

# **TN-ITS viewpoints on the Revision of the Delegated Regulation 2015-962**

Frank Daems

ERTICO, TN-ITS

[f.daems@mail.ertico.com](mailto:f.daems@mail.ertico.com)

22-4-2021



**TN-ITS**

Map Update Exchange



**TN-ITS GO**

Map Update Exchange

# Table of Contents

**Table of Contents ..... 2**

**Introduction ..... 3**

**Background ..... 3**

The TN-ITS ERTICO Innovation Platform ..... 3

ERTICO partnership ..... 4

**TN-ITS strategy assessment..... 5**

**Expected positive impacts from this future oriented TN-ITS strategy ..... 6**

A strong support for the ‘Vision-Zero’ initiative. .... 6

Cost decrease and operational efficiency increase ..... 6

A clear road to an early introduction of CAD (Connected Automotive Drive) ..... 7

Rich applications serving the cities’ needs ..... 7

**Recent opportunities enhancing the deployment of the TN-ITS strategy..... 7**

Successful TN-ITS service realizations across the European union ..... 7

The call MOVE/B4 2020-123 on NAP federation ..... 8

More data coming up ..... 9

Recent uptake in Data sharing initiatives from a vast amount of European cities ..... 9

International interests ..... 9

The availability of Supporting tools ..... 10

**Conclusion..... 11**

## Introduction

The TN-ITS innovation platform,<sup>1</sup> under the legal umbrella of ERTICO,<sup>2</sup> has assessed and benchmarked its current strategy with reference to the ITS directive and the related EU Delegated Regulation 2015/92 on RTTI (Real Time Traffic Information).<sup>3</sup> This document is a short summary of this assessment, the expected impacts and the opportunities that support the deployment of this strategy.

## Background

The EU Delegated Regulation 2015/962 establishes the specifications necessary in order to ensure the accessibility, exchange, re-use and update of road and traffic data by road authorities, road operators and service providers for the provision of EU-wide real-time traffic information services.

Especially related to the TN-ITS ERTICO Innovation Platform's activities and services, it also concerns the so-called 'static data' referring to 'base-layer map related data'.

Recently the SUPPORTING STUDY ON ACTIVITIES 3.2, 3.3 AND 3.4 OF THE NEW WORKING PROGRAMME OF THE ITS DIRECTIVE,<sup>4</sup> issued by VVA<sup>5</sup> in cooperation with ERTICO, has been published. This document contains a number of conclusions that can give guidance on the TN-ITS Innovation Platform's strategy viewpoints.

## The TN-ITS ERTICO Innovation Platform

This ERTICO Innovation platform is a strong multistakeholder platform that focusses on the needs of the market by maintaining and enhancing the specifications with regards to map data updates, supporting the implementation of 'base layer map related data' (Also formerly addressed as 'static road data').

---

<sup>1</sup> <http://www.tn-its.eu/>

<sup>2</sup> <http://www.ertico.com/>

<sup>3</sup> <https://op.europa.eu/en/publication-detail/-/publication/bd9092e5-1973-11e5-a342-01aa75ed71a1/language-en>

<sup>4</sup> <https://op.europa.eu/en/publication-detail/-/publication/043ee22b-643b-11eb-aeb5-01aa75ed71a1>

<sup>5</sup> <https://www.vva.it/en/economics-policy/>

The platform operations are focused to deployment and implementation of the data sharing service. The main activities of the TN-ITS Innovation Platform are grouped as follows:

### **Innovation and Strategy**

- Road mapping – priority setting in EU services – Standards definition on TN ITS;
- Supporting Road authorities to comply to the European Commission’s Delegated Regulation 2015/962 with regards to road map data;
- Assessment tools for public authorities to help their TN-ITS engagement intentions;
- Specification development for TN ITS services and data exchange;
- Several Workgroup contributions towards raising TN-ITS data exchange awareness among private and public mobility stakeholders.

### **Deployment Support**

- Availability of the UML (Unified Modelling Language) description of the TN-ITS data exchange service mechanism, supporting quick realisations in existing ICT infrastructures;
- Consultancy on adoption of the TN ITS standard services and local/regional/national implementation;
- Quality feedback (Feedback loop) test, as well as in operation (continuous) of TN-ITS services in early development stages.

### **Dissemination and licenses**

- Promotion of TN ITS services;
- Logo development and license (Visual) (In progress) to be granted upon compliance;
- Digital certificate license (Digital trust) (In Progress) to be granted upon request;
- Awareness creation (webinars and publications) service offered to all TN ITS Platform public and private members.

