Working together on the implementation of the revised RTTI Delegated Regulation

Strategic session NAPCORE Multi Day Event

November 2023

Stephanie Leonard (TomTom), Rebeca Joaquin (Google), Annet van Veenendaal (NDW-NL)

What is this session about?

1. Revised RTTI DR?

2. Looking back at last years MDD's

3. Where are we now?
   - Quality rating proposal (SP's)
   - RTTI Taskforce (RA's)

4. Strategic discussion

Revised RTTI DR (2022/670)

- Provision of EU-wide real-time traffic information services
- Substitutes Delegated Regulation (EU) 2015/962
- As of January 2025

What's new?
- **Extension of geografical scope** from TEN-T to 'primary road network'
- **Obligations for both road authorities as serviceproviders**:
  - to work together on data quality
  - creating a public-private feedbackloop
  - The following **data must be re-used by serviceproviders** in their end services towards the road users:
    - Traffic circulation plans
    - Traffic reguliations and restrictions
    - Temporary traffic management measures.
- No obligation to digitization yet, but this will probably change with the revision of the ITS Directive
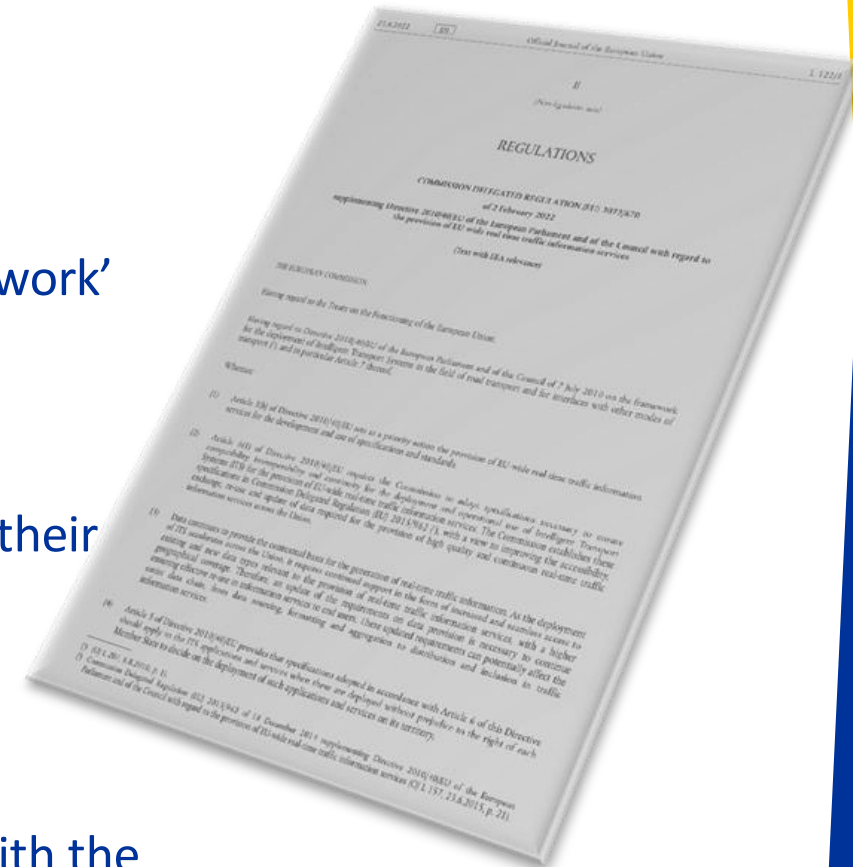
Recap Mobility Data Days 2022

- **Alignment between public and private parties is needed** in order to achieve the overlying goals: high quality and continuous real time traffic information services

- NAPCORE can facilitate in this alignment, together with members of the AB, but involvement of member states / road authorities is also needed!

