



3 July 2020

National Transport Commission
Level 3/600 Bourke Street
Melbourne, VIC 3000
Australia

Submitted via www.ntc.gov.au

Dear Sir or Madam,

**National Transport Commission Discussion paper on
Government Access to Vehicle-Generated Data**

HERE Technologies (HERE) is a leading global provider of location data and services. For over 30 years, HERE has witnessed first-hand the growing role that digital mapping and location technology can play in improving people's quality of life – from making our roads safer to helping enterprises and cities work more efficiently.

We have realized that for everyone to benefit fully from these technologies we need a shared data platform that helps form partnerships and unlocks value for all. That is why we have opened up our platform to allow developers and organizations everywhere to access our map infrastructure and technology and create new, differentiating and value-added location-centric products through the HERE Platform.

HERE welcomes the National Transport Commission's initiative to explore policy options for government access to vehicle-generated data for road safety. The comments that we have provided today are similar to those that we have already made to the European Union (EU) on possible revisions to the European Commission's Delegated Regulation (EU) 2015/962.

General recommendations

In today's fast-paced digital technological environment, the regulatory framework should be competitive and foster the development of innovative business models. As such, the participation and added value of different stakeholders, both public and private, should be duly taken into consideration. In the European market, it has successfully developed a highly competitive marketplace on real-time traffic information (RTTI) while supporting the emergence of world-leading companies.

HERE calls on all future Australian policy initiatives related to RTTI to pursue continuous improvement of the existing framework, based on the harmonization of mobility-generated data sharing processes, while supporting the growth of innovative service providers.

To ensure proper continuity for the deployment and operational use of intelligent transport systems, the European system has established a differentiation between the safety-related traffic information (SRTI) and real-time traffic information (RTTI). HERE would like to highlight that any future revision of the Delegated Regulation (EU) 2015/962 should be aligned and preclude overlap with the processing of safety-related traffic information rules as set in Delegated Regulation (EU) 886/2013. It is also essential that existing and future RTTI services must have a corresponding business model to enable and maintain investment decisions by service providers. Lack of business models and stable regulatory decisions would hinder competitiveness and innovative opportunities in Australia.

Extending the Scope of the Delegated Regulation

Intelligent traffic monitoring, management and control on roads and other important transport corridors should be a nation-wide priority as it would enhance road safety and improve both transportation system efficiency and sustainability. HERE believes that road authorities and public road operators should make available high-quality road and traffic data to improve its accessibility and exchange, to be re-used and constantly updated.

HERE further encourages a scope extension to new data types, such as Urban Vehicle Access Regulations (UVARs) and information on re-fueling stations (including conventional and alternative fuels), recharging points, parking-related services, tolling stations, identification of tolled roads, applicable fixed road user charges and available payment methods, location of public transport stops and interchange points, location of delivery areas. Dynamic information should be also made available, including emergency vehicles and other special purpose vehicles affecting the conditions of the road.

HERE also strongly advises on the inclusion of other essential information such as regulations for automated driving, traffic components, i.e. traffic lights, road sensors, roads-works, or level-crossings. This would enhance the development of accurate related services for the benefits of end-users and supporting the deployment of connected and automated driving in the Australia.

HERE welcomes extending the geographic scope of the specification set beyond motorways and highways, as currently vehicles already collect real-time traffic information regardless of the classification of the road. Extending the geographical scope would also address the current problem of urban traffic data being unavailable in DATEX II and improve the possibility of widening the scope of TN-ITS.

