



Metadata in action: Update on mobilityDCAT-AP

Mobility Data Days

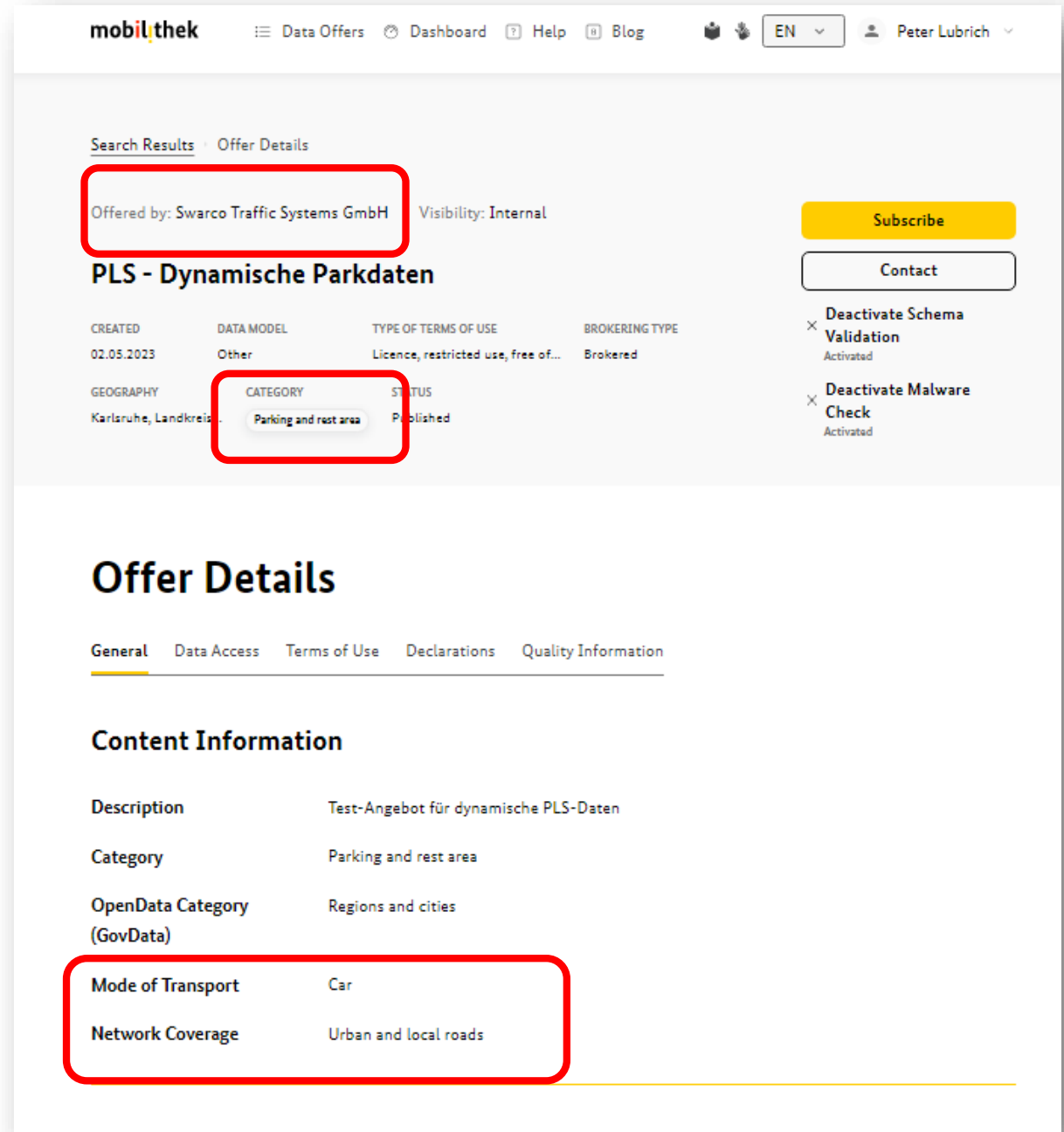
November 6th, 2024

Metadata in action :Agenda

- **Welcome, background and goals** *Peter Lubrich, BAST (DE)*
- **Hosting and collaboration** *Mario Scrocca, Cefriel (IT)*
- **Governance concept** *Ed Ooms, NDW (NL)*
- **Implementation at the Danish NAP** *Kenneth Sørensen, Vejdirektoratet (DK)*
- **Implementation at the Austrian NAP** *Benjamin Witsch, Austriatech (AT)*
- **Future prospects** *Peter Lubrich, BAST (DE)*
- **Q&A with audience**

Context

- Metadata = Basis for data-search functionality



The screenshot displays the 'mobil.thek' website interface. At the top, there is a navigation bar with links for 'Data Offers', 'Dashboard', 'Help', and 'Blog', along with a language selector set to 'EN' and a user profile for 'Peter Lubrich'. Below the navigation bar, the 'Search Results' section shows the offer 'PLS - Dynamische Parkdaten' by 'Swarco Traffic Systems GmbH'. The offer is marked as 'Internal' and 'Published'. A table below the title lists metadata: 'CREATED' (02.05.2023), 'DATA MODEL' (Other), 'TYPE OF TERMS OF USE' (Licence, restricted use, free of...), 'BROKERING TYPE' (Brokered), 'GEOGRAPHY' (Karlsruhe, Landkreis...), and 'CATEGORY' (Parking and rest area). To the right of the table, there are buttons for 'Subscribe' and 'Contact', and two toggle switches for 'Deactivate Schema Validation' and 'Deactivate Malware Check', both currently 'Activated'. Below the search results, the 'Offer Details' section is visible, with tabs for 'General', 'Data Access', 'Terms of Use', 'Declarations', and 'Quality Information'. The 'Content Information' section provides a detailed description of the offer: 'Test-Angebot für dynamische PLS-Daten'. It also lists the 'Category' (Parking and rest area), 'OpenData Category (GovData)' (Regions and cities), 'Mode of Transport' (Car), and 'Network Coverage' (Urban and local roads).

Search Results · Offer Details

Offered by: Swarco Traffic Systems GmbH Visibility: Internal

PLS - Dynamische Parkdaten

CREATED	DATA MODEL	TYPE OF TERMS OF USE	BROKERING TYPE
02.05.2023	Other	Licence, restricted use, free of...	Brokered

GEOGRAPHY	CATEGORY	STATUS
Karlsruhe, Landkreis...	Parking and rest area	Published

Subscribe

Contact

× Deactivate Schema Validation
Activated

× Deactivate Malware Check
Activated

Offer Details

General · Data Access · Terms of Use · Declarations · Quality Information

Content Information

Description	Test-Angebot für dynamische PLS-Daten
Category	Parking and rest area
OpenData Category (GovData)	Regions and cities
Mode of Transport	Car
Network Coverage	Urban and local roads

Context

- Metadata = Basis for data-search functionality

The screenshot displays the TRANSPORTDATA.BE website interface. The top navigation bar includes links for Datasets, Organizations, News, and About, along with a search bar. The main content area is titled 'Datasets' and features a search bar with the placeholder text 'Search datasets...'. Below the search bar, it indicates '97 datasets found' and an 'Order by: Relevance' dropdown menu. On the left side, there is a 'Filters' section with expandable categories: Organizations, Tags, Formats, and Licenses. The 'Tags' category is currently selected and expanded, showing a list of 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. A red arrow points to the 'Tags' filter button. The 'Formats' section shows 'Other' 30, 'CSV' 29, 'JSON' 29, and 'XML' 10. The 'Licenses' section shows 'License not specified' 37 and 'Creative Commons CCZero' 33.

TRANSPORTDATA.BE

Datasets Organizations News About Search

Home / Datasets

Filters

Organizations

Tags

Formats

Other 30 CSV 29 JSON 29 XML 10

Licenses

License not specified 37 Creative Commons CCZero 33

Search datasets...

