



# Introduction to mobilityDCAT-AP

NAPCORE Mobility Data Days  
November 8th, 2023



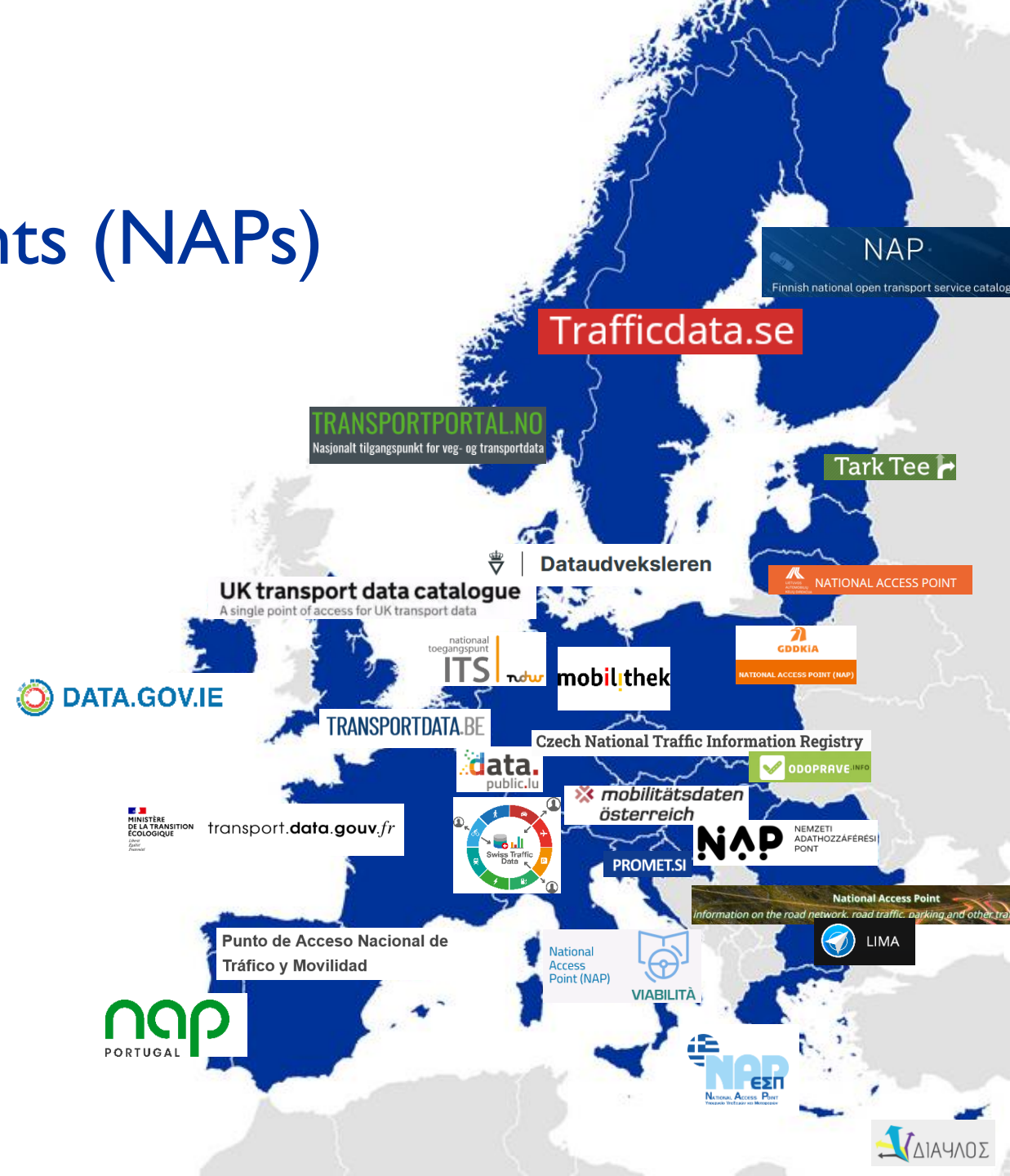
Co-funded by  
the European Union

# Agenda

1. Introduction *(Peter Lubrich, BASt)*
2. The baseline: Conceptual Model *(Benjamin Witsch, Austriatech)*
3. mobilityDCAT-AP: implementation & publication *(Mario Scrocca, Cefriel)*
4. mobilityDCAT-AP: contents, user support, deployment *(Peter Lubrich, BASt)*
5. Other SEMIC projects on metadata specifications *(Lina Teresa Molinas, Fraunhofer FIT)*

# Context

- National Access Points (NAPs)



# Context

- Metadata for search function in NAPs

The screenshot shows the MDM Portal search filter interface. The page header includes the MDM logo, 'Mobility Data Marketplace', and language options 'DE EN' with 'You are logged out.' Below the header are navigation links for 'Search', 'Register', 'Login', and 'Help'. The left sidebar contains 'MDM Info', 'MDM Platform', 'TSCs', 'User Manual', 'Imprint', 'Data Protection', and 'MDM is a project of:' with the Federal Ministry of Transport and Digital Infrastructure logo.

