

TISGRADE Talk #2

Data quality, TCPs, TMMs and NAP updates

5 October 2026



Co-funded by
the European Union

Practical points of attention

- The meeting will be recorded
- Presentation will be available on TISGRADE website
- Recording will be available on YouTube
- Questions?
 - Use chat
 - Raise hand during Q&A slides
- After each presentation block, there will be time for max. two questions
- At the end of the session, opportunity for a broader discussion

Who joins us today?

1. Are you new to TISGRADE or already involved?
 - Involved as a partner
 - Active follower (e.g. via LinkedIn-group)
 - New to TISGRADE
2. What type of organisation do you work for?
 - National public authority
 - Regional or local public authority
 - Service provider
 - Network organisation
 - Other



Results of Poll

Question 1

87% involved (43)

6% active follower (3)

6% new (3)

Question 2

60% national public authority (39)

18% regional public authority (12)

6% service provider (4)

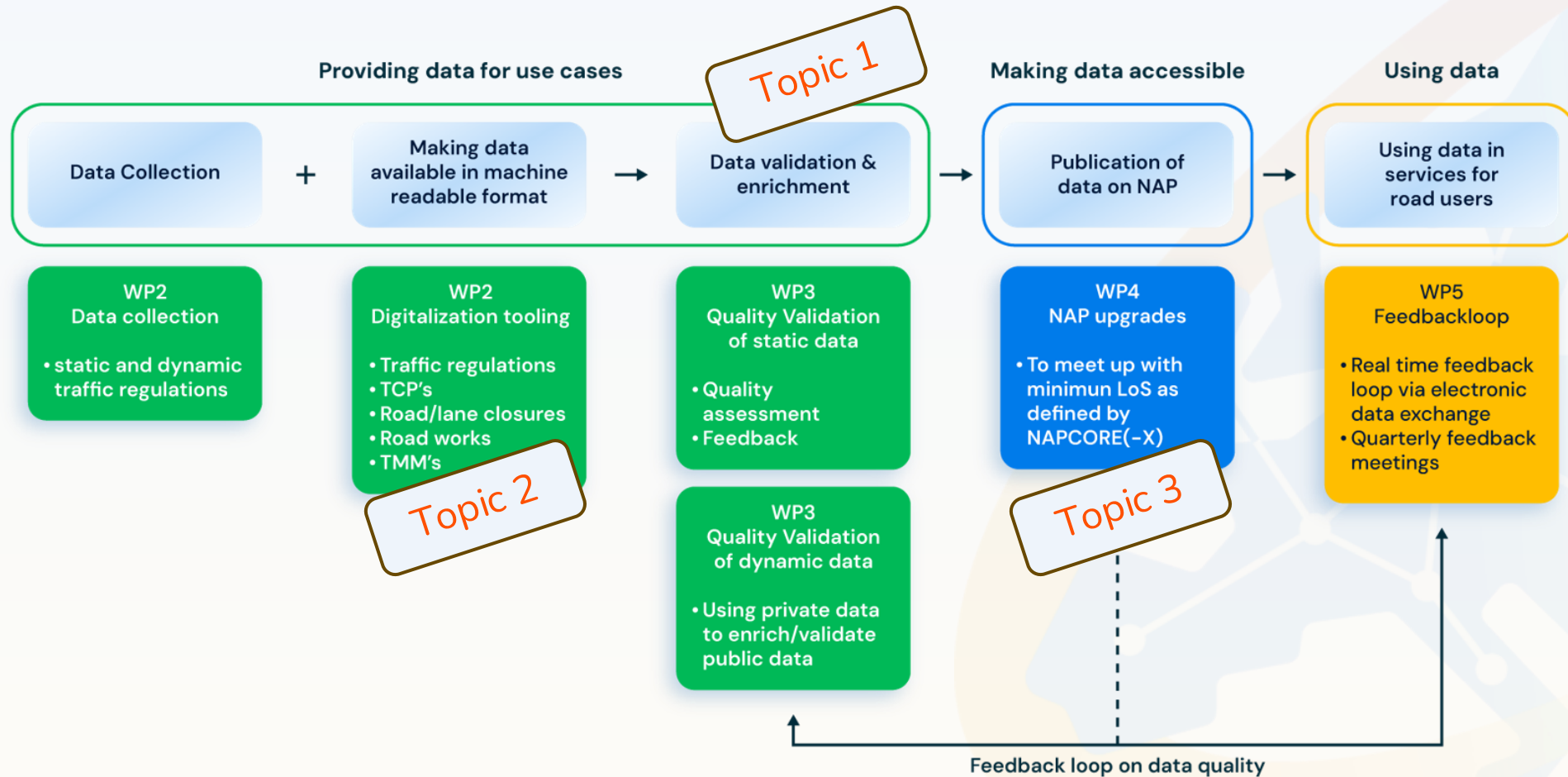
1% network organisation (1)

13% other (9)

Agenda

1. Introducing TISGRADE
2. Measuring and improving data quality
3. Traffic Circulation Plans & Traffic Management Measures
4. NAP updates
5. Q&A session