97 datasets found

Order by: Relevance

Tags

Rail (including high speed rail) 36

Car 23 Bus 22 Truck 20

Cycle 19 Car-sharing 18

Motorcycle 17 Taxi 17 Tram 15

Bike-sharing 14

Goals

- Consistent and harmonised Metadata for all NAPs and other Mobility Data Portals
 - make data search easier!
 - make mobility metadata interoperable!
 - embrace LOD/semantic technologies!



DCAT-AP framework

 European Commission

 joinup

Interoperable Europe Interoperability Solutions Sign in Get started 

 **DCAT Application Profile for data portals in Europe** [Subscribe to this solution](#) [Download releases](#)

 SEMIC Support Centre Topics: [Standardisation](#) Downloads: 4701

[Overview](#) [Members](#) [Discussions](#) [About](#) [EIF Perspective](#) 

DCAT-AP 3.0.0 [Latest release](#)

4 months ago

This page describes version 3.0.0 of the DCAT-AP, which is the latest release of the DCAT Application Profile for data portals in Europe (DCAT-AP).

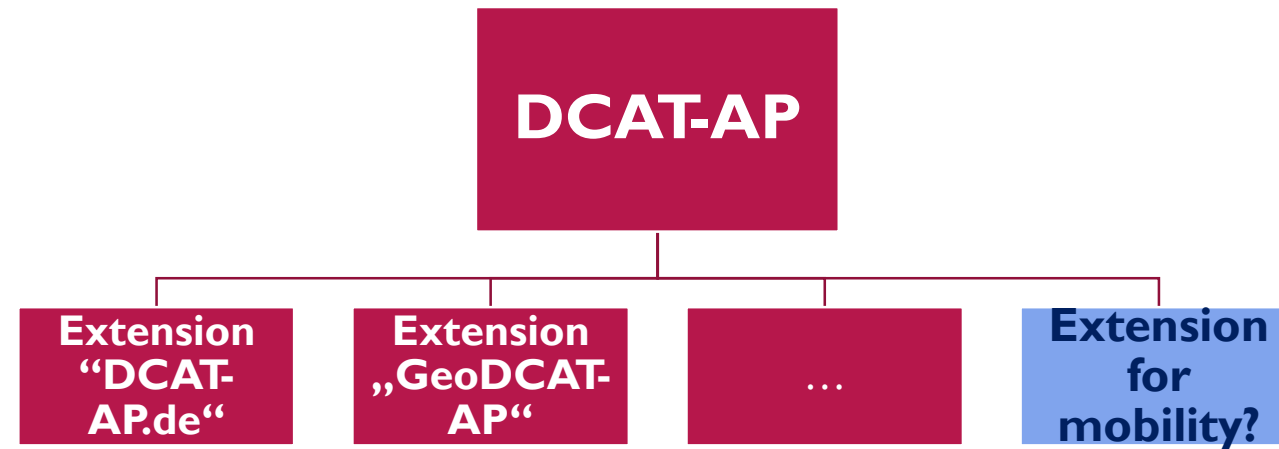
This current version of DCAT-AP 3.0.0 is fully aligned and compatible with the working draft of [DCAT 3](#).

In order to increase the maturity of the specification, we invite you to provide feedback during a **public review** period. The review period will last **until 30 September 2023** after which all feedback will be integrated.

Some changes to the specification we would like to highlight are:

DCAT-AP framework

- Idea: a DCAT-AP extension for mobility data



A new Metadata specification for Mobility Data



Milestones

- 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/>
- Consultation with DCAT-AP/SEMIC group
- October 16th 2023: official release of mobilityDCAT-AP v1.0.0

Public release



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



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2.2	mobilityDCAT-AP Overview
3.	Application Profile Classes
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4.2.2	Recommended property for Agent
4.2.3	Optional properties for Agent
4.3	+Assessment
4.3.1	Optional properties for Assessment
4.4	Catalogue
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4.4.2	Recommended properties for Catalogue
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4.7	Category Scheme
4.7.1	Mandatory property for Category Scheme
4.8	Checksum
4.8.1	Mandatory properties for Checksum
4.9	Data Service

mobilityDCAT-AP - Version 1.0.1

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



NAPCORE Recommendation 04 April 2024

This version:

<https://w3id.org/mobilitydcat-ap/releases/1.0.1/>

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:

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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)

Participate:

[GitHub mobilityDCAT-AP/mobilityDCAT-AP](#)
[File a bug](#)
[Commit history](#)
[Pull requests](#)

Document status:

Completed

Document version:

1.0.1

Reviewed by:

NAPCORE SWG 4.4
European NAP operators
Editors of DCAT-AP/SEMIC Team

Approved by:

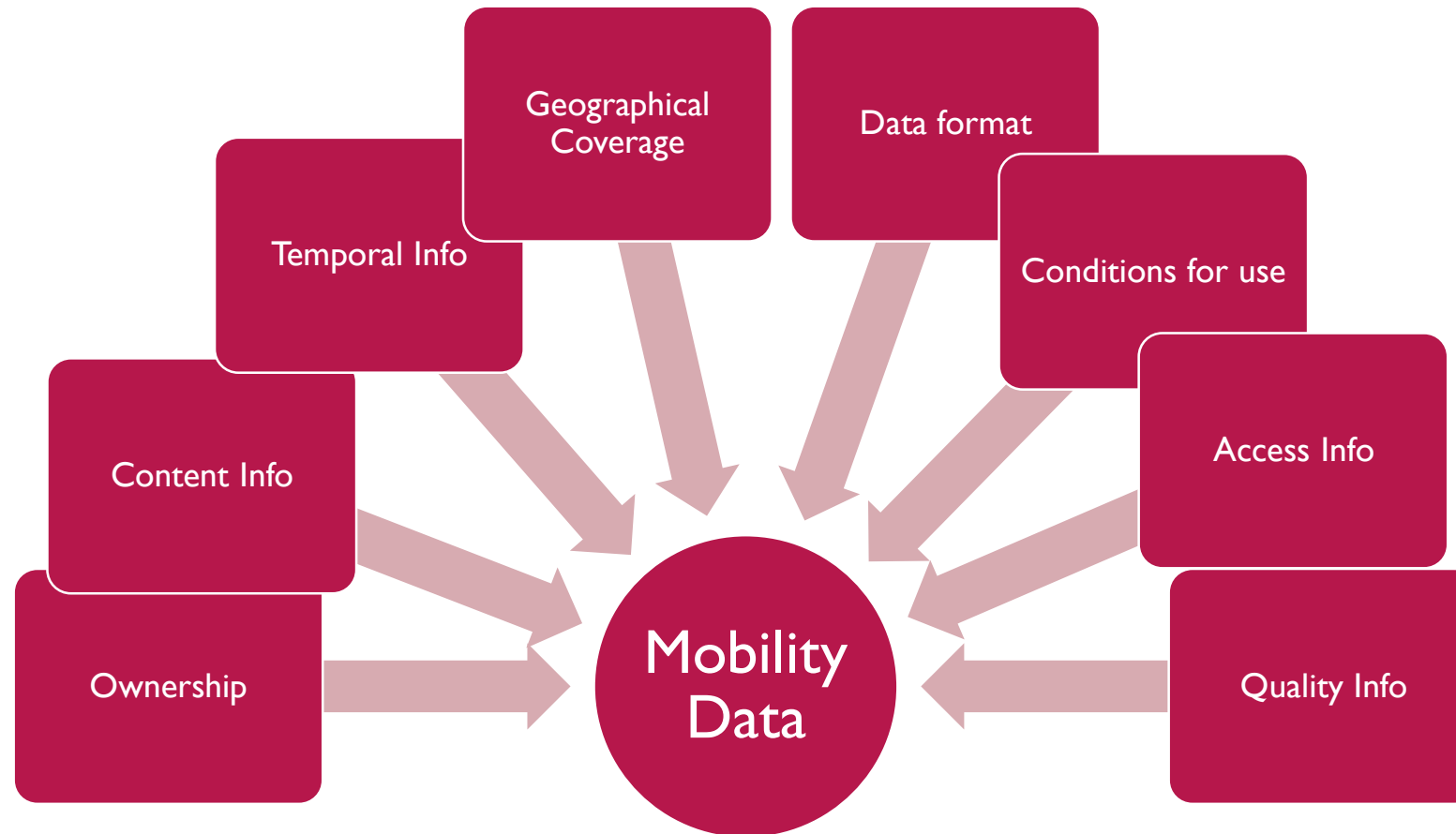
NAPCORE SWG 4.4

Please check the [errata](#) for any errors or issues reported since publication.