### **ERTICO partnership**

ERTICO’s partnership of 120 ITS- related stakeholders (public and private sector) ensures thought leadership activities, availability of professional expertise and cross fertilization opportunities, a profound knowledge base and wide dissemination and communication opportunities. Especially its related ERTICO Academy<sup>6</sup> activity can offer online and physical courses to public and private interested stakeholders, who wish to further expand and elaborate their knowledge on digitalisation and the mobility data space.

---

<sup>6</sup> <https://ertico.com/academy/>

## TN-ITS strategy assessment

The ERTICO Innovation Platform’s ‘TN-ITS reflection paper’ publication<sup>7</sup> on ‘The future of a common European mobility data space’ summarizes the TN-ITS Innovation Platform strategy for the coming years. This strategy, based upon actualized market insights, and agreed during the Innovation Platform’s GA (General Assembly) June 2019, starts developing and deploying activities focused a few important topics: expanding the availability of its map data – update services to new member states, expanding into EU cities and enlarging the specified TN-ITS data attributes to enable more applications in the mobility data space. These topics are related to the concern, expressed by some stakeholders, that there is lack (availability and changes) of relevant road data, especially beyond the scope of the TEN-T road network.

This strategic action is well in line with the VVA study conclusions that states:

*“RTTI is relevant for all classifications of roads, not just the TEN-T Network. Existing RTTI services cover all classifications of roads and therefore we believe that standardized and accessible data should be available behind the TEN-T Network and cover all road classes. Extending the geographic scope of the delegated regulation can help to solve the problem of data availability on static in the Urban context, where more precise RTTI is needed.”*

and:

*“An overall conclusion is that the geographical scope of Delegated Regulation 2015/962 should be changed to also **cover the entire road network**, not only for new data types but also for the data currently covered by the Delegated Regulation (i.e. static road data, dynamic road status data, traffic data (real-time)).”*

---

<sup>7</sup> <https://tn-its.eu/storage/uploads/documents/2020/10/22/TN-ITS-Reflection-paper-22102020.pdf>

## **Expected positive impacts from this future oriented TN-ITS strategy.**

### **A strong support for the ‘Vision-Zero’<sup>8</sup> initiative.**

Enhancing traffic SAFETY is the core focus of the TN-ITS ERTICO Innovation Platform, its members, and the objective for deployment of the TN-ITS service by many of the member states and road authorities. For instance, as a priority goal, the current TN-ITS GO CEF project enhances operational services in 5 leading European countries and introduces the TN-ITS service in 8 more European countries. This project prioritizes the sharing of data related to speed limits as a first objective to realise. It is a strong building block for realising ISA,<sup>9</sup> actively supported by ETSC as a core member of the TN-ITS ERTICO Innovation Platform.

More information on the topic can be found on the related webinar.<sup>10</sup>

In accordance with the EU strategies for safer road network, studies show that speed is the main factor in 30% of the fatal accidents, where 15% of the speeding offences are caused by drivers whose vehicle is registered in another EU country.<sup>11</sup>

This makes the EU cross border availability of reliable and harmonised speed limit data by (road) authorities a high priority and increasingly important.

### **Cost decrease and operational efficiency increase**

TN-ITS services share and exchange data between public authorities as data producer/collector/publisher and e.g. map makers, as data processors. Applying such a (de facto) standard ‘unified’ methodology greatly enhances the operational efficiency of data producers, as they only need to invest, develop and operate a single methodology to access public authoritative data, at the same time it can help to increase accuracy and freshness of digital maps for end-user services. A vast cost decrease is also achievable at the level of public authority, producing, collecting and publishing data, as implementing existing and proven methodologies avoid the need for development and testing of own data exchange schemes. Potentially public authorities can join their efforts and experiences, and possibly cooperating in issuing even joint tenders for implementation.

---

<sup>8</sup> [https://ec.europa.eu/transport/themes/strategies/news/2019-06-19-vision-zero\\_en](https://ec.europa.eu/transport/themes/strategies/news/2019-06-19-vision-zero_en)

<sup>9</sup> <https://etsc.eu/tag/isa/>

<sup>10</sup> <https://www.youtube.com/watch?v=TG9fwmJJ9AY>

<sup>11</sup> [https://ec.europa.eu/transport/road\\_safety/sites/roadsafety/files/pdf/statistics/dacota/edward-static-infog-traffic-offense-160914.pdf](https://ec.europa.eu/transport/road_safety/sites/roadsafety/files/pdf/statistics/dacota/edward-static-infog-traffic-offense-160914.pdf)

Combining both benefits lead to a quicker, less costly and less risky operations as a win-win potential for both involved public and private companies. Data quality and accuracy will increase in general by applying these types of data exchange methodologies.