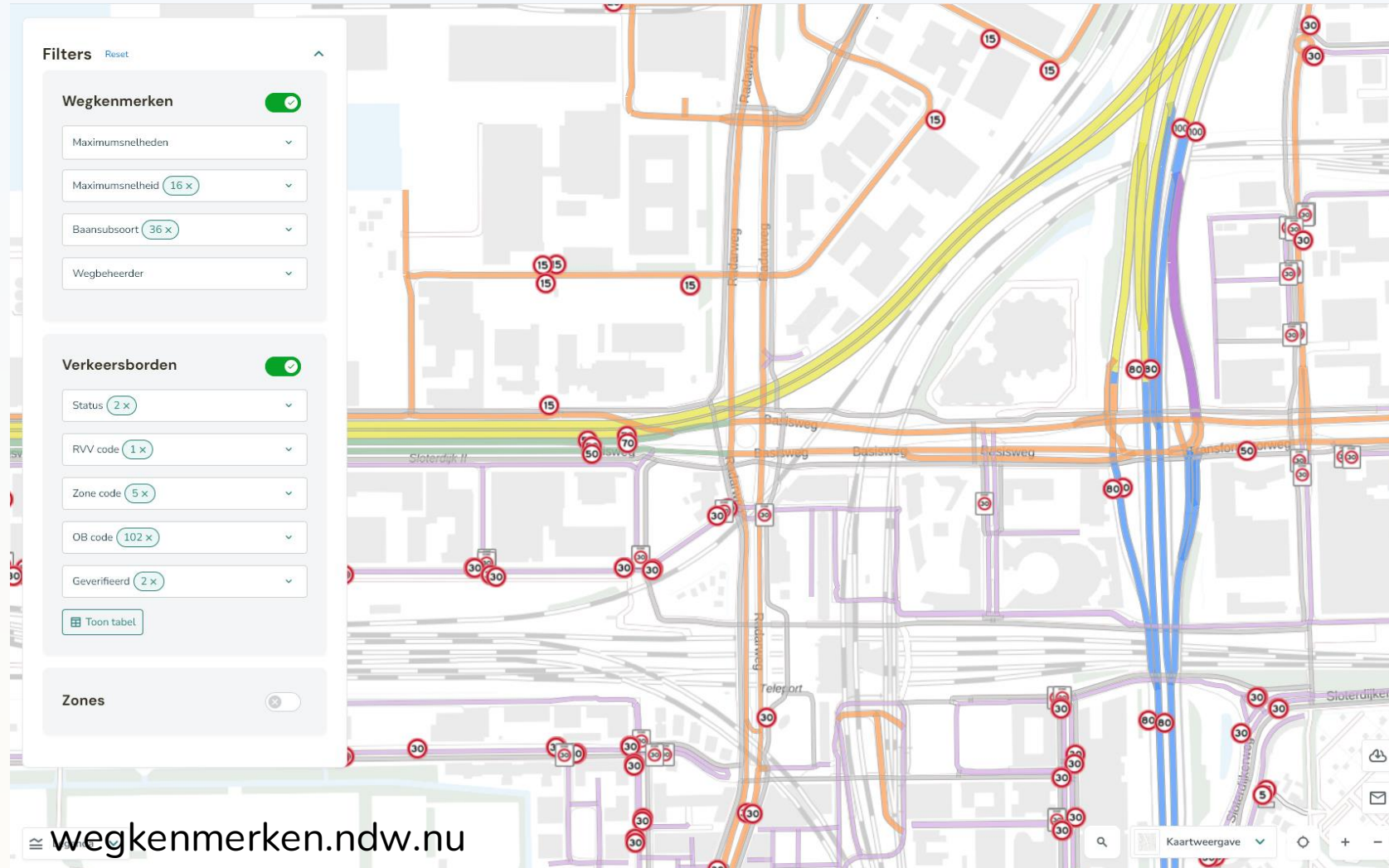
TISGRADE: working on the entire RTTI data value chain



2. Measuring and improving data quality

- Stephen T'Siobbel (ERTICO, BE) on maximum speed data quality (**static data**)
- Pieter Pauwels (BE-MOBILE, BE) on roadworks and road and lane closure data (**dynamic data**)

Maximum Speed Limit Pre Deployment Validation



Maximum Speed Limits

Objective: validate the quality and readiness of **maximum speed data** through pre-deployment validation activities, leading to a setup report and a validation results summary.

Task & PDV status Task 3.1. Maximum speed validation (Lead: BE_ERTICO)

PDV Locations	Road Types	SPOC	Survey	1-on-1 Review	July 26	Aug 26	Sep 26	Oct 26	Nov 26	Dec 26	Jan 27	Feb 27	Mar 27	Apr 27 (M)	May 27	Jun 27	Jul 27 (D)	Partners
City of Amsterdam (NL)	Urban node Amsterdam	Leon Zegers	Done	Done	X	X	X											Amsterdam, NDW, HERE, ERTICO
City of Helmond (NL)	Urban node Eindhoven	Martin de Vries	Done	Done	X		X											Helmond, NDW, TNO, ERTICO
City of Gothenburg (SE)	Urban node Gothenburg	Anna Forsell	Done	Done	X	X	X											STA, Gothenborg, HERE, ERTICO
Interurban roads Spain (ES)	Spanish interurban roads (except for Catalonia and the Basque Country)	Montserrat Estaca Gómez	Done	Done		X	X											DGT, HERE, (CTAG?)
Nicosia District (CY)	National, Regional	Rodolfo Gomes da Silva	Done	Done	X	X	X											Public Works Department, Service Provider (?)
Motorways & Secondary roads and secondary road network (SI)	National, Regional	Jure Dolenc	Done	Done	X		X											SI-MIS, HERE, ERTICO
Mediterranean region (FR)	National, Regional, Urban node	Marie Eldin	Done	In-Directly	X	X												Metropole Nice Côte d'Azur, Council of Departement of Hérault, National Road directorate of Mediterranee, SP (?)
Palaio Faliro - Athens (GR)	Urban Node Athens	Konstantinos Chardavellas	-	Pending														Municipality of Palaio Faliro, NAP, SPs, prof. drivers, traffic org.