- Focus on prioritairy use cases

Work done so far

- Strategic discussions during MDD's 2022

- RTTI action plan in NAPCORE WP2023

- Working together with members of the Advisory Board of NAPCORE:
  - Private service providers TomTom, Google, Be-Mobile, Inrix, Here
  - TM2.0 platform
  - TISA
  - CEDR
  - Polis

- Priority use cases collected in online NAPCORE workshop

- TM2.0 cooperation framework revised for these use cases

- Public-private workshop in Berlin last April
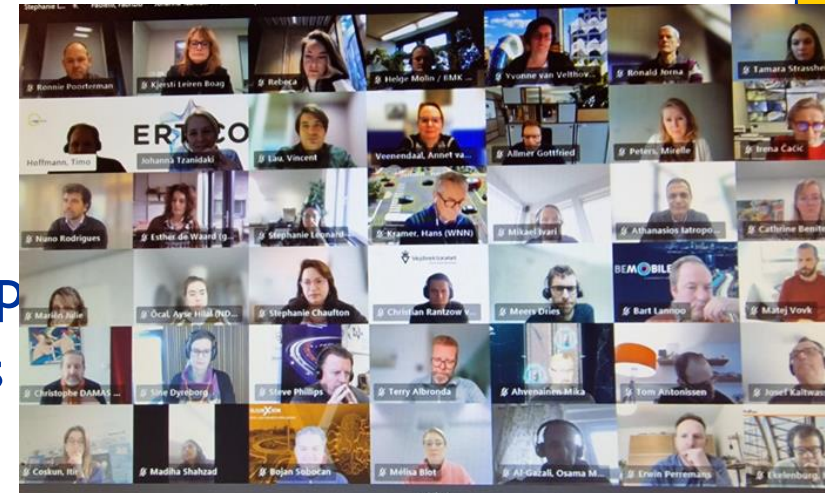
Outcomes of the Berlin workshop

Next Steps/Action Points

Those listed in bold have priority

1. **Service Level Agreement (SLA) for NAPS – covering RTTI data Integrated WITHIN NAPs and how RTTI data used FROM the NAPs (TomTom/HERE/INRIX/Be-Mobile/Google Maps will take lead)**
2. What does a feedback loop technically look like ? (TM2.0 will take the lead, bi-lateral with SPs)
   1. Confirming public RTTI data is being used by SPs
   2. Quality of public RTTI
   3. How do Public Authorities s reach the SPs (contact points, contact processes etc.)
3. Data quality SP requirement per RTTI data type as per template (TISA will take the lead)
4. Public sector reaction/feasibility to SP 'wishlist' (training points 1-4) (napcore will take the lead)
5. Metadata in NAPs – harmonized architecture (napcore will take the lead)

Use Cases

1. (1) speed limits, (2) road works+road closures (3) car routing (investigate harmonized functional road classes and harmonized machine-readable format traffic circulation plans)
2. Truck routing, bridge wind warnings, railway crossings, traffic regulations/laws