HERE does not favour an expansion of the scope of the proposals for vehicle-generated data, beyond safety-essential vehicle data (already covered by Delegated Regulation (EU) No 886/2013). As recalled by the European Association of Vehicle Manufacturers (ACEA), OEMs invest heavily in safety and data sharing models. From the envisaged regulatory framework, it is doubtful if vehicle data sharing can or should be mandated. The current provisions of the ITS directive and its delegated act on RTTI facilitate data sharing with and through National Access Points (NAPs) but

cannot and should not be read as a mandate for the private industry sector. Considering that business models are nascent and evolving, sharing such vehicle data should remain on a purely voluntary basis and in the framework of commercial contracts between OEMs and other actors of the value-chain. Any mandatory requirements would also be prejudicial to business models of ITS service providers and ultimately could be detrimental to customers' acceptance. Nevertheless, HERE would like to point out that because significant investments from road operators into sensors underneath the road are needed, such investments would be significantly decreased by buying, on commercial basis, highly granular and self-sustaining probe data services from data aggregators.

Data Standards

Standards should play a key role in supporting the development and RTTI harmonization of RTTI services. Although DATEX II is the reference standard for road authorities and road operators, other standards, such as TPEG2¹, are widely used today by service providers to deliver RTTI services to drivers (see appendix 1).

Beyond DATEX II, TN-ITS should be considered for new traffic data types such as the location of urban vehicle access restrictions and EV charging infrastructure related data. Also, SENSORIS, a data exchange format for sensor data to be exchanged with the vehicle as the source, should be considered as the most appropriate standard for vehicle sensor data (vehicle-to-cloud/cloud-to-cloud). RTTI should encourage the re-use of existing standardized data schemes.

Therefore, we urge the NTC to consider the above-mentioned standards as complementary means to enhance data harmonization in Australia.

Recommendations for National Access Points (NAPs)

The deployment of NAPs under the current Delegated Regulation should be further encouraged as representing a positive first step for wide-spread, transparent and easily accessible transport-related data to interested parties. It is essential for road transport authorities to distribute and make real-time, quality data available to gain the ecosystem's trust, which is required to reach nation-wide accessibility of high-added value traffic services.

In that regard, HERE would like to underline that Australia could benefit from the establishment of a NAP serving as coordination and/or supervisory mechanism.

The industry stands ready to contribute to such attempts as well to propose other innovative solutions to improve the overall availability and accessibility of RTTI as strong public-private cooperation will be the key to success. Nonetheless, we emphasize that the delivery of high-standard RTTI services require in-depth expertise and technology investments, which ought to be respected and supported to strengthen the current Australian industrial and digital leadership.

In Conclusion

HERE does not favour any expansion to vehicle-generated data, beyond safety-essential vehicle data (already covered by Delegated Regulation (EU) No 886/2013). As recalled by ACEA, OEMs invest heavily in safety and data sharing models. From the envisaged regulatory framework, it is

¹ <https://tisa.org/technologies/tpeg/>

doubtful whether vehicle data sharing can or should be mandated. The current provisions of the ITS directive and its delegated act on RTTI facilitate data sharing with and through NAPs cannot and should not be read as a mandate for the private industry sector. Considering that business models are nascent and evolving, sharing such vehicle data should remain on a purely voluntary basis and in the framework of commercial contracts between OEMs and other actors of the value-chain. Any mandatory requirements would also be prejudicial to business models of ITS service providers and ultimately could be detrimental to customers' acceptance.

Current and future services must have a corresponding business model to enable and maintain investment decisions by service providers. Lack of business models and stable regulatory decisions would hinder competitiveness and innovation. Not respecting this principle would reveal being highly counter-productive for business and would impact the availability of quality of C-ITS Day 1/1.5 services in Australia. The only way to improve service quality and increase motivation to share data is under commercial terms.

Being able to process data on time, have technical analytics in place is the competitive advantage of service providers: making sure qualitative services come out of this is our top priority. One cannot become a service provider overnight. We urge the NTC to distinguish between raw sensor data and enriched data (adding intelligence). Such commercial models that are in place work well according to market rules and we do not see any need to change this. We would not want a fragmented world where every partner delivers one piece of the puzzle: we want to work in an ecosystem (with the current model) where service providers act as a necessary bridge between OEMs and road authorities.