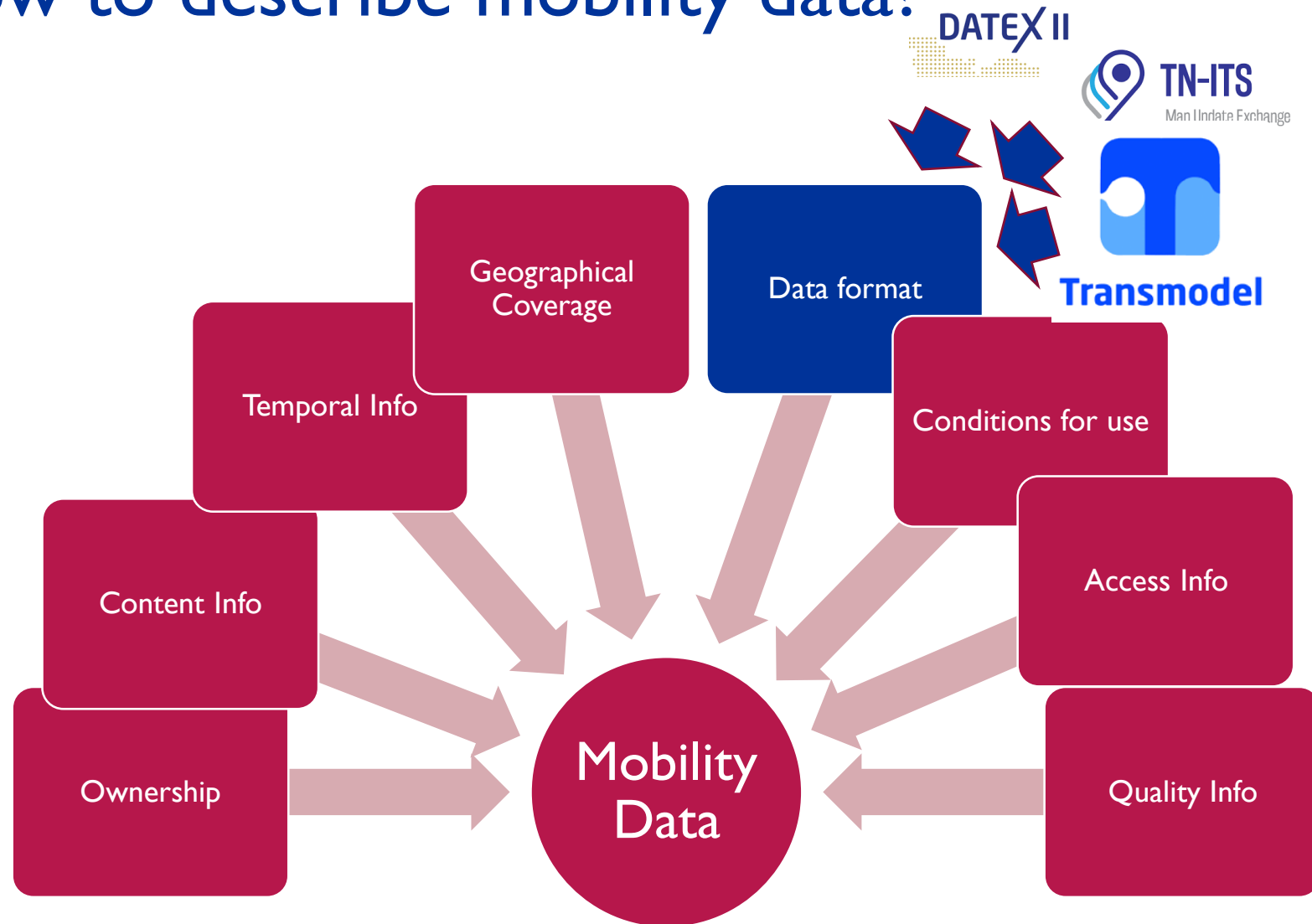
This document is also available in these non-normative formats: [RDF/XML](#), [Turtle](#), [JSON-LD](#), and [SHACL \(Turtle\)](#)

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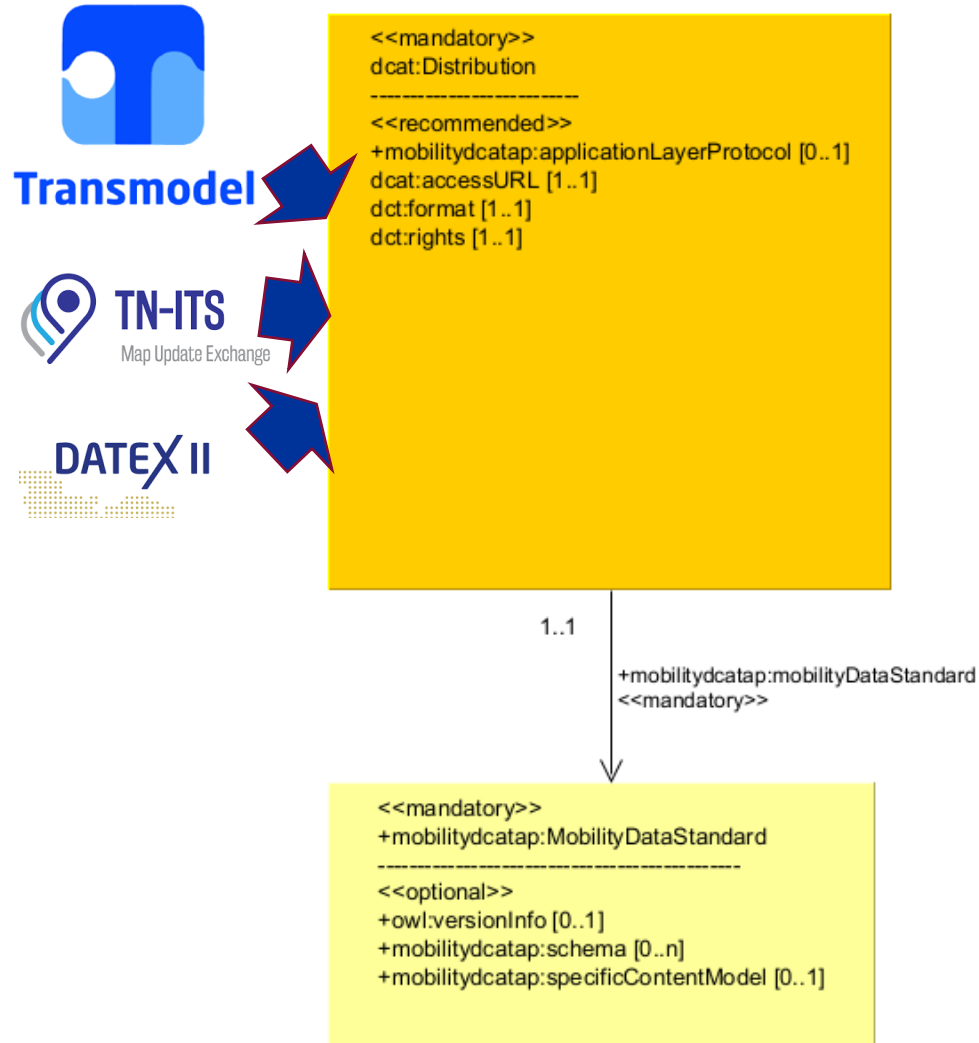
How to describe mobility data?



How to describe mobility data?