Maximum Speed Limits

Task & PDV status Task 3.1. Maximum speed validation (Lead: BE_ERTICO)

Reporting is based on questions in 5 categories:

- Progress and Activities
- Key findings and Output
- Cooperations and Dependencies
- Risks, Blockers and Challenges
- Forward plan and Needs

Format

- Initially: response to email
- Later: MS Excel file

Response

- Evaluation
- Comments

T3.1 MSL validation		Status update 02/07/2026				
PDV Locations	Road Types	Progress & Activities - What have you accomplished in the last 2 month? - Are you on track, ahead, or behind schedule for your current milestone?	Key Findings / Outputs What are the most significant results, data points, or insights you have produced so far? Have any of these findings changed our original assumptions about the task?	Co-operations & Dependencies Which partners have you collaborated with successfully? Are there any partners whose input you are waiting on to proceed with your work?	Risks, Blockers & Challenges What is your biggest blocker right now (something preventing progress)? What risks do you see on the horizon for the next month(s)? (Beyond challenges) What is simply taking longer than expected?	Forward Plan & Needs What are your top 3 priorities between now and our next check-in? Specifically, what do you need from me or the core team to remove obstacles?
City of Gothenburg (SE)	Urban node	* We had a physical meeting in Gothenburg 15-16 of April for the all the PDV's in Sweden (STA, City of Gothenburg and HERE). For the Speed limit validation PDV we have agreed on the work to be carried out, steps, who is doing what and expectations. I think it is pretty clear what we are supposed to do even though it's been a bit quite since then (because of my priorities...) STA leads the work. But all parties are actively involved. * On track	* The actual matching of HERE speed limit data set and NVDB speed limit for the complete road network of city of Gothenburg will take place after summer. Meeting planned end of August. HERE showed some initial tests in the Gothenburg meeting (TN-ITS feeds from NVDB for some time back compared to the HERE DB) * No	* Swedish Transport administration (STA), City of Gothenburg and HERE * No	* None * . * .	* Meeting planned end of August and then the matching of data and analysis of data will start. * Since we're also in the 5.3 PDV Feedback loop and in those meetings and discussions the 3.1 PDV is mentioned, especially in the architecture discussion in 5.2. So it would be good to get a clearer understanding and alignment between these two PDV's.
	SUMMARY	On Track (technically)	Initial	Strong	Underreported / Complacent	Vague
	COMMENTS	You completed a key alignment meeting in April and defined roles clearly. However, the admission that it has been "quite" since then due to personal priorities means zero active work has occurred for 2.5 months. You're on track for planning, but not for execution.	No substantive findings yet. The only insight is that HERE ran initial tests, but the core data matching won't start until after summer. No assumptions have been tested or changed.	Collaboration is healthy. STA is leading effectively, and HERE, STA, and Gothenburg are all actively engaged. No dependencies are blocking you.	You listed "None," but that is inaccurate. The biggest blocker is your own bandwidth/priorities. Additionally, the 2.5-month gap between April and August creates a significant restart risk (memory loss, context switching).	The plan is a single meeting in August. That is not a "plan"—it's a calendar invite. There is no mention of prep work, data QA, or analysis timelines before that meeting.

Maximum Speed Limits

Objective: validate the quality and readiness of **maximum speed data** through pre-deployment validation activities, leading to a setup report and a validation results summary.

Task & PDV status Task 3.1. Maximum speed validation (Lead: BE_ERTICO)

Observations

- Almost all PDVs are **active** — only one is not.
- MSL data is **available** almost all of the time (close to 100%).
- Very **heterogeneous** situations across all PDVs
- Partnerships: most PDVs have built their own **network of partners/community**.
- "**Linearisation**" work is ongoing: teams are mapping traffic signs to road attributes (polylines), which is required for TISA 5*.
- **Feedback Loop**: the first feedback loop has started in SE; others are in discussion with SP.
- Tools: (GIS) tools are being used to inspect and edit various MSL data.
- **RTTI 5* rating**: no findings have been reported yet. TISA will publish its Evaluation Method in Dec 2026.
- **Guidance**: some teams have asked for support with methodology.
- **Survey** data: the open-source Panoramax tool and data are being used in several PDVs.
- Growth: some countries reported that more regions are now publishing MSL data.
- A few minor tendering issues have come up.