Also, taking the EU regulations into consideration, it is not the role of a NAP to invest in maintaining accessibility and quality of data. Major challenges in terms of resources and technology on the public side are to be foreseen. Private actors like HERE stand ready to assist public authorities overcome current challenges commercially with the HERE platform facilitating data storage, exchange, standardization and accessibility in a neutral and open fashion.

Instead of focusing on B2G data, Australia should follow the EU ambition to improve access to new data types, such as Urban Vehicle Access Regulations (UVARs) and information on refuelling stations (including conventional and alternative fuels), recharging points, parking-related services, tolling stations; identification of tolled roads, applicable fixed road user charges and available payment methods, location of public transport stops and interchange points, location of delivery areas.

Dynamic information should be made available, including emergency vehicles and other special purpose vehicles affecting the conditions of the road, where HERE also strongly advises on the inclusion of other essential information such as regulations for automated driving, traffic components, i.e. traffic lights, road sensors, roads works, or level crossings, which would enhance the development of accurate related services for the benefits of end-users and supporting the deployment of connected and automated driving.

Taking into account HERE's involvement in EU initiatives such as the EU Data Task Force (see appendix 2) since its inception, our experience in that project demonstrates that the focus should not lie on B2G data but rather focus first on G2B as this is where we see the biggest remaining

challenges today. Even in this instance, with the original principle of reciprocity, governments still have a long way to go to readily share data.

Standards should play a key role in supporting the development and harmonization of SRTI and RTTI services. Although DATEX II is the reference standard for road authorities and road operators, other standards, such as TPEG2 are widely used today by service providers to deliver RTTI services to drivers. Beyond DATEX II, TN-ITS should be considered for new traffic data types as well. Also, SENSORIS should be considered as the most appropriate standard for vehicle sensor data (vehicle-to-cloud/cloud-to-cloud). HERE strongly encourages the re-use of existing standardized data schemes and calls on Australia to consider the above-mentioned standards to enhance data harmonization around the world.

HERE favours international harmonization through United Nations Economic Commission for Europe (UNECE) working party 29, and notably within the working party on Automated/Autonomous and Connected Vehicles (GRVA) in order to avoid a scattered implementation of regulations and to ensure that connected and automated driving will be effectively deployed around the world.

We thank you for the opportunity to comment on our experience in Europe on the National transport Commission's Discussion Paper on "Government Access to Vehicle-Generated Data."

Please feel free to contact me directly or my colleague Ben Wilson (benjamin.wilson@here.com or +61 48 887 3278) if you have any questions or need further clarifications. You can also learn more about HERE at www.here.com or <http://360.here.com>.

With best regards,

A handwritten signature in blue ink that reads "Alvin Lee". The signature is fluid and cursive, with the first name "Alvin" and the last name "Lee" clearly distinguishable.

Alvin Lee
Head of Government Relations, Asia Pacific
HERE Technologies

APPENDIX 1



Joint Comments on the Survey for DG MOVE Real Time Traffic Information Study

16 April 2020

Introduction

ITS Service Providers **BE-MOBILE**, **HERE**, **INRIX** and **TOMTOM** wish to jointly submit feedback to DG MOVE's Real Time Traffic Information study survey. We greatly support the Commissions endeavour to improve real-time traffic information in the European Union by exploring ways to possibly revise the Commission Delegated Regulation 2015/962. This document is our primary response to the consultation, it provides contextual information as leading real-time traffic information service providers on topics of common interest where we have agreed joint positions. We believe our points need to be considered more during this study and in the possible future legislative process. Also, we firmly believe it is essential, that existing and future RTTI services must have a corresponding business model to enable and maintain investment decisions by Service Providers. Lack of business models and stable regulatory decisions hinders our competitiveness and innovative capabilities in Europe.