The main content area is titled 'Search' and contains a 'Filter' section with the following fields:

- Search:
- General Information
  - Data category:  (highlighted with a red box and a red arrow pointing to a callout box)
  - Data category detail:
  - Transport modes:
  - Update interval:
  - MDM Brokering:
- Geography
  - NUTS 1:  (highlighted with a red box and a red arrow pointing to a callout box)
  - NUTS 3:
- Road network coverage
  - Network:
- Access Information
  - Modell:

At the bottom of the filter section is a 'Show result list' button. The footer contains the copyright notice '© MDM-Portal 2010-2020'.

Two callout boxes are overlaid on the image:

- A white box with a yellow border containing the text 'Data category:' and a dropdown menu showing 'Road work information'.
- A white box with a yellow border containing the text 'NUTS 1:' and a dropdown menu showing 'Schleswig-Holstein X'.

# Context

- Metadata for search function in NAPs

The screenshot shows the TRANSPORTDATA.BE website interface. The main navigation bar includes 'Datasets', 'Organizations', 'News', 'About', and a search box. The 'Datasets' page is active, showing a search bar with the text 'Search datasets...' and a search button. Below the search bar, it indicates '97 datasets found' and an 'Order by: Relevance' dropdown menu. On the left side, there are filter sections: 'Filters', 'Organizations', 'Tags' (highlighted with a red box), 'Formats', and 'Licenses'. A red arrow points from the 'Tags' filter to a dropdown menu that lists various tags with their respective counts: Rail (including high speed rail) 36, Car 23, Bus 22, Truck 20, Cycle 19, Car-sharing 18, Motorcycle 17, Taxi 17, Tram 15, and Bike-sharing 14. The 'JSON' format is also highlighted with a red circle in the 'Formats' section, with a count of 29. The 'Creative Commons CCZero' license is listed with a count of 33. The background shows a snippet of a dataset description in Dutch, mentioning 'nationale geografische institut' and 'Belgian hydrography'.

# Context

- Metadata = Basis for data-search functionality in each NAP!
- Consistent and harmonised Metadata across all EU NAPs
  - make data search easier
  - make NAPs interoperable!

**This is why we harmonise Metadata!**

# Context

## ● EC Del. Regulations

COMMISSION DELEGATED REGULATION (EU) 2017/1926

of 31 May 2017

supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services

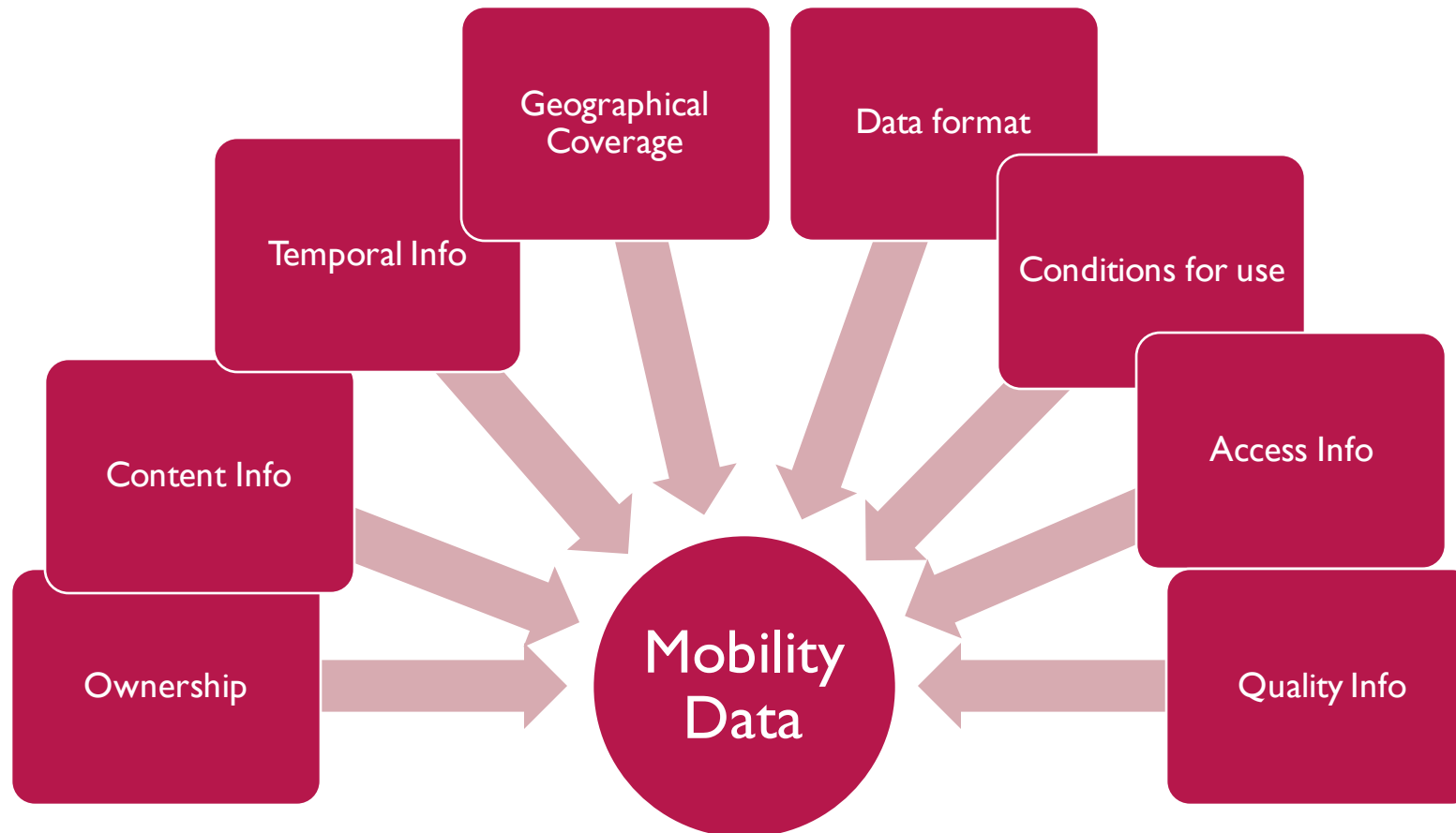
(Text with EEA relevance)