WP3: Road Works & Closures

Goal: Road works and road/lane closure validation

Plan of attack:

1. Couple the NAP-feeds
2. Perform quality checks
3. Provide feedback

WP3: Road Works & Closures

1. Coupled Sources:

- Belgium: be-awv
- Belgium: be-lantis
- Netherlands: nl-ndw
- Slovenia: si-mis
- Finland: fi-fty
- Sweden: se-gbg
- Spain: es-dgt
- Cyprus: cy-pwd
- Estonia: ee-ta
- Norway: no-npra
- Croatia: hr-cr
- Germany: de-mobi

2. Quality Checks

Checks defined and described according the TISA RTTI 5-Star Rating Specification

- Available on the sharepoint:
 - RTTI_5-Star-Rating_20251021_v1.0
- First version
- Some gaps open for interpretation

A practical interpretation by Simon Michels (Be-Mobile)

- Available on the sharepoint:
 - Self Assessment Manual validation -5 Star Rating TISGRADE
- Approved in the deliverables D3.2-D3.3

First focus on the Desk Analysis: mainly the format and fields

Sharepoint Location:

WP3 - Sources for data validation -> Manual self assessment - source level validation
-> Self assessment documentation

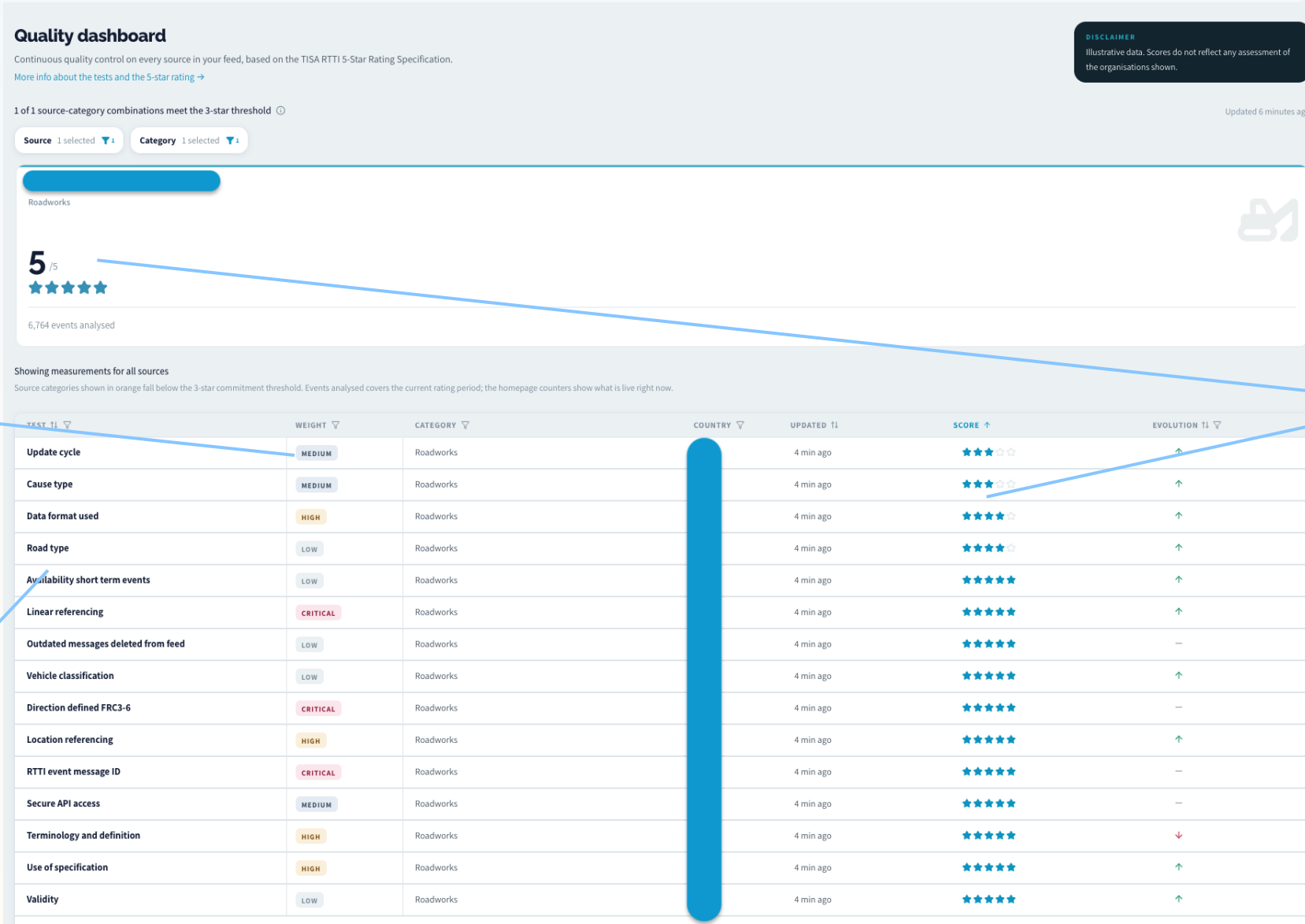
WP3: Road Works & Closures

3. Feedback on PDV's using a Quality Dashboard

- Note: not the proposed feedback loop from WP5
 - Using a personal login
 - Automated quality view on your own datafeed
 - Data filtered and divided into (a) roadworks and (b) closures
 - Analysis according the 5* rating, including the weights low, medium, high, critical
 - Desk Analysis: focus mainly on the format and data-fields
 - Global overview on the score
 - Detail overview on each of the criteria
-
- Some insights...