Data and Services: Recognizing the Difference

There is an important distinction between data and services in the real-time traffic information domain. As detailed in Article 2 of Delegated Regulation 2015/962, there are separate definitions for static road data, dynamic road status data, traffic data, real-time traffic information and real-time traffic information services. However, while these definitions are very high level, this consultation does not take them into account and does not clearly distinguish between traffic data and traffic services. This is critically important when addressing data ownership, access rights and license conditions.

Commercial Traffic Information Services: Procured via Tenders

Traffic Information Services can be provided by both the public and the private sector. Beyond the most commonly known use case of real-time traffic information, services can also be historic and predictive: analyzing probe data to observe mobility trends and movement patterns and predicting what the traffic situation might be in the future.

RTTI service providers disrupted the traditional traffic management market more than a decade ago with cost-efficient probe data-based approaches of keeping road managers informed about the traffic situation on the road network. Prior to this change, making such observations were typically hardware based: loop detectors & cameras fed into physical traffic management centres staffed by personnel. Both markets still exist, and traditional hardware providers are increasingly evolving their products to be more smart and connected solutions. The current business model for private RTTI service providers is to acquire, license and integrate various data sources (incl. probe data) from 3rd parties and create value-added services that are sold to public authorities via commercial tenders. Europe has a highly competitive market with multiple service providers offering solutions in the RTTI domain.

Understanding the difference between public and private RTTI services and the private sector business model is critically important when considering data access, but the questions posed within the consultation do not clearly reflect this point, especially Q86, 87 and 92. RTTI service providers license various data sources to use within their commercial services and in the majority of cases they are not in a legal position to distribute RTTI data feeds themselves.

Vehicle Position & Historic Traffic Data: A Core Component of Existing Commercial Traffic Information Services

Vehicle position data, also known as probe vehicle data, is a highly valuable dataset to better understand how fast traffic is moving and where traffic jams are located in real-time traffic flow information. It can also be analysed historically to better understand origin-destination demands in historic traffic information. Following the mandatory introduction of eCall and the market development of connected services, a significant proportion of vehicles are already equipped with GPS technology and this is expected to continue increasing over time.

RTTI service providers are already acquiring, licensing and integrating such data sources as part of their commercial traffic services designed for road authorities and road operators. RTTI service providers ingest such data as either CSV or Protobuf and create a dedicated service in DATEX II. While public authorities may wish to acquire, license and integrate this type of data for themselves as indicated in Q.79, the investment, technical expertise and sophistication of technology required to do this must not be underestimated.

As part of a highly competitive European market, RTTI service providers are well placed to continue supporting our public authority customers with high level quality traffic flow and historic traffic information services on various data sources including probe vehicle data.

DATEX II: Not the Only Relevant Standard in the RTTI Domain

In the RTTI domain there are different standards along the value chain for different typology of customers and data types. DATEX II is the preferred delivery channel for road authorities and road operators for dynamic RTTI and TN-ITS¹ is the preferred delivery channel for static RTTI. It is not the delivery channel used for real traffic information to drivers which use TPEG2² and enterprise customers which commonly use Google's Protobuf³ standard.

In the context of the possible revision of the delegated regulation as indicated in Q93, DATEX II should be used for dynamic RTTI, whereas TN-ITS should be the preferred delivery channel for static RTTI such as static speed limits. DATEX II and TN-ITS should be used for new traffic data types such as the location of urban vehicle access restrictions and EV charging infrastructure related data. But it is not suitable for vehicle location probe data, if this is ultimately identified as a required dataset.

Data Quality: The Underestimated but Essential Component

Good quality data brings value and underpins good quality services: the better the data, the better the service. Good quality data is data that can be used easily, is free from error and uses location referencing. It's complete, coded in a widely understood and standardized format and it's up to date. Creating and maintaining good quality data requires a sophisticated quality management system which comes with high implementation costs. Some public authorities, due to sustained, forward-looking investment in data collection, storage and processing infrastructure, have impressive feeds of good quality. RTTI service providers are increasingly using public traffic data feeds within their own RTTI services along with other data sources. However, the quality level of traffic data from many public authorities does not allow service providers to integrate them within their systems as it would reduce the quality of their services.