(13) In order to allow the successful and cost-efficient use of national access points, it is necessary to properly describe the content and structure of the relevant travel and traffic data by using the appropriate metadata <sup>(1)</sup>.

<sup>(1)</sup> EU EIP SPA Coordinated Metadata Catalogue.

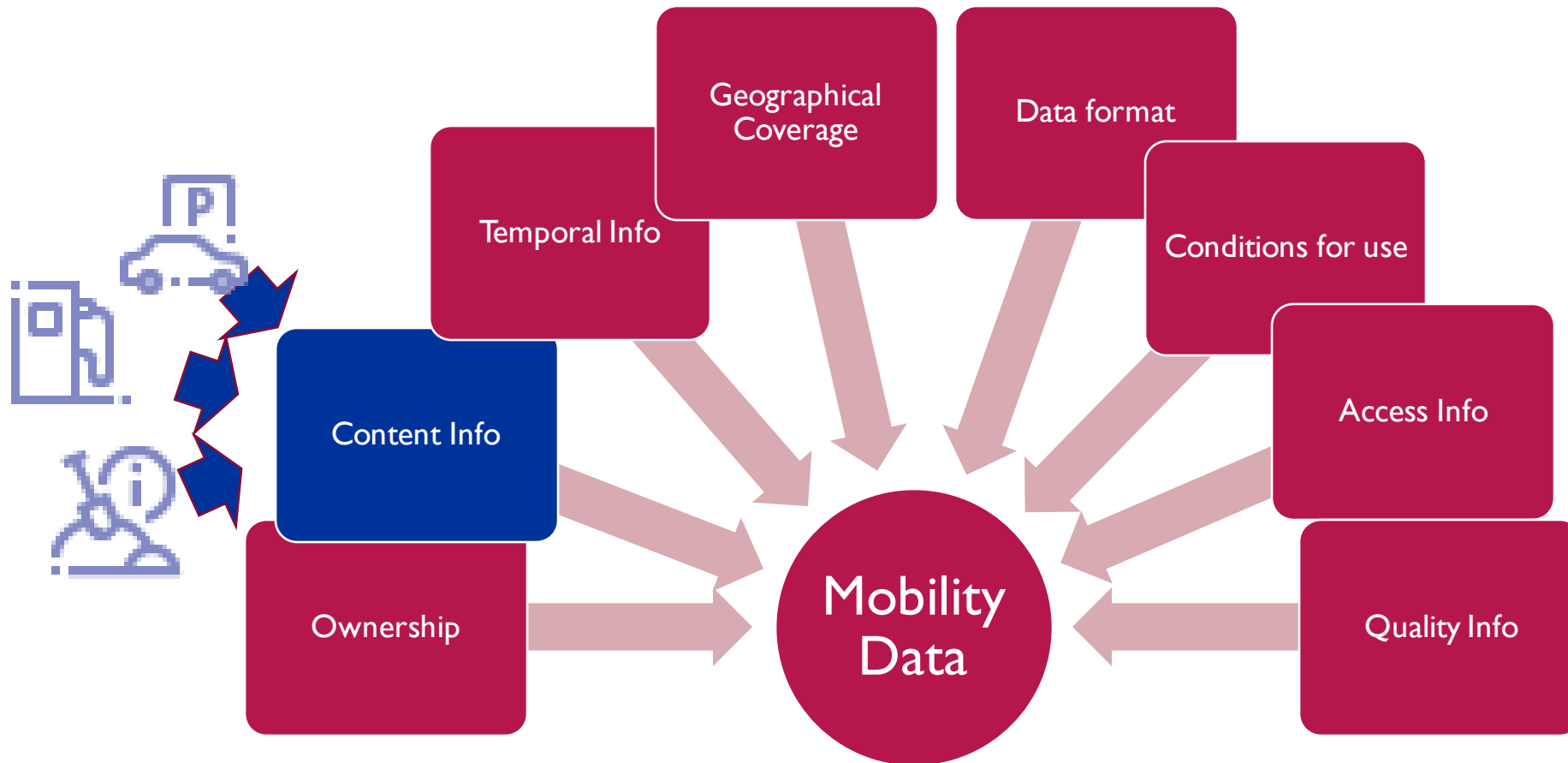
(6) 'access point' means a digital interface where at least the static travel and historic traffic data together with the corresponding metadata are made accessible for reuse to users, or where the sources and metadata of these data are made accessible for reuse to users;