WP3: Road Works & Closures

Global Overview



Weights

Score

Different criteria

WP3: Road Works & Closures

Criteria Detail

Data format used

REAL-TIME DESK ANALYSIS

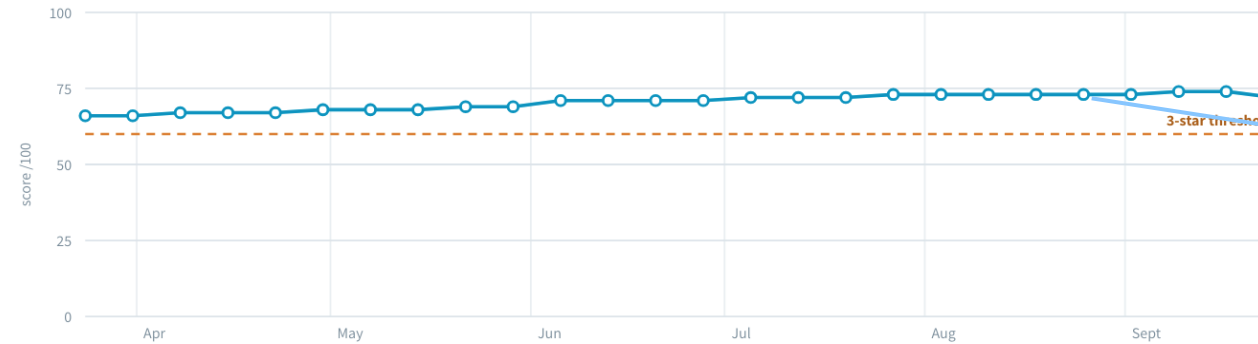
Updated 4 min ago
5,977 events analysed

4/5



✓ Above the 3-star threshold

Score over time



100-point scale - 6-month rolling window - month labels, one clickable point per week - click a point for its measurement window.

WHERE YOUR EVENTS SIT

☆☆☆☆	1 star - Bespoke local format or DATEX II	179	3%
☆☆☆☆	2 stars - Only DATEX II (version 2)	359	6%
★★★★☆	4 stars - Only DATEX II (version 3) Same requirement as 3 star, so meeting this scores 4	4,483	75%
★★★★★	5 stars - Only DATEX II (version 3 or higher, compliant with the related reference profile)	956	16%

Share of 5,977 events per level. Illustrative until the backend supplies the per-event split.

This test has four possible outcomes: 1, 2, 4 or 5 stars. TISA sets the same requirement for 3 and 4 stars, so there is no partial pass in between.

How to improve

Most of your events sit at "Only DATEX II (version 3)", which holds up to 4 stars. The next real step is "Only DATEX II (version 3 or higher, compliant with the related reference profile)", which reaches 5 stars.

ABOUT THIS TEST

What it checks

Which exchange format your source is published in, and which version of it.

Why it matters

A current, standard format means consumers can read your source without custom parsing, which keeps integrations stable.

How it is measured

Real-time desk analysis: the source is assessed as it is at the moment of measurement, as a single snapshot.

THE FIVE TISA LEVELS FOR THIS TEST

1 star	Bespoke local format or DATEX II
2 stars	Only DATEX II (version 2)
3 stars	Only DATEX II (version 3)

Evolution

5* explanation

How to improve

WP3: Road Works & Closures

Request your access!

- Account can be created and linked to the correct organization.
- Please provide feedback: was it possible to detect improvements on your datafeed?
- Link: <https://mailchi.mp/be-mobile/flowimpact-early-access>
- Or use the QR:



Questions



3. Traffic Circulation Plans & Traffic Management Measures

Melanie Verstraete (Movias, BE)



Why integrate TCPs and TMMs into navigation services?

Example 1: Cut-through traffic

Cut-through · 10 min

North of the city

Main road · 12 min

City centre

South of the city

What happens today

Route via the main road — where the TCP wants through-traffic to stay.

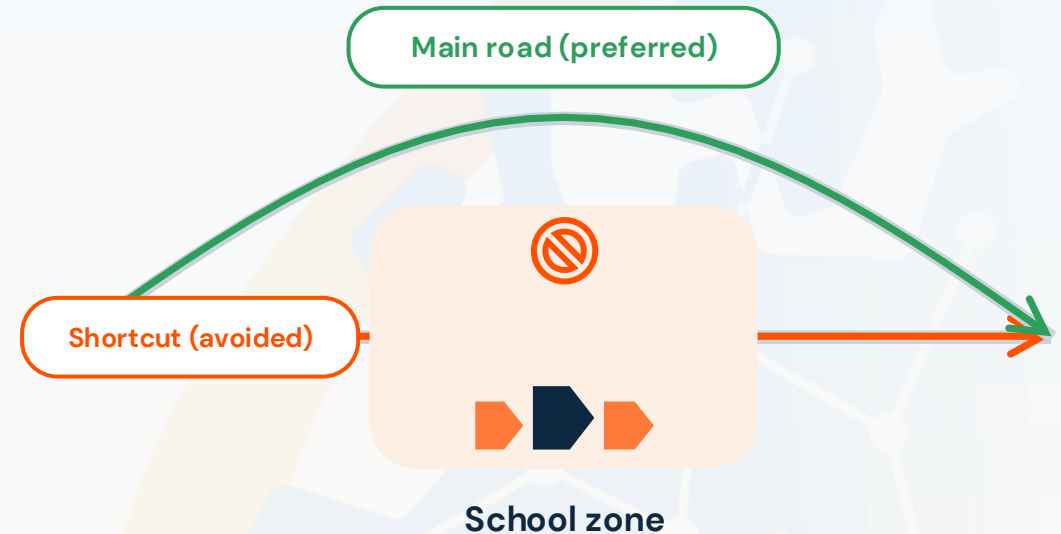
Shortcut through the center is a few minutes faster, so some nav apps route traffic here (cut-through).

