public transport authorities, private service companies and research organisations to stimulate the creation and development of tomorrow’s digital services for the everyday traveller. In Work Package 2 of the research project, Daniel Rudmark, from the University of Borås and Viktoria Institute, is working to answer the question: “How can intentions of information providers, i.e. in this case transport authorities, be carried over by APIs and information services to third-party actors in a distributed development environment?”

## 8 Re-use Showcases

Given the relevance of transport and information about it for citizens, businesses and society as a whole, there is a great potential for both commercial and non-commercial re-use. There are currently hundreds of Apps re-using transport data in the EU member states. The following examples are chosen to highlight the variety of products and services available. A comprehensive list does not exist at present.

### 8.1 iRail

The Belgian iRail project commenced around September 2008 as a mobile alternative to the official NMBS/SNCB site. The idea of iRail, which was developed by a group of commuters, was to provide a simple interface to quickly look up train departure times in Belgium.

As outlined below in more detail, the project has faced legal challenges from NMBS/SNCB, the National Belgian Railway Company. In 2010 the company sent a ‘cease and desist’ letter to stop iRail from using their data as it was copyrighted according to the European database laws. The case great sparked political and media interest and the project has been able to continue to function.

In January 2011, the iRail NPO was established, making iRail now more than a mobile website. iRail is specifying an API for anyone to implement or use, and is further developing the iRail site and the accompanying BeTrains applications for various platforms. The community at this moment consists of around 35 people developing various projects in addition to the API ([api.iRail.be](http://api.iRail.be)) and is open to anyone who is interested in developing it further. iRail has developed a web service for public transport data. The old version ([api.iRail.be](http://api.iRail.be)) handled around 70k requests a day. The new version ([data.iRail.be](http://data.iRail.be)) was

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<sup>20</sup> <http://web.viktoria.se/iset/>

released on the 5th of December.

The data used includes traffic information, weather reports (api buienrader), real-time train information and static bus information for De Lijn and MIVB/STIB. In spite of attempts to work together with the different Belgian railway companies, much of the data still needs to be scraped individually. Several companies have begun developing their own mobile apps, (NMBS info & Railtime) to compete with iRail.

iRail has been talking to bus and subway companies and has acquired the right to use data after lengthy negotiations with De Lijn and MIVB/STIB.

Apart from the legal challenges, challenges faced have included the lack of mobile apps and of well-implemented user interfaces. iRAil has implemented an open data strategy for all Belgian public transport companies.

Website: <http://npo.iRail.be>

## 8.2 Mapnificent

Begun in March 2010, the volunteer-run project was created to provide demand-side arguments for open data. Mapnificent shows the area one can reach with public transport from any point in a given time. It is available for several dozen major cities in Europe, Canada, the USA, Australia and New Zealand.

The site enhances access to timetable information, real time travel information, information on fare structures and accessibility information.

An example for how Mapnificent works and of the challenges it faces is the Greater Manchester area, where the transport system has been deregulated with currently around 40 different bus operators and numerous rail operators in the areas, all of whom are in competition with one another. Transport users are often left with little information to make value choices and many transport routes are treated as monopolies with asymmetric charging policies often perceived as being unfair. According to the project, it aims to fix the “opaque transport system” in the Greater Manchester area by making data available, which, the project hopes, will allow people to make informed choices as to what mode of transport that they take, from where and at what time. In the long term, the project hopes to reduce peoples’ reliance on private vehicles, to help to abolish the asymmetric and unfair charging policies which mean that more dependent communities are charged more, and to allow for better transport planning.

The project has already accessed the Greater Manchester area-wide bus timetable data and, in co-operation with the transit authority, they are encouraging private bus operators to release fare data. Together with the transit authority, the project also hopes to embed open data across transport infrastructure in the region in the future.

Challenges have included countering arguments from operators regarding command and control and allowing competitors to see fare structures and timetables. Also, proprietary technologies have made it difficult to access data. The project has sought to overcome these issues by co-operating with the Directorate of Transit Authority and has also advised

various working groups. In addition, the project has also organised numerous events to promote its work.