# How to describe mobility data?

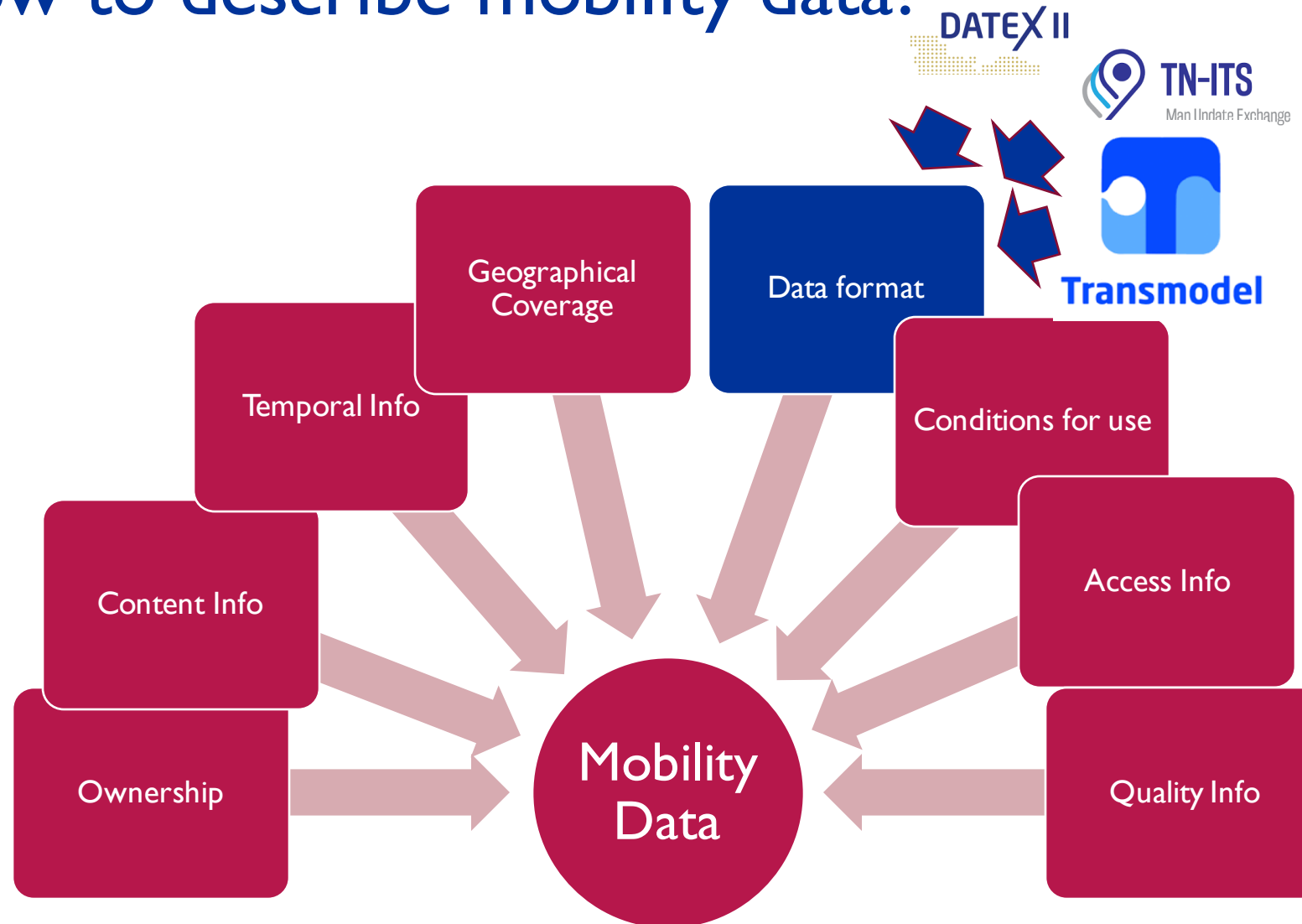




# How to describe mobility data?

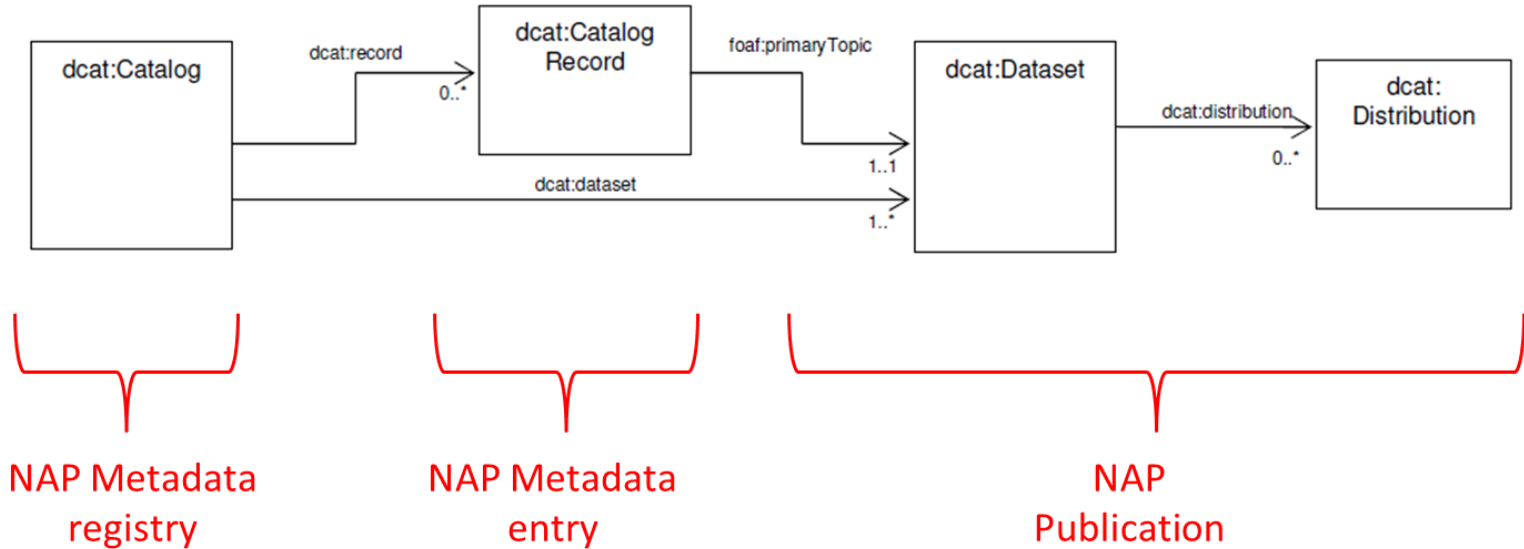


# How to describe mobility data?



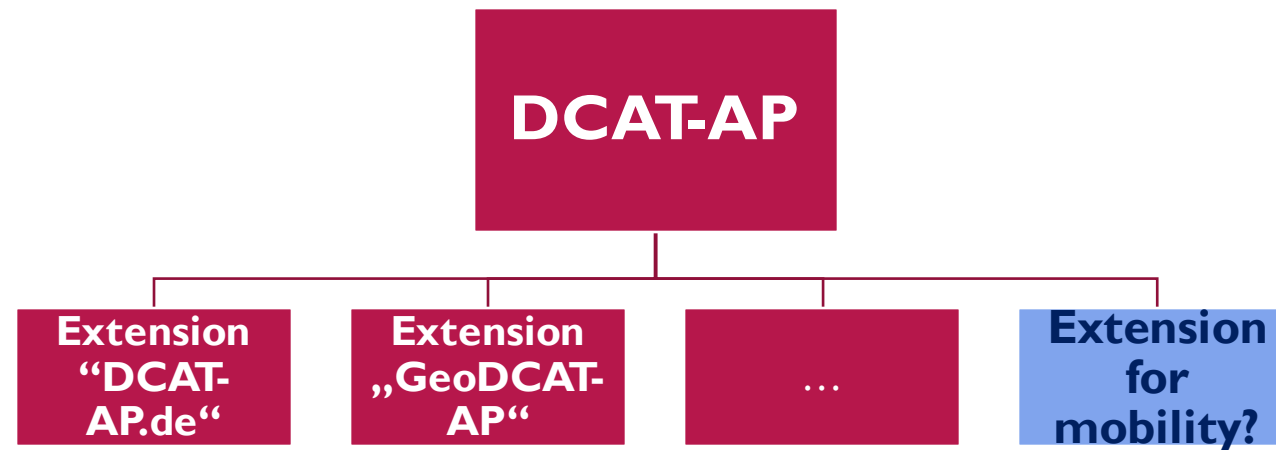
# DCAT-AP framework

- Mapping of basic NAP elements



# DCAT-AP framework

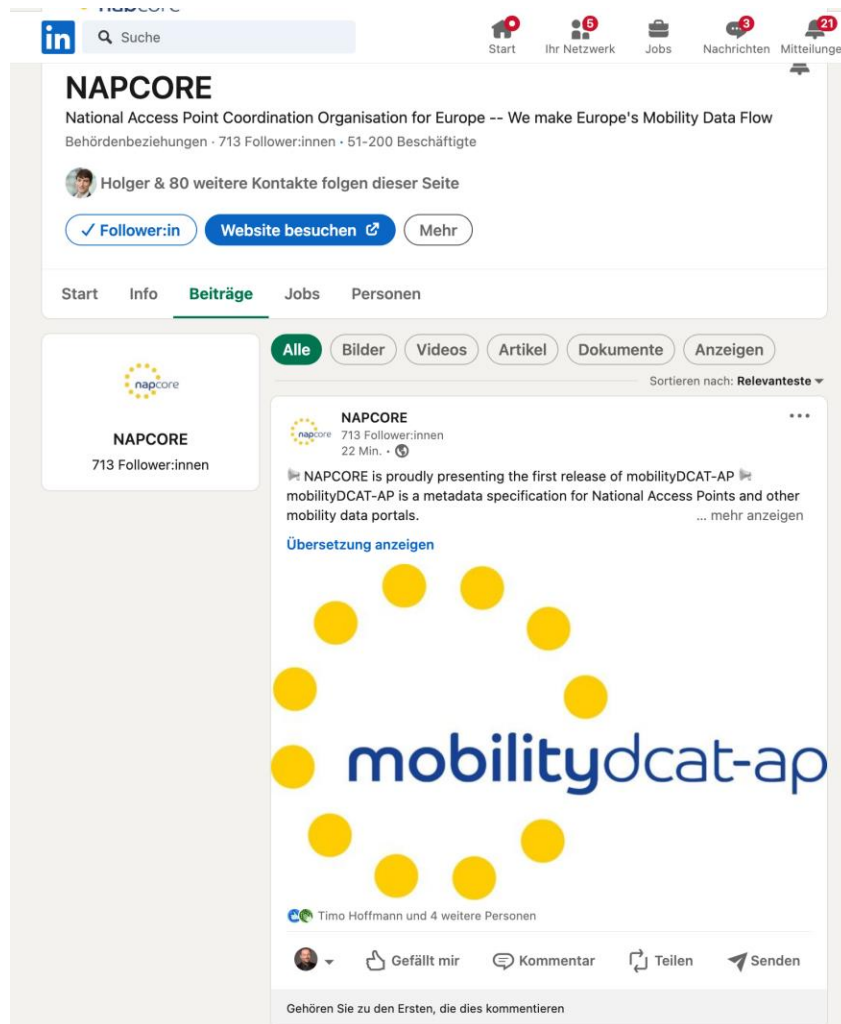
- Idea: a DCAT-AP extension for mobility data



# A new Metadata specification



# A new Metadata specification



The screenshot shows a LinkedIn profile for NAPCORE (National Access Point Coordination Organisation for Europe) with 713 followers. The profile description states: "National Access Point Coordination Organisation for Europe -- We make Europe's Mobility Data Flow". Below the profile, there are navigation tabs for "Start", "Info", "Beiträge", "Jobs", and "Personen". The "Beiträge" tab is active, showing a post from NAPCORE, 22 minutes ago. The post text reads: "NAPCORE is proudly presenting the first release of mobilityDCAT-AP mobilityDCAT-AP is a metadata specification for National Access Points and other mobility data portals." Below the text is a graphic with the text "mobilitydcat-ap" and a circular arrangement of yellow dots. The post has received likes from Timo Hoffmann and 4 other people. At the bottom of the post, there are options for "Gefällt mir", "Kommentar", "Teilen", and "Senden".