Integrating the Traffic Circulation Plan into navigation services keeps through-traffic on the main road.

Why integrate TCPs and TMMs into navigation services?

Example 2: School zones & vulnerable areas

Protecting sensitive areas: TCPs can steer through-traffic away from school environments and vulnerable residential areas, keeping local streets safer and more liveable.



TCP: keep through-traffic on the main road, away from the school zone.

Why integrate TCPs and TMMs into navigation services?

Example 3: Preferred truck routes

Guiding trucks appropriately: TCPs can define preferred routes for freight traffic, guiding trucks towards the road network best equipped to handle them, and away from unsuitable local roads.



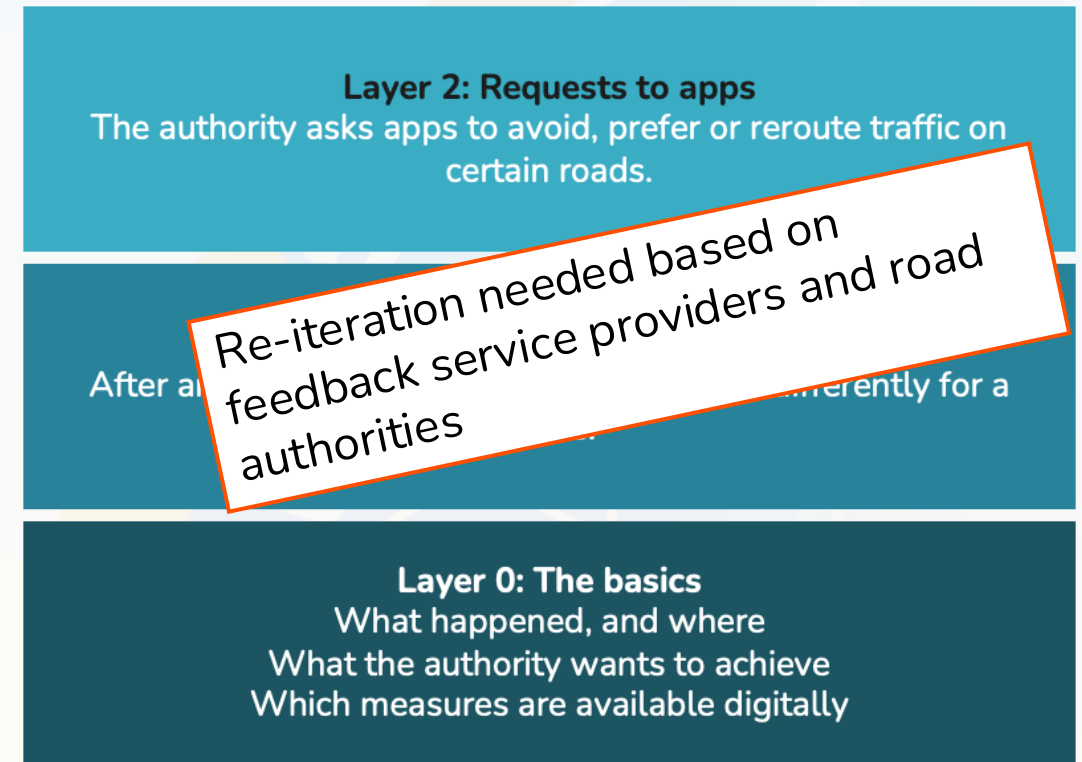
TCP: guide trucks onto the preferred route, away from local streets.

TCPs & TMMs: 3-Layer Concept

TCP — Traffic Circulation Plan



TMM — temporary measures



▲ layers build on the base — each layer adds detail and enables richer integration

The road authority perspective

For road authorities, there is a clear, direct benefit in integrating Traffic Circulation Plans into navigation services.

It turns policy intent into real-world traffic outcomes, without always requiring new infrastructure.

The service provider perspective

Individual objectives: service providers pursue their own goals, giving travellers the best and most accurate advice for their trip.

Not always aligned: that advice does not always match what the road authority would like to see.

Road authority:
desired traffic flow (TCP)

≠ not always aligned

Service provider:
best route for the traveller

RTTI Delegated Regulation (EU) 2022/670

“Service providers shall **process and include**, in the relevant services they provide, without additional costs to the end-user, **data on any traffic circulation plans** developed by the competent authorities and made accessible via the NAP in a digital machine-readable format.”