How to describe a data standard?



```

<mobilitydcatap:mobilityDataStandard>
  <mobilitydcatap:MobilityDataStandard
    rdf:about="https://w3id.org/mobilitydcat-ap/mobility-
data-standard/datex-II"/>
    <owl:versionInfo "3"/>
    <mobilitydcatap:schema
      rdf:resource="https://mobilithek.info//mdp-
api/files/aux/schemas/DATEX_2_V3/Parkraummanagement_D
ATEX_II_v3_Belegungsdaten/DATEXII_3_Parking.xsd"/>
    <mobilitydcatap:specificContentModel
      rdf:resource="https://w3id.org/mobilitydcat-
ap/content-model/MeasuredDataPublication"/>
  </mobilitydcatap:mobilityDataStandard>
  
```

Public release



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mobilityDCAT-AP - Version 1.0.1

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



NAPCORE Recommendation 04 April 2024

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The road to deployment

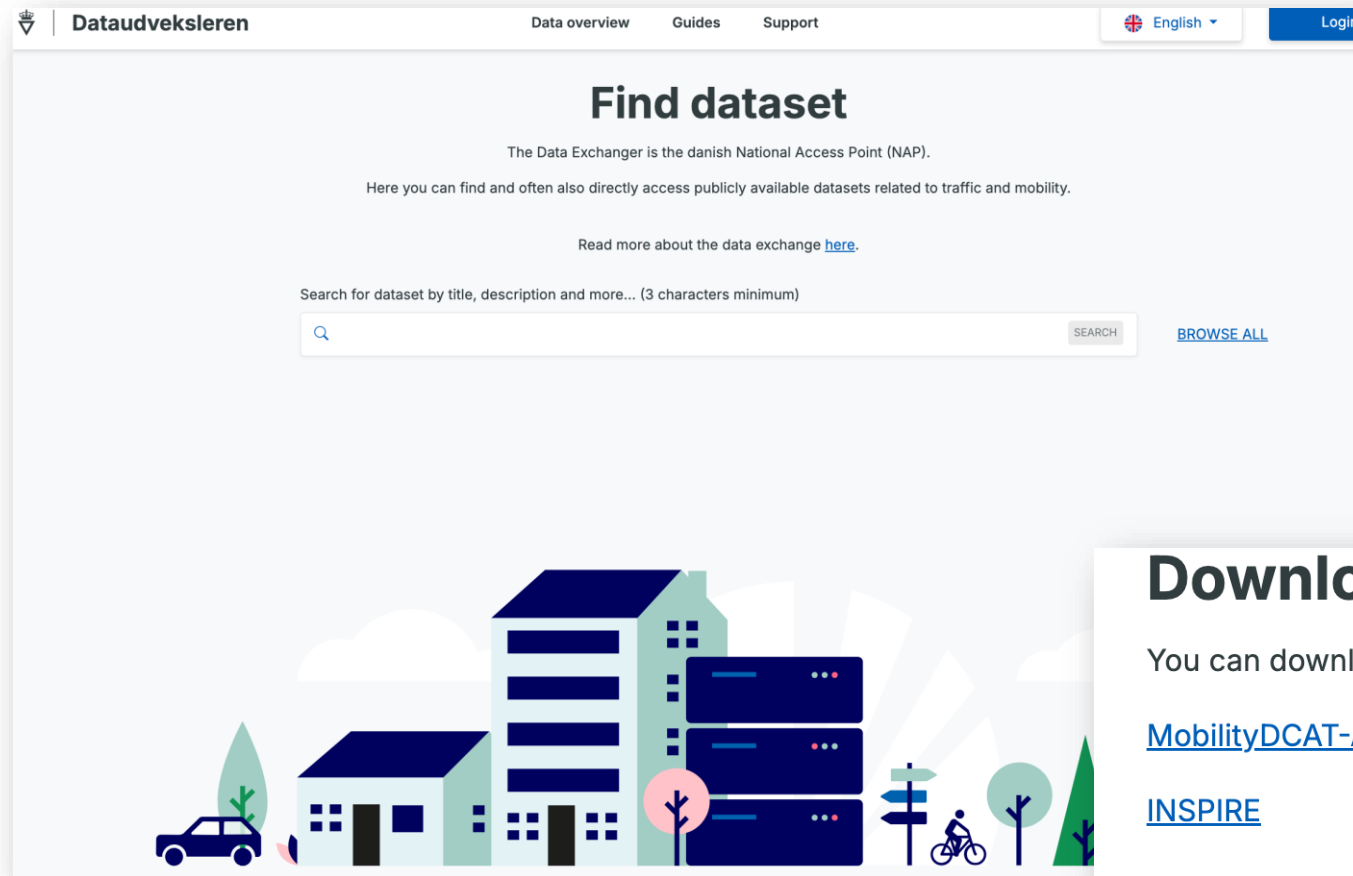
NAP Name	NAP Link	Contact	Status	Target Deployment Date
NAP Denmark (Dataudveksleren)	du.vd.dk	vd@vd.dk	deployed	Q2 2024
NAP Latvia	transportdata.gov.lv	-	testing	Q4 2024
NAP Cyprus	traffic4cyprus.org.cy	-	testing	Q4 2024
NAP Austria	mobilitydata.gv.at	-	preparation	Q4 2024
NAP Sweden (Trafficdata)	trafficdata.se	-	preparation	Q4 2024
NAP Finland (SRTI&RTTI)	digitraffic.fi	-	preparation	Q4 2024
NAP Belgium	transportdata.be	contact@transportdata.be	testing	Q4 2024
NAP The Netherlands	toegangspuntmobiliteit.nl	ed.ooms@ndw.nu	testing	Q1 2025
NAP Germany	mobilithek.info	mobilithek@bast.de	testing	Q4 2024
NAP Czechia	dopravniinfo.cz	petr.bures@tamtamresearch.com	interested	-
NAP Norway (Transportportal)	transportportal.no	kontakt@transportportal.no	interested	-

<https://github.com/mobilityDCAT-AP/adopters>

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The road to deployment



Our first
implementation,
congrats!



Download

You can download

[MobilityDCAT-A](#)

[INSPIRE](#)

<https://du-portal-ui.dataudveksler.app.vd.dk/guides>

Birthday icons created by Freepik – Flaticon

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Ongoing tasks

- **Governance & maintenance**

Long-lasting structures & resources planned under NAPCORE-X

- **User support**

Wikipage, webinars, bilateral consulting,...

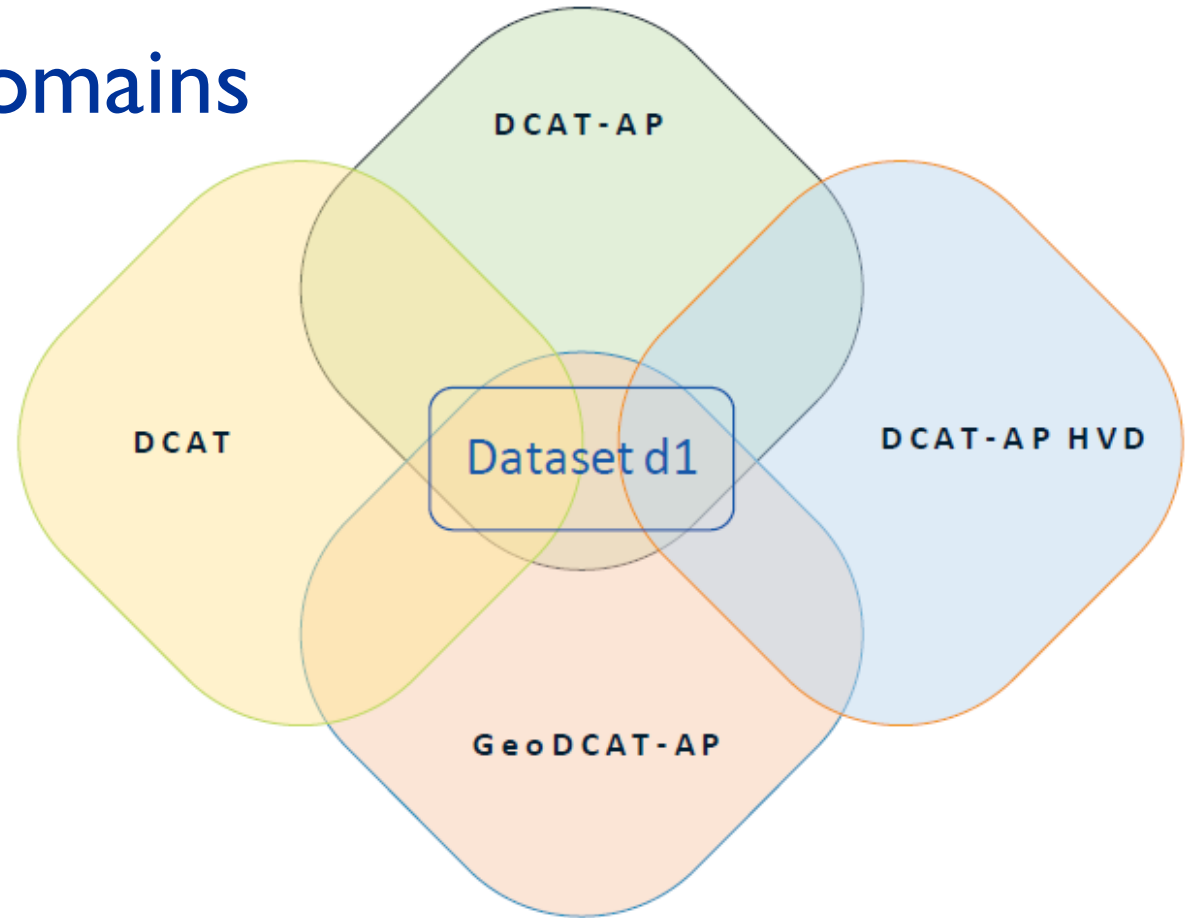
- **Metadata aggregator as Proof-of-concept**