### **A clear road to an early introduction of CAD (Connected Automotive Drive)**

The role of TN-ITS ERTICO Innovation Platform will act as a trusted and authoritative data source will be the cornerstone for future CAD applications, as the vehicles must understand the authoritative character of data and their software impose, e.g. traffic speed regulations and other traffic regulations on dedicated sections of the road.

TN-ITS, as the digital twin for physical road attributes, is the only source that is being fed directly by the road operators, thereby guaranteeing the possession of a 'logo of trust'.<sup>12</sup>

### **Rich applications serving the cities' needs**

The deployment of TN-ITS ERTICO Innovation Platform services in cities and regions will enhance the creation of rich value add third party applications. Amongst others we can mention e.g. as last mile optimizations for logistic transports to find optimal routes to their HUB destinations and improved traffic management options for cities to guide traffic via preferred routes, avoiding e.g. school areas are quiet area's like hospital area's etc.

## **Recent opportunities enhancing the deployment of the TN-ITS strategy.**

Fortunately, there are a few emerging opportunities that can enhance the deployment and proliferation of the TN-ITS services as a de-facto standard and trusted mobility data sharing mechanism across Europe.

### **Successful TN-ITS service realizations across the European union**

TN-ITS services are successfully operational in 5 EU member states, and being implemented by the end of 2021 in 8 more states. Service capability is continuously being expanded towards wider exchange of more road attributes. Data exchange and mechanisms are in the testing and deployment phase, enhancing the quality and the accuracy of data (the so-called TN-ITS feedback loop). The proof of successful operations, the vast experiences, the technical knowledge obtained from the several applied ICT architectures, the know-how of the implemented solutions, and the obtained awareness of policy and socio-economic factors that

---

<sup>12</sup> At the time of writing this 'logo of trust' is in development.

are related to the implementation of TN-ITS services, allow the TN-ITS ERTICO Innovation platform to be able to offer its guidance and advice to interested road authorities, member states, regions and cities interested in understanding the benefits of this data exchange mechanism and to reach realistic, quick and cost-effective deployment.

### **The call MOVE/B4 2020-123 on NAP federation <sup>13</sup>**

Recently the EC has launched the PSA Call MOVE/B4 2020-123. The results of this PSA will be used by the commission to enhance the implementation by the Member States of delegated regulations under Directive 2010/40/EU, as a major contribution to the establishment of the Common European mobility data space. A specific focus to data accessibility and exchange (task 4) is addressed.

Task 4 also explicitly asks for the further continuation and integration of TN-ITS -related activities.

Almost all EU Members States have expressed their interest to the TN-ITS ERTICO Innovation Platform to be involved in developing the data exchange standard and concept and to receive guidance on how to deploy the services, providing in this way a clear recognition of the necessity to reach a unified and common standard set in the field across the EU.

The activity under Task 4 within this proposal that answers to the DG MOVE Call, will include the following important priority TN-ITS topics:

- Alignment and harmonisation between all involved data sharing mechanisms (e.g. DATEX and public transport data):
  - Ensuring the integration of TN-ITS services as a part of the NAP federation architecture;
  - Aiming at the creation of an interoperable ecosystem including obtaining the required consensus and governance of information across data standards;
- Enhancement of the TN-ITS Specifications based on the CEN TS 17268:2018, by the TN-ITS community and also by other stakeholders, such as the DATEX community, taking into consideration the priorities of the TN-ITS Innovation Platform and NAP platform strategies;
- TN-ITS data enhancement to further develop the ‘Trust basis’ ensuring quality, integrity and security of data;
- A further and profound engagement action within in the European community aimed at member states, their regions and cities.

---

<sup>13</sup> [https://ec.europa.eu/transport/content/2020-call-for-proposals-nap\\_en](https://ec.europa.eu/transport/content/2020-call-for-proposals-nap_en)

## More data coming up

The recent IoT (Internet of Things) technical revolution will also support TN-ITS services towards exchanging greater amounts of different kinds of data attributes and their related data volumes.

IOT sensing is in its beginning of deployment. Sensors allow the quick recognition of physical road attributes and are able to register and check the digital twin compliance. Projects like 5GMeta<sup>14</sup> and ERTICO Innovation platforms such as SENSORIS<sup>15</sup> can play a big stimulating role in establishing creative solutions for a speedier digitalization actions to realize TN-ITS's data full digital twin.