Star rating quality proposal SP's

RTTI Taskforce RA's

Star rating RTTI Data Quality proposal

Implementation of (EU) 2022/670 RTTI

Stephanie Leonard, TomTom

Christian Kleine, HERE Technologies

Bart Lannoo, Be-Mobile
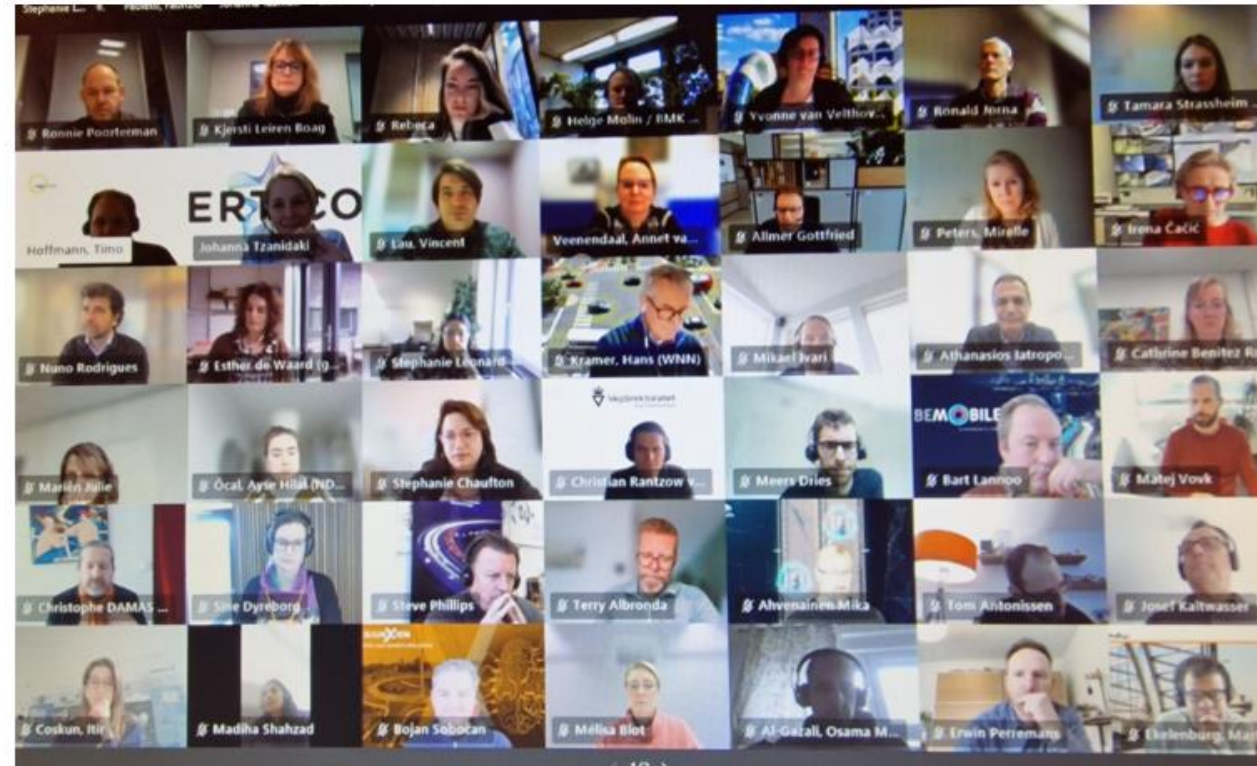
Rebeca Joaquin, Google Maps

RTTI Webinar

Date: 1st February 2023

Organised by: NAPCORE/TISA/TM2.0/TomTom

Scope: SP obligation to process Traffic Circulation Plans/Temporary Traffic Management Measures

Attendees: 167 public and private actors

Link: NAPCORE online workshop on the implementation of the revised RTTI DR - YouTube

FOLLOW UP of the workshop on the implementation of the revised RTTI DR

13 February 2023 · No Comments

The video and the presentation of the workshop are available

Read More

RTTI Workshop Berlin April 23'

- ITS Service Providers Be-Mobile, Google Maps, HERE Technologies and TomTom jointly organised a workshop at their corporate offices to **discuss the implementation of RTTI 2022/670** with 60 public/private stakeholders.

- **Trainings** were provided on the basics of digital maps, navigation software and traffic information and **how to increase the useability of public RTTI data.**

- Workshops were held on 4 RTTI **priority uses cases** groups to address bottlenecks and identify mitigation measures:
    - Truck Routing in Cities & Bridge Wind Warnings
    - Car Routing in Cities & Park and Ride Information
    - Inaccurate Road Works/Road Closures
    - Inaccurate Speed Limits and Railway Crossings

Implementation Focus Until 25'/27'

Feedback Loops

Minimum Quality Levels

Service Level ~~Agreements~~ SLA for NAPs

Digital Traffic Circulation Plans – Harmonized Functional Road Classification FRCs

Road Works

Road Closures

Speed Limits

How to combine and use input from Berlin workshop?

Data Quality – Minimum Service Provider Requirements

General	Location Referencing	Event & Validity Handling	Content
Must have: • **format: xml/json/DATEX II** • **feed: can be fetched once per minute** • **stable message id required if referring to the same event** • if possible, event description/comments available	**Must have:** • **coordinate referencing system is stated: preferably WGS84** • **lon/lat stretches/polylines or OpenLR** • **direction defined / bidirectional attribute** • if possible, road names given (lane level specific for high road classes, updates available as close to real time for automation use cases)	**Must have – Event:** • **differentiation between full road closures and lane closures** • **vehicle specific closures (i.e. older petrol cars)** • if possible, documentation around all valid event types • if possible, guided by Datex II standard or Alert-C event codes **Must have - Validity** • **start/stop times available** • if possible, schedules available (e.g. "Mon-Fri 22:00-06:00")	**Must have** • **Coverage:** • which road classes are covered? • which areas are covered (urban, rural) • **how many messages are active at the same time (or is the feed cluttered with old messages)?** • **how many short-term events are available (intermittent road closures, accidents) or are the events mostly scheduled?** • If possible, how well does map matching onto our map work