see session tomorrow at 9:00: “NAP Interoperability Demonstrators”

Ongoing tasks

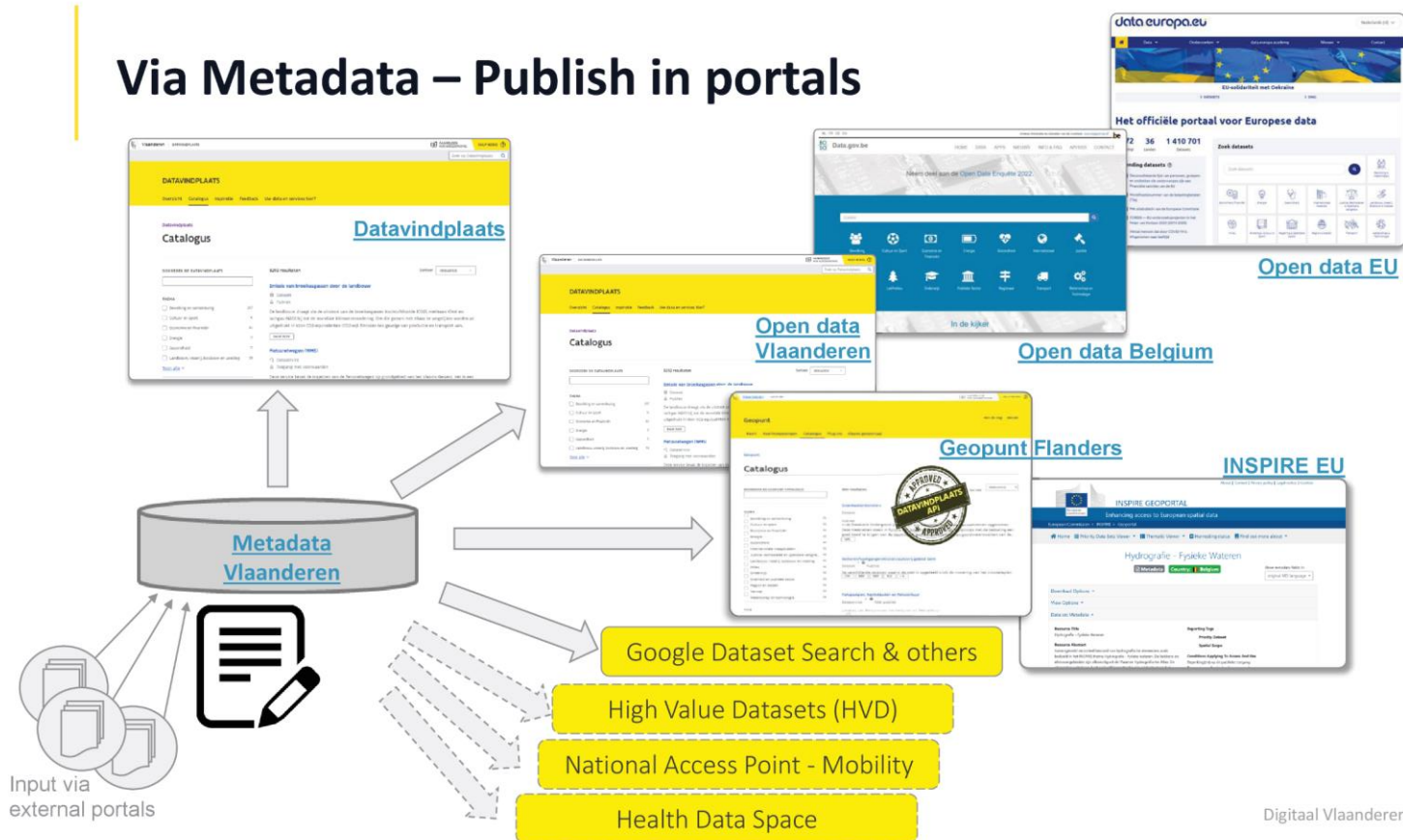
- Alignment with other domains

- mobilityDCAT v.1.0.1 is aligned with:
 - DCAT-AP v2.0.1
 - geoDCAT-AP v2.0.0
- 2025: upgrade with alignments to:
 - DCAT-AP v3.0.0
 - geoDCAT-AP v3.0.0



Get the big picture – consider mobilityDCAT-AP in national metadata ecosystems

Via Metadata – Publish in portals



https://joinup.ec.europa.eu/sites/default/files/event/attachment/2024-04/20240423%20GeoDCAT-AP%20WG3%20Webinar_0.pdf

Get the big picture – consider mobilityDCAT-AP in national metadata ecosystems

- Example:
 - Handling of various metadata formats in one NAP

The screenshot shows the 'mobilithek' website interface. At the top, there's a navigation bar with links: Data Offers, Blog, The Mobilithek, Help, and Contact. Below this, a breadcrumb trail reads 'Search Results > Offer Details'. The main content area displays information about a data offer: 'Offered by: Neuss', 'Visibility: Public', and the title '_OPEN_NRW_: Rhein-Kreis Neuss: Radzählstationen Auswertung'. A table below provides details on 'CREATED' (26.08.2024), 'DATA MODEL' (Other), 'TYPE OF TERMS OF USE' (Licence, free use/open data), 'BROKERING TYPE' (Not brokered), 'GEOGRAPHY' (—), and 'CATEGORY' (Other). Below the table, there's a section titled 'Offer Details' with tabs for 'General', 'Data Access', and 'Terms of Use'. The 'General' tab is active, showing 'General Information'. A red arrow points from the text 'Handling of various metadata formats in one NAP' to the 'Metadata Export' section. This section lists export options: 'Export to DCAT-AP.de' with links for JSON-LD, Turtle, and RDF/XML; 'Export to ISO19115/19119' with a link for XML; 'Export to Mobilithek Information Model' with links for JSON-LD, Turtle, RDF/XML, and CSV; and 'In future: Export to mobilityDCAT-AP' with links for JSON-LD, Turtle, and RDF/XML.

mobilithek Data Offers Blog The Mobilithek Help Contact DE | EN

Search Results > Offer Details

Offered by: Neuss Visibility: Public

_OPEN_NRW_: Rhein-Kreis Neuss: Radzählstationen Auswertung

CREATED	DATA MODEL	TYPE OF TERMS OF USE	BROKERING TYPE
26.08.2024	Other	Licence, free use/open data	Not brokered
GEOGRAPHY	CATEGORY		
—	Other		