The project uploads data to the DataGM website. In the near future, there will be an implementation of scraped real-time data. Currently, the Transit Authority is bidding for money to create a more intelligent data system that outputs open data both statically and in real time.

Website: <http://www.mapnificent.net>

### **8.3 FixMyTransport**

FixMyTransport is a UK site set up by the charity mySociety in 2010. The aims of mySociety are to build websites which give people simple, tangible benefits in the civic and community aspects of their lives as well as to teach the public and voluntary sectors, through demonstration, how to use the internet more efficiently to improve lives.

FixMyTransport was built to help people solve common public transport problems. It is targeted specifically at smaller problems such as persistently broken ticket machines, buses that always leave early, or other inconveniences such as incomprehensible rules.

At a basic level, FixMyTransport makes it easy for people to send problem reports to the companies or authorities responsible for those problems, and also provides an easy way to gather support from other people, whether fellow commuters, colleagues or friends, in support of requests.

As well as being aimed at helping people to solve transport problems, FixMyTransport represents an experiment to discover whether a sufficiently well designed internet service can help activate members of the public to actively work for change. It is hoped that FixMyTransport will also help people by becoming part of the wider internet community of transport activists and campaigners where experts and more experienced users can transfer their skills to people who have little or no experience of lobbying for change.

The site uses NaPTAN (National Public Transport Access Node database), NPTG (National Public Transport Gazetteer), and NPTDR (National Public Transport Data Repository), all available via <http://data.gov.uk>. It also uses the National Operator Codes database from Traveline.

The project has faced several technical challenges. According to FixMyTransport, there is no easily obtainable dataset with a unique identifier for what the general public would think of as bus routes. The project thus uses the journey data in NPTDR to identify routes, but this is prone to errors. A further problem is that NPTDR is only updated annually so the data on routes can become outdated through the course of the year. The project hopes that the new national datasets will be updated more frequently. NPTDR also currently does not use a nationally unique set of operator codes, so the project has had to create heuristic code and admin interfaces to assign operators to routes correctly and to update operators and routes when members of the public report corrections.

FixMyTransport is built using Ruby on Rails, PostgreSQL with PostGIS spatial extensions

and run on Debian servers.

Website: <http://www.fixmytransport.com>

## 8.4 Open Rail Data

The Open Rail Data project commenced in May 2011 around a loose-knit group of varying numbers of people who were keen to solve the issues surrounding the opening of rail data in the UK.

The project was motivated by the closing of a previously unprotected API in the Live Departure Boards service of the National Rail Enquiries (NRE). This had vague conditions surrounding its use and enforced licensing and pricing was imposed once it became public. The project is looking to help make similar positioning data available with less onerous and subjective licensing conditions - broadly similar to a Code of Practice. Furthermore, the project wants to use the data Network Rail (NR) already has available to industry partners and make this accessible and understandable to the public. The project hopes to add alternative representations to existing NRE services in terms of visualising train data, such as through integrated journey planners. It is also hoped that the barrier to entry for other people wanting to work with real-time train data will be lowered through the project.

In the project's view,

“NRE continues to licence data under "open but not open enough" conditions - for example, data.atoc.org has a licence for timetable data updated weekly which includes a Creative Commons license with an extra term about not putting a negative spin on the data.” (Interview with Open Rail Data)

Currently, NRE are seen as having the monopoly on rail data, and information about timetables, fares and real-time information is sold for a profit. Citizens' tax money goes in to funding Train Operating Companies, who fund the Association of Train Operating Companies (ATOC), who then re-sell the data they generate for a profit – even though one could argue that the taxpayers have already paid for the data.

The project analyses data, such as timetable information, from NR. NR had to make a policy decision internally to make this available, as this was the first non-industry request. Having obtained access to the data, the project had to agree to take a small subset of the available data initially, as expensive server software would have been required for the full feed.

The project runs on Linux, Apache, Ruby on Rails, RabbitMQ, and IBM WebSphere MQ.

Website: <http://www.openraildata.info/>

## 8.5 Open Train Times

Open Train Times was launched late in 2011. The site is a proof-of-concept, which uses Open Data from British Network Rail and ATOC to display static timetable information, and highlights the benefits of free access to public data. According to Peter Hicks, who runs Open Train Times, the plans for the near future are to display real-time information from Network Rail, as well as a map of train locations.