However, the consultation does not include any questions concerning how data quality can be improved. As leading RTTI service providers we firmly believe that data quality is important in the RTTI domain and data quality goes beyond just 'data updates' as referenced in the delegated regulation 2015/962 such as correctness, integrity, completeness, timeliness, accuracy, reliability, representativeness and robustness.

Regarding the responsibility of data quality as indicated in Q.86-93, we believe that data quality is a shared responsibility across the entire value chain. Data providers that create data in the first place should do their utmost to create the highest quality data possible and service providers which acquire and license such data also share the responsibility to maintain or even improve the level of quality.

Geographic Coverage: Required for the Entire Transport Network

Real-time traffic information is relevant for all classifications of roads, not just the motorways and highways of the TEN-T Network. Existing RTTI services for road managers and drivers cover all classifications of roads and in accordance with Q.16-72 we firmly believe that standardized and accessible RTTI data should be available beyond the TEN-T and cover all road classes. Extending the geographical scope of the delegated regulation in a possible revision would address the current problem of urban traffic data being unavailable in DATEX II and improve the possibility of widening the scope of TN-ITS.

Additional Traffic Datasets Required: UVAR, EV & Others

As more and more cities introduce urban vehicle access restrictions and deploy electric vehicle charging infrastructure, this type of information is becoming increasingly important to display in RTTI services and today sourcing such data if available is done locally. In accordance with Qs 77, 79, 81, 83 and 85 RTTI service providers welcome the intentions to include UVAR and electric vehicle charging infrastructure data in DATEX II/TN-ITS as additional data types as part of the possible revision of the delegated regulation. Furthermore, there will be additional traffic related datasets required for connected and automated driving in the future. For example, local traffic rules and policies will have to be established to permit if automated vehicles will be allowed to drive along certain public roads or not. This type of data and others should be included in a possible revision of the delegated regulation to make automation a reality.

National Access Points

In accordance with the questions defined in section 3, RTTI service providers welcome the development and deployment of National Access Points. They help increase the visibility of available traffic data and RTTI services in a given territory to large audiences. However, since the Delegated Regulation came into force in 2015, the deployment of national access points has been fragmented and slow and we call upon the European Commission and Member States to speed up their deployment.

There is a high need for a pan-European coordination mechanism to enhance efficiency and foster more efficient transport systems in Europe. Some members States already work on bilateral or trilateral initiatives to overcome hurdles and we strongly encourage this. Also, private actors can support public authorities maintain their databases and support with their data exchange. In addition, beyond national access points, we should also be open to other tools and mechanisms to facilitate access to data in the RTTI domain as the data economy continues to grow and more actors and solutions enter the market.

¹ CEN TS 17268

² <https://tisa.org/technologies/tpeg/>

³ <https://developers.google.com/protocol-buffers/docs/overview>



APPENDIX 2

HERE Technologies strengthens commitment to improving European road safety

- *HERE joins European 'Data for Road Safety' initiative*
- *OLP Marketplace to support OEMs in push to share their safety-related data*
- *BMW Group to be the first to release such data under Creative Commons license, starting July 1*

3 June 2019

Eindhoven, The Netherlands; ITS European Congress – *Safety first*. That is the message from HERE Technologies, which today announced that it is strengthening its commitment to helping improve the safety of drivers across Europe.

HERE has long championed the idea that sharing data is at the heart of safer driving. The company envisions tens of millions of vehicles sharing anonymized data with, for example, EU National Access Points, government transportation agencies, and service providers, enabling drivers and road operators to benefit from more precise and reliable warnings about potential hazards on the road.

Today, HERE outlined important new steps it is taking to move closer to realizing this vision.