Offer Details

General Data Access Terms of Use

General Information

Metadata Export

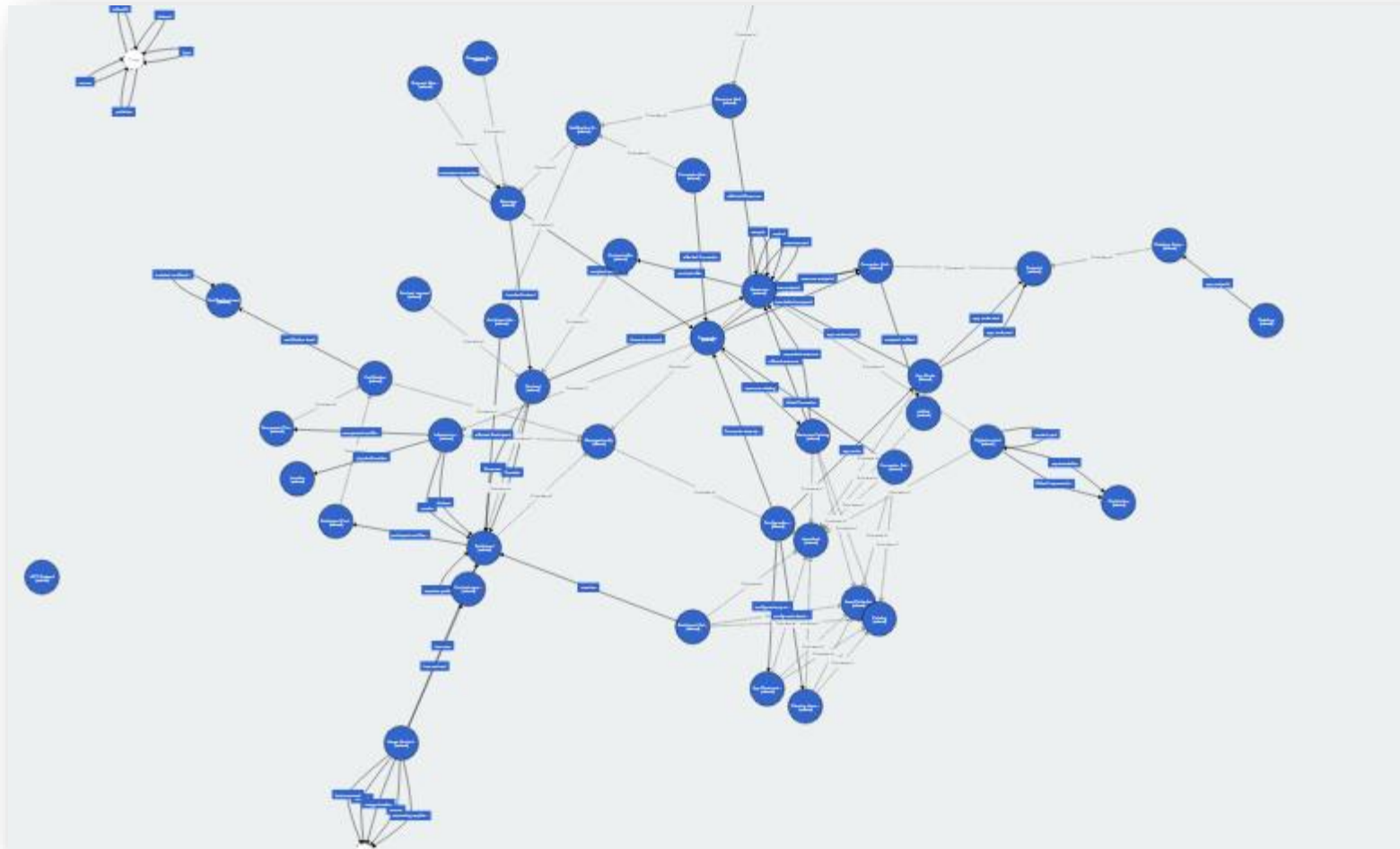
Export to DCAT-AP.de [JSON-LD](#) [Turtle](#) [RDF/XML](#)

Export to ISO19115/19119 [XML](#)

Export to Mobilithek Information Model [JSON-LD](#) [Turtle](#) [RDF/XML](#) [CSV](#)

In future: [JSON-LD](#) [Turtle](#) [RDF/XML](#)
Export to mobilityDCAT-AP

Future: enhance the semantic component - build a detailed ontology?



<https://international-data-spaces-association.github.io/InformationModel/docs/index.html#>

Thank you!



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Federal Highway Research Institute
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lubrich@bast.de
www.bast.de + [LinkedIn](#) + [Instagram](#) + [YouTube](#)

mobilityDCAT-AP

Hosting and Collaboration

Mobility Data Days, Turin – November 6th, 2024

Mario Scrocca (Cefriel)
mario.scrocca@cefriel.com

mobilityDCAT-AP

- **Hosting**

Where can I find all the resources needed to adopt mobilityDCAT-AP?



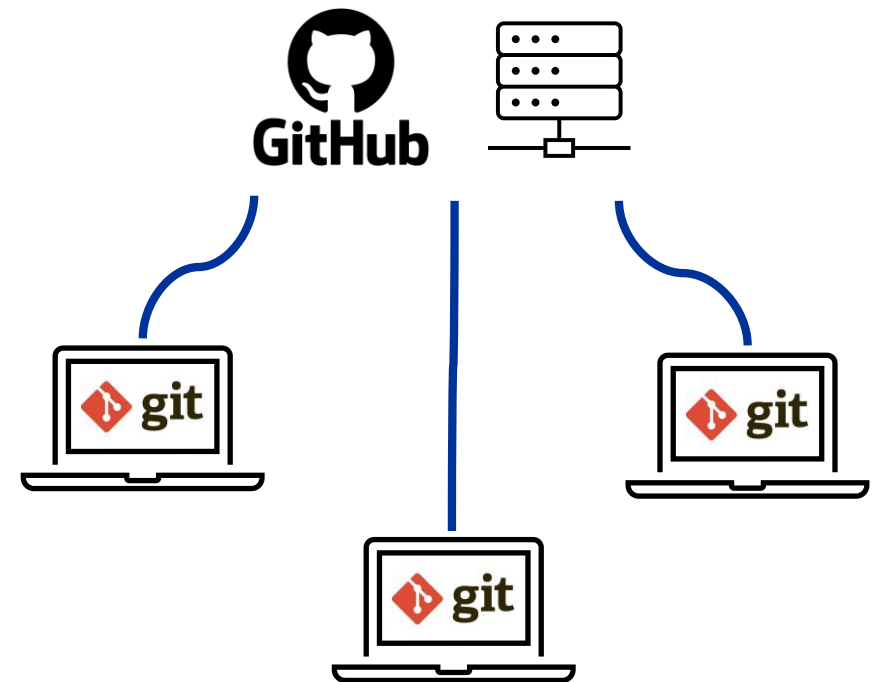
- **Collaboration**

How can I contribute or ask questions about mobilityDCAT-AP?