## Recent uptake in Data sharing initiatives from a vast amount of European cities

The ERTICO City Moonshot<sup>16</sup> initiative, which aims to interview 300 cities (200 in Europe and 100 cities in other regions) on the topics of sustainability (air quality and climate crisis), data sharing and mobility as a Service (MaaS), reveals that European cities already have a great interest in sharing data. 96% of European cities believe that sharing data between public and private stakeholders can support to reach the cities objectives and overcome some of the mobility challenges they encounter. 73% of cities are already sharing their data and 87% of these cities would do it for free. Many cities have taken initiatives to build some related data sharing platforms to this effect.

However, these current city initiatives are very ad hoc, and mostly not based on existing standards such as TN-ITS and DATEX. We believe that adopting these standards can be a win-win situation for both cities, data processors and data consumers and this should be the second step with regards to the cities data sharing initiatives.

The revision of the EU ITS Delegated Regulation also looks to additional data types, mandating UVARs, static speed limits, traffic regulations and recharging/refuelling points etc.

## International interests

Whereas TN-ITS is very much a European initiative since its inauguration in 2013, with a continued support from the Commission to establish the European exchange of road data between authorities and map/service providers, there have been various expressions of interest in TN-ITS from outside of Europe as well. This is of no surprise as the challenges of

---

<sup>14</sup> <https://5gmeta-project.eu> : ERTICO ITS innovation project

<sup>15</sup> <https://sensoris.org/>

<sup>16</sup> <https://erticonetwork.com/ertico-city-moonshot-takes-off/>

maintaining digital map databases to enable safety and efficiency in vehicle & mobility technology are indeed global.

TN-ITS representatives have been informing relevant US stakeholders such as researchers, consultants and government agencies (e.g. DOTs<sup>17</sup>, NHTSA<sup>18</sup>), by participating to workshops or by discussions before / during the ITS World Congresses or industry meetings, e.g. Open Auto Drive Forum<sup>19</sup>. It is to be expected that President Bidens' recently announced Infrastructure Plan, with a strong focus on the digitization infrastructure (\$100B), will also renew or accelerate the interest of federal and state organisations in road data exchange.

Recently, a report was published in Australia by Queensland authorities and academia addressing the context and challenges for HD maps for automated driving. TN-ITS was explicitly referred to as technology for making changes of road data available. TN-ITS representatives and the authors of the report exchanged information at a call in March 2021 and agreed to continue discussions.

Via Jun Shibata, ISO TC204 WG3 Convenor and former representative of the Japan Digital Road Map Association (DRM) TN-ITS has reached out to current General Manager at DRM, Dr Oda, to investigate how TN-ITS-like services are operational in Japan for the maintenance of the map database for both the public sector and the private sector.

The TN-ITS platform and its representatives are also familiar with the EU-US-Japan Trilateral ITS Cooperation (Automated Road Transport), especially with the Digital Infrastructure informative subgroup.

## **The availability of Supporting tools**

In the meantime, a number of interesting tools have been developed in relation to TN ITS services that stimulate the dissemination of TN-ITS services. Amongst others:

### **The TN-ITS feedback loop**

This is a development as an operational tool to monitor the quality of the shared data. The tool is developed within the TN-ITS GO<sup>20</sup> project and is currently in evaluation.

---

<sup>17</sup> DOT: department of Transport

<sup>18</sup> <https://www.nhtsa.gov>

<sup>19</sup> <https://www.openautodrive.org>

<sup>20</sup> <https://tn-its.eu/tn-its-go>

## Mobile app development

The Flemish Road and traffic agency, (BE) developed the so called Movin' App.<sup>21</sup> This app is an excellent example how digitalisation can help in quickly feeding the authorities databases that feed the TN-ITS data exchange service.

## The availability of a related UML documentation

The UML (Unified Modelling language) TN-ITS description is a great aid to ICT developers to quickly achieve the accurate and fault free implementations of TN-ITS data sharing services. The UML complements the mandatory purchase of the CEN standard.

## Conclusion

TN-ITS welcomes the revision of the EU Delegated Regulation 2015-962, and specifically the law-maker's intention to extend the Regulation's geographic coverage and attributes which will also include an extension of static data types.

TN-ITS should be promoted in the regulation as an international recognized standard way for sharing the base layer map related (so called 'static') data. Quoting the VVA study:

*“For current data categories, the study concluded that static road data are essential for RTTI services and that mandating the availability of these data would incur limited costs. For this reason, **availability and accessibility of static road data should be mandated for the entire road network**”*

TN-ITS ERTICO Innovation Platform is fully committed to adhere these recommendations and enhances its activity and service offerings to these new opportunities and geographical areas.

---

<sup>21</sup> Reference to the Movin' App: <https://tn-its.eu/news/tn-its-go/tn-its-go-hosts-webinar-on-implementation-success-stories>