“Service providers shall **process and include**, without additional costs to the end-user, in the relevant services they provide, any **temporary traffic management measures** developed by the competent authorities and made accessible via the national or common access point in a digital machine-readable format.”

Article 5(4) & Article 6(4), RTTI Delegated Regulation (EU) 2022/670

Unpacking Article 5(4): 'process & include'

On the one hand

Must be processed: if the TCP is relevant for routing, its content must actually be processed into the routing service; “service providers must use that information.”

Cannot be ignored: a correctly published TCP may not be ignored; it must be processed in a relevant way.

On the other hand

No absolute enforcement duty: the RTTI Regulation does not explicitly require a service provider to enforce every route the authority desires, without any own judgement.

Alternative routes remain possible: a service provider may still propose a different route; legally, there is no ban on proposing a route that does not 100% match a TCP.

But: proposed routes must, taken as a whole, be consistent with TCPs & TMMs.

Unpacking Article 5(4) and 5(2): which TCPs count?

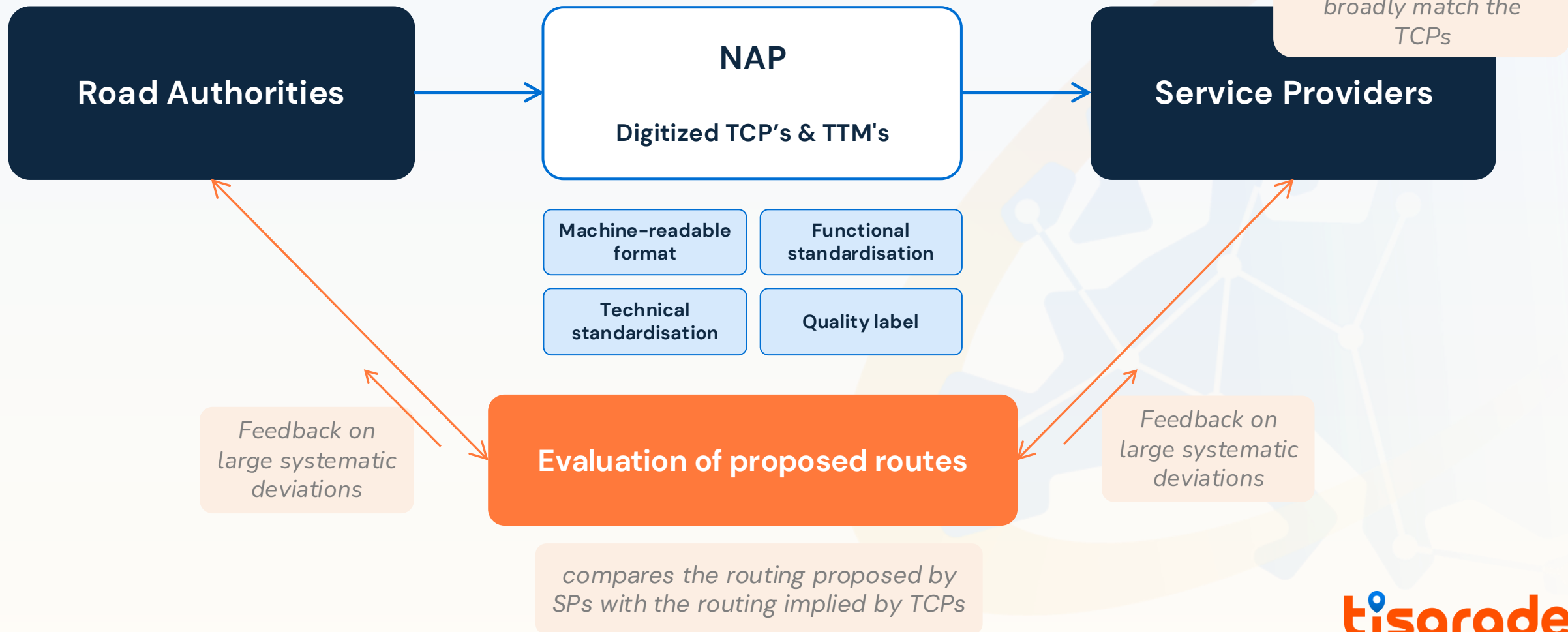
To trigger this obligation, a TCP must meet following conditions:

1. developed by the competent authority
2. made accessible via the NAP (or a common access point)
3. published in a digital, machine-readable format
4. minimum quality requirements that Member States shall agree upon in cooperation with relevant stakeholders

tisgrade adds conditions to make integration as easy as possible for service providers:

5. **Functional standardisation:** TCPs look the same functionally and contain the same info.
6. **Technical standardisation:** a shared technical format (DATEX II / TN-ITS, OpenLR, API, ...).

Process to integrate TCPs & TMMs into navigation services



Questions we still need to answer

- What if one route crosses the areas of several road authorities?
- How do we bring traffic policy and route planning closer together?
- How do we check that provided routes match what the authority expects?
- What actions are feasible for authorities and service providers in terms of costs after the project?
- Are the proposed implementations scalable after the project for all involved stakeholders?