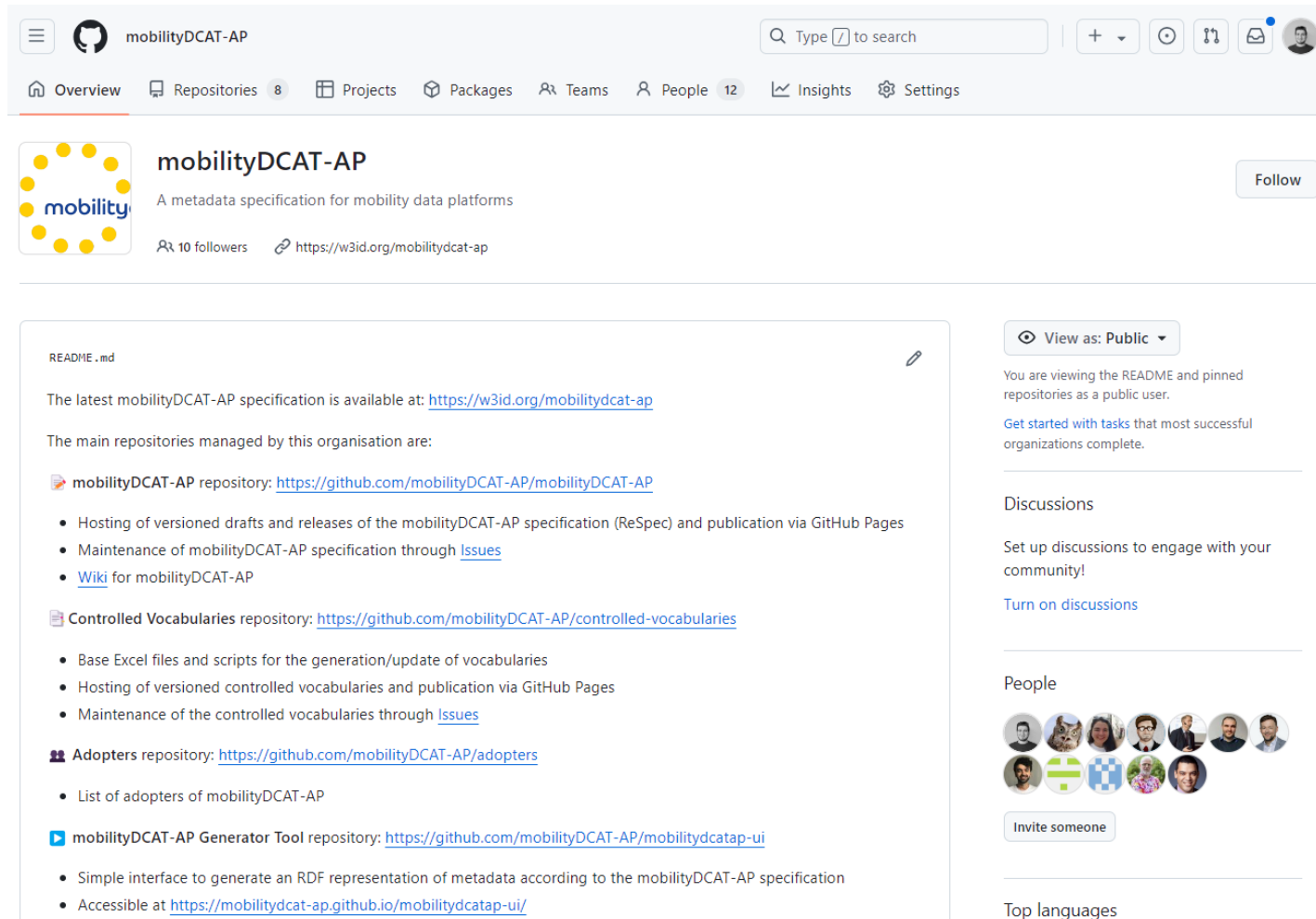


Hosting: GitHub Repository

- GitHub Repositories are **online repositories** for collaboration
- **Hosting of versioned files** is enabled by the *Git* distributed version control system
- **GitHub Pages** enable the online **publication** of web pages hosted in a repository
- **GitHub Wiki** enables the definition of additional documentation associated with the content of a repository



mobilityDCAT-AP GitHub Organisation



The screenshot shows the GitHub organization page for mobilityDCAT-AP. The header includes the organization name, a search bar, and navigation links for Overview, Repositories (8), Projects, Packages, Teams, People (12), Insights, and Settings. The main section features the organization's logo, name, and description: "A metadata specification for mobility data platforms". It also shows 10 followers and the website URL <https://w3id.org/mobilitydcat-ap>. The README file is displayed, detailing the latest specification, main repositories, and adopters. The right sidebar shows options to view as public, discussions, and a list of people.

mobilityDCAT-AP

A metadata specification for mobility data platforms

10 followers <https://w3id.org/mobilitydcat-ap>

README .md

The latest mobilityDCAT-AP specification is available at: <https://w3id.org/mobilitydcat-ap>

The main repositories managed by this organisation are:

- mobilityDCAT-AP repository: <https://github.com/mobilityDCAT-AP/mobilityDCAT-AP>
 - Hosting of versioned drafts and releases of the mobilityDCAT-AP specification (ReSpec) and publication via GitHub Pages
 - Maintenance of mobilityDCAT-AP specification through [Issues](#)
 - [Wiki](#) for mobilityDCAT-AP
- Controlled Vocabularies repository: <https://github.com/mobilityDCAT-AP/controlled-vocabularies>
 - Base Excel files and scripts for the generation/update of vocabularies
 - Hosting of versioned controlled vocabularies and publication via GitHub Pages
 - Maintenance of the controlled vocabularies through [Issues](#)
- Adopters repository: <https://github.com/mobilityDCAT-AP/adopters>
 - List of adopters of mobilityDCAT-AP
- mobilityDCAT-AP Generator Tool repository: <https://github.com/mobilityDCAT-AP/mobilitydcatap-ui>
 - Simple interface to generate an RDF representation of metadata according to the mobilityDCAT-AP specification
 - Accessible at <https://mobilitydcat-ap.github.io/mobilitydcatap-ui/>

View as: Public

You are viewing the README and pinned repositories as a public user.

[Get started with tasks](#) that most successful organizations complete.

Discussions

Set up discussions to engage with your community!

[Turn on discussions](#)

People

Invite someone

Top languages

Link:

<https://github.com/mobilityDCAT-AP>

A group to manage:

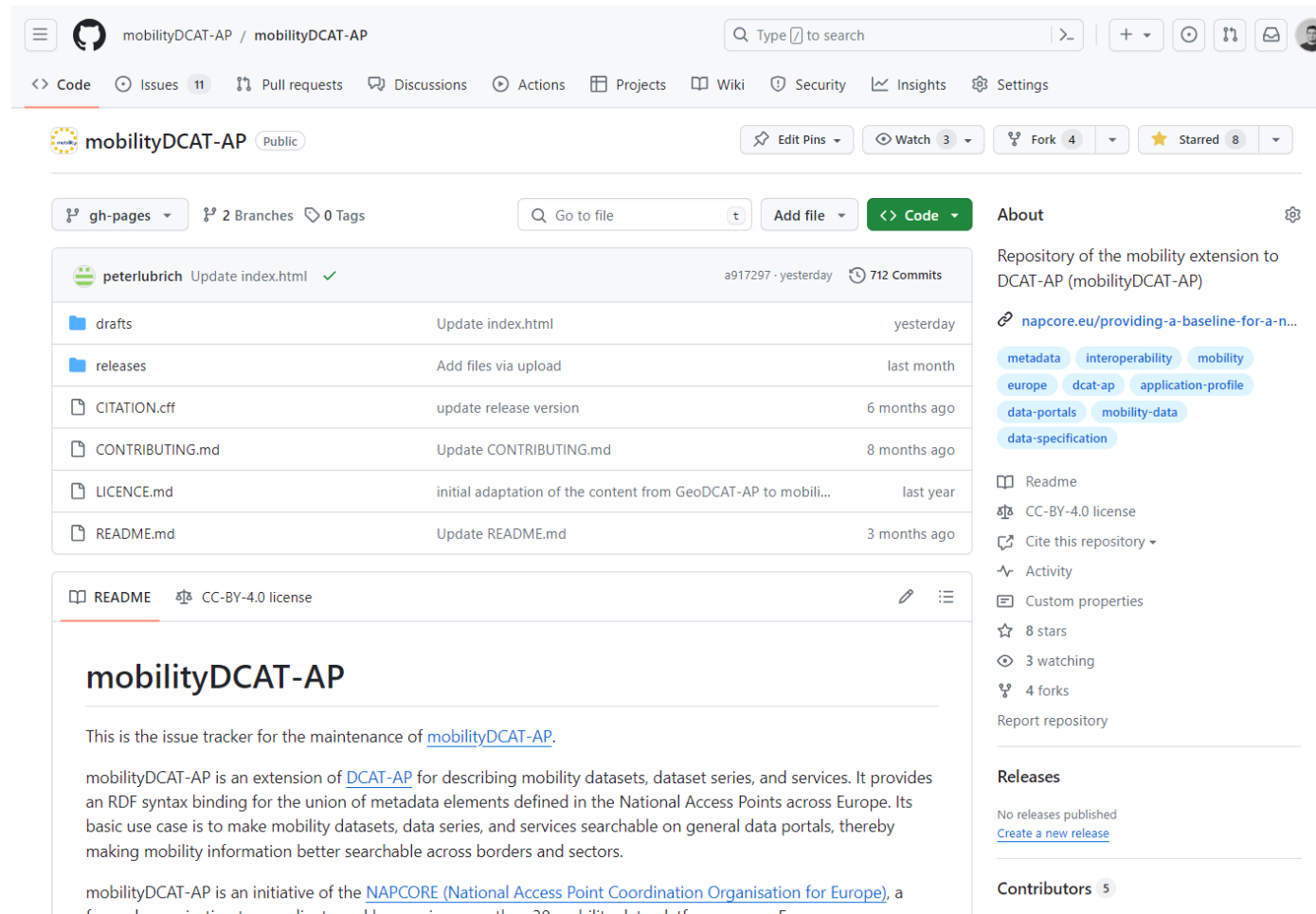
- *Repositories*
- *Users with different roles working on the repositories*