[https://www.linkedin.com/posts/napcore\\_napcore-is-proudly-presenting-the-first-activity-7127220996587053058-rN3I](https://www.linkedin.com/posts/napcore_napcore-is-proudly-presenting-the-first-activity-7127220996587053058-rN3I)

# A new Metadata specification

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## mobilityDCAT-AP - Version 1.0.0

A mobility extension for the DCAT application profile for data portals in Europe



NAPCORE Recommendation 16 October 2023

### This version:

<https://w3id.org/mobilitydcat-ap/releases/1.0.0/>

### Latest published version:

<https://w3id.org/mobilitydcat-ap/releases/>

### Latest editor's draft:

<https://w3id.org/mobilitydcat-ap/drafts/latest/>


### Previous version:


<https://w3id.org/mobilitydcat-ap/drafts/1.0.0-draft-0.1/>


### Latest Recommendation:

<https://w3id.org/mobilitydcat-ap/releases/1.0.0/>

### Editors:

Lina Molinas Comet  (Fraunhofer Institute for Applied Information Technology FIT)

Peter Lubrich  (Federal Highway Research Institute (BAST))

Mario Scrocca  (Cefriel)

### Author:

[NAPCORE Sub-Working Group \(SWG\) 4.4 \(NAPCORE \(National Access Point Coordination Organisation for Europe\) Organization\)](#)

# Behind the scenes

- The baseline: Conceptual Model  
Benjamin Witsch, Austriatech
- Hosting solution  
Mario Scrocca, Cefriel



# Work done so far

- Preparatory actions : Requirement Analysis, RoadMap, Conceptual Model, Mapping to DCAT-AP elements
  - <https://napcore.eu/providing-a-baseline-for-a-new-metadata-scheme-for-european-naps/>
- Draft and review of mobilityDCAT-AP
- Intensified exchange with DCAT-AP/SEMIC group