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Key Aspects for Data Quality

3. Data Quality

1. **Service Level Agreement (SLA)**
   1. a commitment between the provider and customer on various aspects of the service (quality, availability, responsibilities)
   2. the most common component of an SLA is that the services should be provided to the customer as agreed upon in the SLA
   3. Very common tool in traffic business, could be useful in RTTI NAP context (see next slide)
2. **Location Referencing** – standardized/widely adopted method required
3. **Event and Validity Handling** – high level of detail required
4. **Content** – detail and context of data required
5. Description of accuracy, freshness, completeness, correctness – quality management
6. High requirements expected when we move from SD, ADAS Map to HD Map

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Service Level Agreement (SLA) in TN-ITS GO

Parameter	Entry	Basic	Elite	Ultimate
Timeliness	3 Month	Month	Week	Day
Location Accuracy	>10m	<10m	<5m	<1m
Completeness	>80%	>90%	>95%	>99%
Correctness	>80%	>90%	>95%	>99%

TN-ITS GO, Deliverable 4.1 Evaluation

TN-ITS Service Levels Support services	Basic (low)	Elite (medium)	Ultimate (high)
Service Availability (over a period):	90%	96%	99,9%
Incident management – support hours	Office hours	Office hours	24x7
Incident management – Initial response time	1 day	4 hours	1 hour
Incident management – Target resolution time	Reasonable effort	1 day	4 hours

Table 2 - Service Quality Levels

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Chicken or Egg Paradox

We learnt in Berlin that many road authorities and road operators know the quality of their traffic data could be improved but they don't want to make investments without the assurance ITS Service Providers will use the new and improved feeds.

What comes first, traffic data quality improvements or commitment to use traffic data?

Inspired by EuroNCAP's 5 Star Vehicle Safety Rating as an SLA Alternative

Introducing our RTTI 5 Star Rating Scheme

Purpose:

Give road authorities and road operators a helpful, practical and easy-to-use tool to self-assess the quality level of their traffic data.

Understand what minimum quality level ITS Service Providers require to use public traffic data

→ this in turn should increase the use of traffic data from Road Authorities and Road Operators by ITS Service Providers.

Content:

- Part 1 - RTTI Data Useability
    - NAP Functionality
    - Static Data - Traffic Regulation/Restriction and Infrastructure Data
    - Dynamic Data - State of the Network/Real-Time Use of Network
- Part 2 - RTTI Data Ingestion

Framework can be used for RTTI traffic data overall and specific data types i.e. speed limits, road works, road closures.

RTTI 5 Star Rating Scheme – Part 1a

RTTI Data Useability					
NAP Functionality	★☆☆☆☆	★★☆☆☆	★★★☆☆	★★★★☆	★★★★★
Language					
Search					
Metadata and Harmonized Data Terminology					
Service Provider Registration Process					
Grouping/ Consolidation of Individual RTTI Data Feeds					

RTTI 5 Star Rating Scheme – Part 1b

RTTI Data Useability					
Static Data	★☆☆☆☆	★★☆☆☆	★★★☆☆	★★★★☆	★★★★★
RTTI Data Terminology Definition					
Data Format Used					
Profile Used					
Update Cycle					
Freshness Rate					
Accuracy					
Correctness					
Completeness					
Location Ref					
Geographical Scope					
Direction Defined					

RTTI 5 Star Rating Scheme – Part 1c

RTTI Data Useability					
Dynamic Data	★☆☆☆☆	★★☆☆☆	★★★☆☆	★★★★☆	★★★★★
All Static Data Elements PLUS:					
RTTI Event Message ID					
Old/Outdated Messages Deleted from Feed					
API Access					
Availability Short Term Events					