HERE joins European 'Data for Road Safety' initiative

HERE today announced that it is collaborating with the EU Data Task Force (DTF) on a proof of concept called 'Data for Road Safety' aimed at bringing Safety-Related Traffic Information (SRTI) to road users across EU member states, in accordance with existing EU regulations.

Working together to make driving safer for all road users is at the heart of the DTF's work. Founded in 2017, the DTF supports the implementation of existing EU laws on access to safety services. By boosting access to safety data and enabling collaboration between vehicle manufacturers and countries, the DTF aims to enhance traffic safety for all road users.

The Data for Road Safety initiative involves pooling safety-related data from multiple sources, including road infrastructure and different brands of vehicles, and making it accessible to all project partners. The year-long trial will see participating organizations explore the different aspects involved in running such a data ecosystem.

Data for Road Safety was outlined today at a high-level roundtable of the DTF in Eindhoven ahead of this week's ITS European Congress. HERE, one of the 11 founding partners, will begin participating in the initiative in the role of data aggregator, an area in which it has deep experience. Furthermore, HERE will explore ways

of deploying its proven expertise in creating high-quality safety services for drivers. The HERE Open Location Platform (OLP) already powers location-based services created with live data from different carmakers.

Representing HERE at today's Eindhoven roundtable, the company's Chief Financial Officer Peter Meier said: "HERE Technologies has been at the forefront of the effort to turn vehicle sensor data into live services that enhance driver safety. We have shown that the technology is both commercially ready and globally available. Now the focus is on more industry players coming together in the spirit of collaboration to create truly scaled data services where, eventually, drivers of any brand of car can benefit from the experiences of others on the road. We therefore welcome the 'Data for Road Safety' initiative as a catalyst for further collaboration and look forward to contributing to its success."

HERE data marketplace to support OEMs and transport agencies in safety push

The HERE OLP is a collaborative location platform and home to global-scale location data, tools and services. It also integrates the world's first global location data exchange, HERE OLP Marketplace, enabling data providers to unlock value from their data by making it available to others.

To help promote an open data ecosystem to improve road safety, HERE today announced that it is committing to make European safety-related data distributed under a Creative Commons license (CC) accessible to Marketplace data consumers at no cost to them. Such data could come from vehicle fleets and road infrastructure.

BMW Group has announced that it will be the first carmaker to make a set of live safety-related data from its European fleet available through the Marketplace. The data, planned to be available from July 1, will include anonymized information collected by BMW and MINI cars, such as that related to slippery roads, poor visibility or broken-down cars.

Edzard Overbeek, CEO, HERE Technologies, said, "Through the Open Location Platform, HERE Technologies is creating a vibrant ecosystem where data can be exchanged to create applications and solutions that benefit people and society at large. Traffic safety is a fundamental societal need and requires industry-wide collaboration that we are pleased to facilitate. We commend BMW Group in taking the initiative, and invite others to join this effort."

HERE and safer driving

- HERE is fully committed to advancing road safety worldwide. The company supports the safer movement of vehicles with a range of location data and mapping technologies. These include traffic and incident data services used by carmakers and road operators as well as high-precision mapping for autonomous cars.
- HERE initiated and developed SENSORIS, the car-to-cloud data standard. Now an open-source initiative, SENSORIS has since become widely deployed across the industry, ensuring that data from one manufacturer can easily be combined with data from another.
- In 2017, HERE launched the HERE OLP as a place where organizations can more easily pool and share location-centric data. The HERE OLP powers the HERE Safety Services suite, a set of services derived from live vehicle data to creating a live depiction of the road environment.

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About HERE Technologies

HERE, the Open Location Platform company, enables people, enterprises and cities to harness the power of location. By making sense of the world through the lens of location, we empower our customers to achieve better outcomes – from helping a city manage its infrastructure or an enterprise optimize its assets to guiding driver to their destinations safely. To learn more about HERE, including our new generation of cloud-based platform services, visit: <http://360.here.com> and www.here.com.