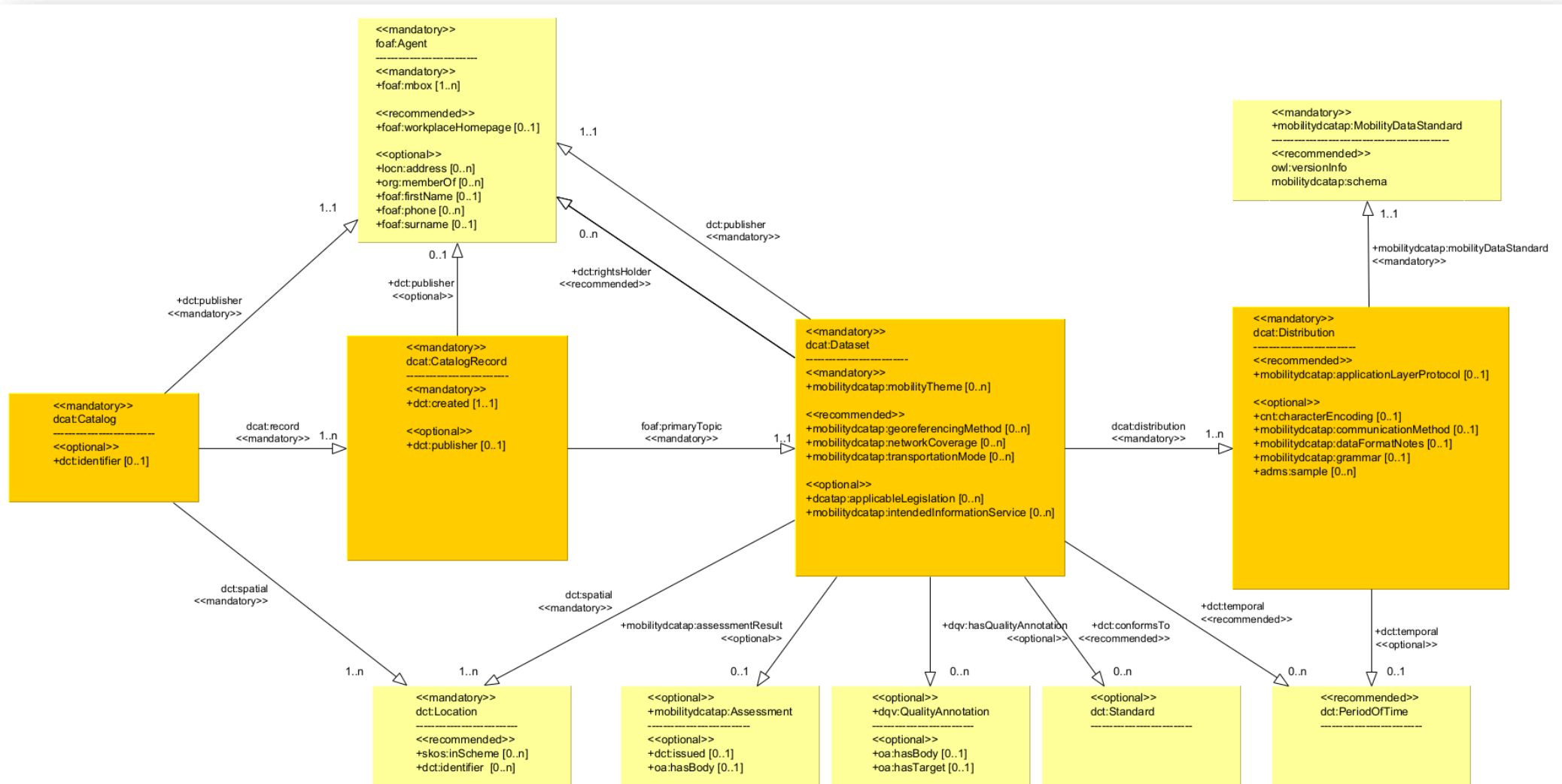
# The final product

- October 16<sup>th</sup> 2023: official release of mobilityDCAT-AP v1.0 specification
  - A set of documentation and technical artefacts
  - <https://w3id.org/mobilitydcat-ap/releases/>

# mobilityDCAT-AP: Key facts

- 2 additional classes
- 48 additional properties (some of them analogue to geoDCAT-AP)
- Several obligation levels changed
- Several usage notes refined
- Some controlled vocabularies added

# mobilityDCAT-AP: UML model



# Conversion of existing metadata


- Example from SE NAP

```
<dc:keyword>Act B</dc:keyword>  
<dc:keyword>Datex</dc:keyword>  
<dc:keyword>Speed limits</dc:keyword>
```

```
<ext:networkcoverage  
rdf:resource="http://trafficdata.se/definitions/networkcoverage/motorways"/>
```

Traffic signs expressing traffic regulations and identifying dangers, Speed limits

Data and Resources

 **Datex**  
Datex is the Swedish Transport Administration resource for Traffic signs... [Explore](#)

Act B Datex Speed limits

Additional Info

Field	Value
Description	Traffic signs expressing traffic regulations and identifying dangers from the Swedish Transport Administration. Datex
Metadata date	2019-12-04
Dataset language	English
Update frequency	On occurrence
Publisher email address	datex@trafikverket.se
Publisher website	<a href="http://www.trafikverket.se">www.trafikverket.se</a>
Contact Point Organisation	Trafikverket
Contact Point email address	datex@trafikverket
Quality indicator	Best effort
Area covered	<a href="#">Sweden</a>
Network Coverage	<ul style="list-style-type: none"><li>• Motorways</li><li>• Arterial roads</li></ul>
Transportation modes covered	
Conforms to	
Category	Traffic signs expressing traffic regulations and identifying dangers - Act B-Speed limits

# Conversion of existing metadata

- Example from SE NAP

```

<deat:keyword>Act B</deat:keyword>
<dcatap:applicableLegislation
rdf:resource="http://data.europa.eu/eli/reg_del/2022/670/oj">