Questions



4. NAP updates

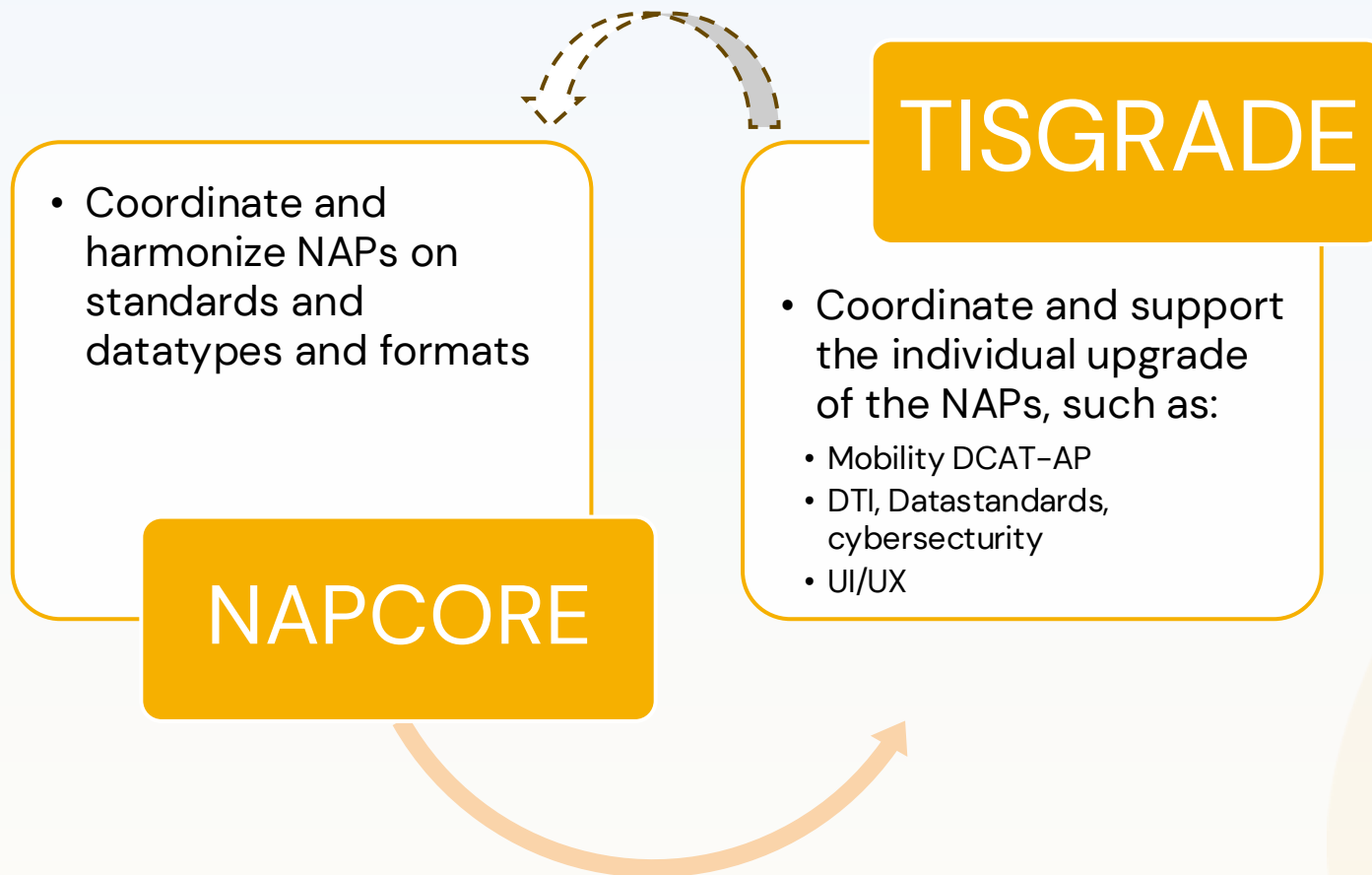
Andras Selmeczy (KOZUT, HU)



4. NAP updates

- 2010/40 (ITS directive) -> every European Union Member State is required to establish and manage a National Access Point (NAP).
- But... the parameters and variables were not set what resulted in "27 slightly different" NAPs.
- **The NAPCORE project was established in 2021**, the world's largest cooperation of mobility data platforms, with the objective to coordinate and harmonize all European NAPs on a technical and organizational level creating interoperability.
- Among others, 2026/2661 was published -> Rather than changing the mandate to have a National Access Point (NAP), the new directive significantly expanded the scope, authority, and data delivery mandates that go through them.
- **NAPCORE focused only on harmonization, implementations were not eligible for fund.**
- Traffic information can't be shared, if the MS's NAP is not working properly... data has to be made accessible! -> **TISGRADE**

4. NAP updates



- We have created a Roadmap on the implementations when and what will happen, as **every member state is doing something else in its own pace.**
- We as WP4 provide technical support and the coordination of the individual NAP upgrades
- Each Member state **has to do its own procurement**, yet can learn/adapt from other countries who e.g. already finished with their implementation
- We will create a 'best practice' document available also for the countries who have not participated in the Project.

Questions



5. Q&A session



Be involved



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Via Public Private Tactical Group

- *Want to be updated about future PPTG meetings? Send us a mail!*