RTTI 5 Star Rating Scheme – Part 2

RTTI Data Ingestion	★ ☆ ☆ ☆ ☆	★ ★ ☆ ☆ ☆	★ ★ ★ ☆ ☆	★ ★ ★ ★ ☆	★ ★ ★ ★ ★
In Progress					
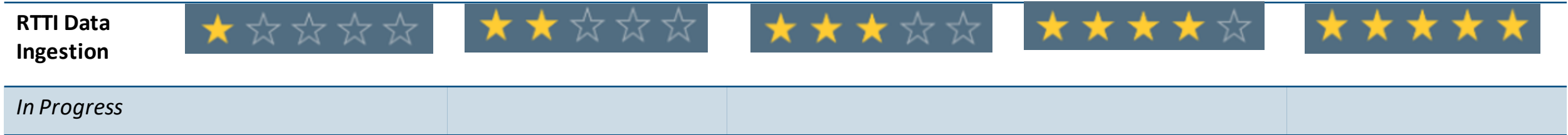
TISA RTTI Quality Workshop 27-28 Nov 23'

Full presentation of RTTI 5 Star Rating Scheme

Use framework to agree minimum quality levels for:

- Road Works
- Road Closures
- Speed Limits

Data Quality - Workshop on the Implementation of EU RTTI 2022/670

Agenda
27-28 November 2023, Amsterdam

DRAFT AGENDA

Day 1 Monday 27th November 2023 12h00 – 17h30	Day 2 Tuesday 28th November 2023 09h00 – 16h00

Venue: OBA Oosterdok, Oosterdokskade 143, Amsterdam 1011DL

Registration until 17/11/23 : via this form https://forms.office.com/e/yVR3hd0NGK

Day 1		
12h00 – 13h00	*Welcome Lunch*	
13h00 – 13h15	Welcome & Workshop Objective Setting	Stephanie Leonard, TISA Chairwoman
13h15 – 14h15	NAPCORE Data Quality Progress Update	Peter Lubrich, BAST
14h15 – 15h15	TISA's Learnings & Recommendations on Data Quality	Teun Hendriks, TISA
15h15 – 15h30	*Coffee Break*	
15h30 – 17h30	ITS Service Provider 5 Star RTTI Data Quality Proposal – Presentation and Discussion	Stephanie Leonard TomTom, Christian Kleine HERE & Bart Lannoo Be-Mobile
Evening	*Spontaneous drinks in Amsterdam*	
Day 2		
09h00 – 09h30	Welcome Coffee	
09h30 – 10h30	Understanding Priority Use Case Data Quality Requirements • Speed Limits • Road Works • Road Closures	All – TISA Presentation Break Out Group Activity
10h30 – 12h00	Examples of Priority Use Case Best Practice • Speed Limits • Road Works • Road Closures	Speakers TBC
12h30 – 13h30	*Lunch*	
13h30 – 15h30	Minimum Data Quality Requirements for Speed Limits, Road Works And Road Closures Priority Use Cases – EU RTTI 2022/670	All – Group Discussion
15h30 – 16h00	Next Steps in RTTI Implementation Preparation	Stephanie Leonard TISA Chairwoman & Annet van Veenendaal NDW

EU RTTI 2022/670 Workshop Data Quality | 27-28 November 2023   2

RTTI Taskforce
Member states / Road authorities

napcore

RTTI Task force to elaborate focus use cases

- Forming a RTTI taskforce of EU road authorities / operators to fill the gap in the data value chain

- Work – in close collaboration with NAPCORE and the serviceproviders – on **focus use cases**:
  - Machine readable data needed for these use cases (f.i. TCP's and TMP's)
  - (Minimum) data quality requirements, star rating proposal
  - How to create a public – private feedbackloop
  - Implementation of the mandate of the revised RTTI DR.

Data collection → **Data accessibility** → **Data in services**

Road authorities & operators

RTTI Task force

napcore

BEMOBILE
Google Maps
INRIX
here
tomtom

napcore

Discussion

Debate statement 1

Creating a feedbackloop helps road authorities / operators getting on board in improving data quality.

Debate statement 2

Having insight in how certain quality data are incorporated in the services of serviceproviders helps road authorities / operators motivate to supply data.

napcore

Debate statement 3

Data quality is a responsibility for:
(a)   road autorities / operators
(b)   NAPCORE
(c)   Serviceproviders
(d) Combination of the above.

Thank you for your attention!

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Stephanie Leonard
TomTom, Chairwoman of TISA
Do you want to provide contactdetails?

Rebeca Joaquin
Google
Do you want to provide contactdetails?

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