<deat:keyword>Datex</deat:keyword>
<mobilitydcatap:mobilityDataStandard
rdf:resource="https://w3id.org/mobilitydcap/mobility-data-standard/datex-II"/>


<deat:keyword>Speed limits</deat:keyword>
<mobilitydcatap:mobilityTheme rdf:resource="https://w3id.org/mobilitydcap/mobility-theme/dynamic-speed-limits">
    
```

```

<ext:networkcoverage
rdf:resource="http://trafficedata.se/definitions/networkcoverage/motorways"/>
<mobilitydcatap:networkCoverage rdf:resource="https://w3id.org/mobilitydcap/network-coverage/motorways"/>
    
```

Traffic signs expressing traffic regulations and identifying dangers, Speed limits

Data and Resources

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[Explore](#)

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Contact Point Organisation	Trafikverket
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Quality indicator	Best effort
Area covered	Sweden
Network Coverage	<ul style="list-style-type: none"> <li>Motorways</li> <li>Arterial roads</li> </ul>
Transportation modes covered	
Conforms to	
Category	Traffic signs expressing traffic regulations and identifying dangers - Act B-Speed limits

# Upcoming tasks

- mobilityDCAT-AP governance & maintenance concept  
*December 2023*
- Accompanying Guidelines as additional user support  
*January 2024*
- WG 2 Metadata demonstrator as Proof-of-concept for mobilityDCAT-AP *April 2024*

# SubWG 4.4: Facts & Figures

- Participants = 21
- Time plan = mid 2021 until end 2024
- Budget = 450.000 EUR
- Tasks = 4
- Milestones = 4



# SubWG 4.4: Participants

AT	BE	BE-FL	BG	HR	CY	CZ	DK	EE	FI	HE	UITP
A	F			F	F	A	F		F		
FR	DE-BAS <sub>t</sub>	DE-AB	GR	GR-EG	HU	IE	IT	LV	LT	ERTIC O	ITxP T
F	L		A		F		A				
LU	NL	MT	PL	PT	RO	SK	SI	ES	SE	NPRA	FEDR O
	A	F	F	F	A		F		A	A	F

L = leading ; A = active ; F = following

# Thank you!



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Federal Highway Research Institute  
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