## 9 Potential barriers and conflicts

There have been several cases of conflict between transport service providers and transport data re-users in EU member states. In general, the conflicts arise from barriers on both the technical and the legal aspects of transport data re-use. Some of these conflicts have created a high degree of media attention whilst others have not. In some cases the conflicting parties have resolved the conflicting interests in out-of-court settlements, whereas other cases have been brought to court. As the author of the Topic Report is not a legal expert, the following discussion should not be regarded as a legal analysis of the cases. For the scope of this Topic Report only one case is introduced to showcase some of the potential barriers and conflicts surrounding the re-use of transport data.

### 9.1 Technical barriers

The main technical barrier often described by developers of websites and services that re-use transport data is that the data is often not available in machine-processable formats or over an API (especially real-time data). This is why many of these projects are actually using screen-scrape technologies to extract the unstructured information from official websites of the transport service providers. After the screen-scrape process the data has to be re-structured and transformed into machine-processable formats. This is time consuming and so generates high transaction costs, a burden which small projects might not be able to undertake. In some cases screen-scraping has also led to legal conflicts, in which the owners of the scraped websites argue that this is against their terms of use or a violation of their Intellectual Property rights e.g. database rights.

### 9.2 Legal barriers

Legal barriers often mentioned by people wishing to re-use transport data is that the data is provided with restrictive, incompatible or unclear licenses. If the license doesn't allow for re-use of the data, that's the end of the story. A problem is that the data is often licensed with restrictions such as a "non-commercial" clause or - even worse - an "only for private use" clause. If only private use of the data is allowed one can't build services or mash-ups of it. Missing or unclear licensing creates legal uncertainties and fear: Am I allowed to use the data? If so, for what purposes am I allowed to use it? If these questions are not answered unambiguously in a standard license, the potential re-user is forced to contact the data owner asking these questions. This again creates high transaction costs and is a burden a non-legal expert is unlikely to undertake. Another level of difficulty is introduced when a potential re-user is planning to combine multiple data sources in one mash-up. The question of whether two different licenses are compatible with one another is often hard to answer, and so again raises transaction costs and creates barriers.

### 9.3 The Belgian Case of NMBS/SNCB vs. iRail

One of the main providers of transport data is the Belgian National Railway Company (NMBS/SNCB). Until very recently, NMBS/SNCB had a restrictive policy on making its data available for re-use. One of the most important examples of this was the dispute between

NMBS/SNCB and iRail. iRail is a not for profit organisation that created a mobile alternative to the NMBS/SNCB website, providing a simple interface to look up train departure times in Belgium,<sup>21</sup> initially using data available via the NMBS/SNCB website.

In June 2010, NMBS/SNCB sent a formal letter to the founder of the iRail website, a student in computer sciences, asking for immediate cessation of iRail's activities. The Railway Company stated that its intellectual property rights were being violated. Much earlier, in 2008, the student had actually asked permission from the NMBS/SNCB to develop his website and to offer the railway data to iPhone users via this website. However, until the formal letter of 2010, NMBS/SNCB had not replied to this.<sup>22</sup>

As a first reaction, the iRail website was taken offline. However, a month later the website was re-launched, after encouragement from the Belgian Minister for Enterprise Vincent van Quickenborne. In a letter from its representing lawyer, iRail contested NMBS/SNCB's intellectual property rights on the data, and added that the Railway Company itself had failed to comply with its obligations to provide information to its customers and to use new technologies to facilitate the provision of information to its customers. iRail therefore asked that NMBS/SNCB would facilitate its mobile website by publishing the API of its database.<sup>23</sup>

NMBS/SNCB has now created its own application; it has dropped the complaint against iRail and has started a dialogue with the organisation. In the meantime, iPhone and Android apps are also available based on the iRail API.

Whilst the iRail-case has received a lot of media attention, they are not the only ones to have had trouble using transport data. There has also been an earlier dispute between NMBS/SNCB and Wasabi, the makers of an iPhone app named Trein België (Train Belgium). In August 2009, NMBS and Infrabel (the public company that manages the railroad infrastructure) sent a letter to Apple asking them to remove the Trein België app from the App Store. This was done in September 2009, without any consultation with the makers of the app, either from NMBS or Apple. As in the iRail case, the complaint was also based on NMBS's intellectual property rights. Wasabi tried to get the app back in the App Store, but it did not succeed.<sup>24</sup>

Two possible reasons could be indicated for the limited attention Trein België received from the media, politicians and activists. On the one hand, open data had not yet received the attention it has gained since the launch of data.gov.uk in 2010. On the other hand, Trein België was offered against payment under a commercial model in the App Store, whereas iRail was a non-profit initiative set up by a student, without any initial business

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<sup>21</sup> <http://npo.irail.be/about.html>

<sup>22</sup> <http://www.nickdemey.be/2010/06/16/weer-eeen-gemiste-kans-van-nmbs-irail-be-moet-stoppen/>

<sup>23</sup> <http://blog.tuinslak.org/wpRcontent/uploads/2010/07/S35CR410070513190.pdf>

<sup>24</sup> <http://www.iphoneclub.nl/41111/het-verhaal-achter-de-verdwijning-van-trein-belgie/>

model behind it.

Contrary to NMBS/SNCB, the Brussels public transport authority responsible for trams and buses (MIVB/STIB) does make its data available for the development of new products or applications. Data that can be used include the stops and their geolocation, the lines and their georoute, and the details and theoretical timetables for each stop.<sup>25</sup>

The user is required to use the most recent version of the data, to respect the graphic charter of STIB, and to use the STIB logo and slogan. However, no commercial use can be made of the data. One could question whether this last condition is not contrary to the PSI Directive, as STIB already has an agreement with Google to include the data in Google Transit.

The Flemish bus company De Lijn will in the future start providing data on bus transport in Flanders to iRail. So far, only the iRail servers will have access to the raw data, but iRail will provide support to other developers who want obtain the data from the iRail API. Currently, De Lijn is already teaming up with Google to provide the bus data on Google Maps.

This section about the case NMBS/SNCB vs. iRail is taken from the Topic Report: “PSI in Belgium, a slow journey towards open data?”<sup>26</sup> by Katleen Janssen published on the ePSI platform in October 2011.

## 10 Conclusions

Transport data in its multiple forms is one of the areas of PSI where there is great public demand and vast potential for developing innovative data reuse possibilities. This has been noted not only by PSBs and private companies in charge of providing transport services across the EU, but also by the European Commission as well as the open data community. A range of projects and initiatives have been launched across the Union to enhance citizens’ and companies’ access to this data and to promote its re-use in innovative ways, improving mobility, service levels and accountability. Re-use of transport data is however trickier than in other fields, as depending on the individual case it may or may not be considered PSI.

Re-use efforts have in the past been stymied by the fact that not all PSBs and companies are open to sharing data. Especially in the case of privatised services, companies may fear losing competitive advantages and have even gone so far as to sue data re-users. As in other fields of PSI re-use, technical difficulties have also been a challenge to the re-use efforts. In spite of these challenges however, transport data re-use remains one of the PSI fields with the potential to afford the wider public with the tangible benefits of PSI re-use, and to engage them more widely with the issue.

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<sup>25</sup> <http://www.stib.be/dataRsharing.html?l=en>

<sup>26</sup> <http://epsiplatform.eu/content/topic-report-1-psi-belgium-slow-journey-towards-open-data>



## About the Author

Daniel Dietrich was born in 1973 in Frankfurt, Germany. His academic work surrounds political science, computer science and communication science in Frankfurt and Berlin. He worked as Research Associate at Technical University Berlin, Department of Internet and Society until the end of 2011. He has been working for the Open Knowledge Foundation (OKFN), since 2009 and is Chairman of the German Chapter of the Open Knowledge Foundation. He is the Project Coordinator for the OKF Project Open Definition as well as the Coordinator of the Working Group on Open Government Data and the Working Group on Open Data in the EU. He is the co-founder of the Open Data Network, a non-profit advocacy organisation to promote Open Data, Open Government and Transparency in Germany and beyond. In 2011 he became Editor of the ePSIplatform.

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