Documentation: <https://docs.github.com/en/organizations/collaborating-with-groups-in-organizations/about-organizations>

mobilityDCAT-AP Specification

GitHub Repository: <https://github.com/mobilityDCAT-AP/mobilityDCAT-AP>



The screenshot shows the GitHub repository page for `mobilityDCAT-AP`. The repository is owned by `mobilityDCAT-AP` and is public. It has 3 watches, 4 forks, and 8 stars. The repository description is "Repository of the mobility extension to DCAT-AP (mobilityDCAT-AP)". The repository contains a README, a CC-BY-4.0 license, and a list of files including `drafts`, `releases`, `CITATION.cff`, `CONTRIBUTING.md`, `LICENCE.md`, and `README.md`. The README content is as follows:

mobilityDCAT-AP

This is the issue tracker for the maintenance of [mobilityDCAT-AP](#).

mobilityDCAT-AP is an extension of [DCAT-AP](#) for describing mobility datasets, dataset series, and services. It provides an RDF syntax binding for the union of metadata elements defined in the National Access Points across Europe. Its basic use case is to make mobility datasets, data series, and services searchable on general data portals, thereby making mobility information better searchable across borders and sectors.

mobilityDCAT-AP is an initiative of the [NAPCORE \(National Access Point Coordination Organisation for Europe\)](#), a formed organisation to coordinate and harmonise more than 20 mobility data platforms across Europe.



Hosting: mobilityDCAT-AP artefacts (1/2)

- **Machine-readable serializations** in different RDF formats: RDF/XML, Turtle, JSON-LD
- **SHACL shapes** for the **automatic validation of metadata**, i.e., to check if a set of metadata comply with the specification

```
@prefix vcard: <http://www.w3.org/2006/vcard/ns#> .
@prefix voaf: <http://purl.org/vocommons/voaf#> .
@prefix vs: <http://www.w3.org/2003/06/sw-vocab-status/ns#> .
@prefix xml: <http://www.w3.org/XML/1998/namespace> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@base <https://w3id.org/mobilitydcat-ap/> .

mobilitydcatap: a voaf:Vocabulary,
  owl:Ontology,
  adms:Asset ;
rdfs:label "mobilityDCAT-AP"@en ;
dct:abstract "mobilityDCAT-AP is an extension of the DCAT application profile for data portals" ;
dct:alternative "mobilityDCAT-AP - Version 1.0.0: A mobility extension for the DCAT application profile" ;
dct:conformsTo dcatap: ,
  <https://joinup.ec.europa.eu/collection/semantic-interoperability-community-semic/document/p/semic-solution-dcatap/> ,
  <https://joinup.ec.europa.eu/collection/semantic-interoperability-community-semic/solution/dcatap/> ,
  <https://www.w3.org/TR/vocab-dcat-2/> ;
dct:created "2023-05-11"^^xsd:date ;
dct:creator [ a foaf:Group ;
  foaf:name "NAPCORE SWG 4.4" ;
  foaf:page <https://github.com/mobilityDCAT-AP/mobilityDCAT-AP> ] ;
dct:dateCopyrighted "2023"^^xsd:gYear ;
dct:description "mobilityDCAT-AP is an extension of the DCAT application profile for data portals" ;
dct:issued "2023-05-11"^^xsd:date ;
dct:license <https://creativecommons.org/licenses/by/4.0/> ;
dct:modified "2023-10-15"^^xsd:date ;
dct:publisher <https://napcore.eu/> ;
dct:rightsHolder <https://napcore.eu/> ;
dct:title "mobilityDCAT-AP"@en ;
dct:type <http://publications.europa.eu/resource/authority/asset-classification/c_89b4bdb7> ,
  <http://publications.europa.eu/resource/authority/dataset-type/APROF> ,
  <http://publications.europa.eu/resource/authority/dataset-type/ONTOLOGY> ;
bibo:editor [ a foaf:Person ;
  foaf:name "Lina Molinas Comet" ,
  <https://lina-molinas-comet.name/foaf/#me> ;
  vann:preferredNamespacePrefix "mobilitydcatap" ;
  vann:preferredNamespaceUri <http://w3id.org/mobilitydcat-ap/>^^xsd:anyURI ;
  voaf:reliesOn dcatap: ,
  dct: ,
  rdfs: ] ;
```

Hosting: mobilityDCAT-AP artefacts (2/2)

- mobilityDCAT-AP **HTML Documentation** defined using the ReSpec tool

Draft documentation (unstable)

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1.3	A DCAT-AP extension: Enhancing DCAT-AP for Mobility
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2.1	Namespaces
2.2	mobilityDCAT-AP Overview
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3.2	Recommended Classes
3.3	Optional Classes
4.	Application Profile Properties per Class
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4.1.1	Recommended properties for Address (Agent)
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4.2.2	Recommended property for Agent
4.2.3	Optional properties for Agent
4.3	+Assessment
4.3.1	Optional properties for Assessment
4.4	Catalogue
4.4.1	Mandatory properties for Catalogue
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4.4.3	Optional properties for Catalogue
4.5	Catalogue Record
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4.5.2	Recommended properties for Catalogue Record

mobilityDCAT-AP - Version 1.0.1
A mobility extension for the DCAT application profile for data portals in Europe



NAPCORE Editor's Draft 13 March 2024

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

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

Latest editor's draft:
<https://w3id.org/mobilitydcat-ap/drafts/latest/>

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)

Participate:
[GitHub mobilityDCAT-AP/mobilityDCAT-AP](#)
[File a bug](#)
[Commit history](#)
[Pull requests](#)

Document status:
Completed

Document version:
1.0.1

Please check the [errata](#) for any errors or issues reported since publication.

This document is also available in these non-normative formats: [RDF/XML](#), [Turtle](#), [JSON-LD](#), and [SHACL](#)

Versioned releases (stable)

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mobilityDCAT-AP - Version 1.0.1
A mobility extension for the DCAT application profile for data portals in Europe



NAPCORE Recommendation 04 April 2024

This version:
<https://w3id.org/mobilitydcat-ap/releases/1.0.1/>

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:
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[Commit history](#)
[Pull requests](#)

Document status:
Completed

Document version:
1.0.1

Reviewed by:
NAPCORE SWG 4.4

Hosting: Controlled Vocabularies

- The mobilityDCAT-AP specification also defines “**recommended values**” to be used for certain metadata fields
- For example, a fixed list of transport modes is defined for the property `mobilitydcat-ap:transportMode`
- mobilityDCAT-AP defines **11 controlled vocabularies** using the W3C **SKOS Recommendation**

Air
Bicycle
Bike Hire
Bike Sharing
Bus
Car
Car Hire
Car Pooling
Car Sharing
E-Scooter
Long-distance coach
Long-distance rail
Maritime
Metro, Subway train
Motorcycle
Pedestrian
Regional and local rail
Ride Pooling
Shuttle bus
Shuttle ferry
Taxi
Tram, Light rail
Truck
Other

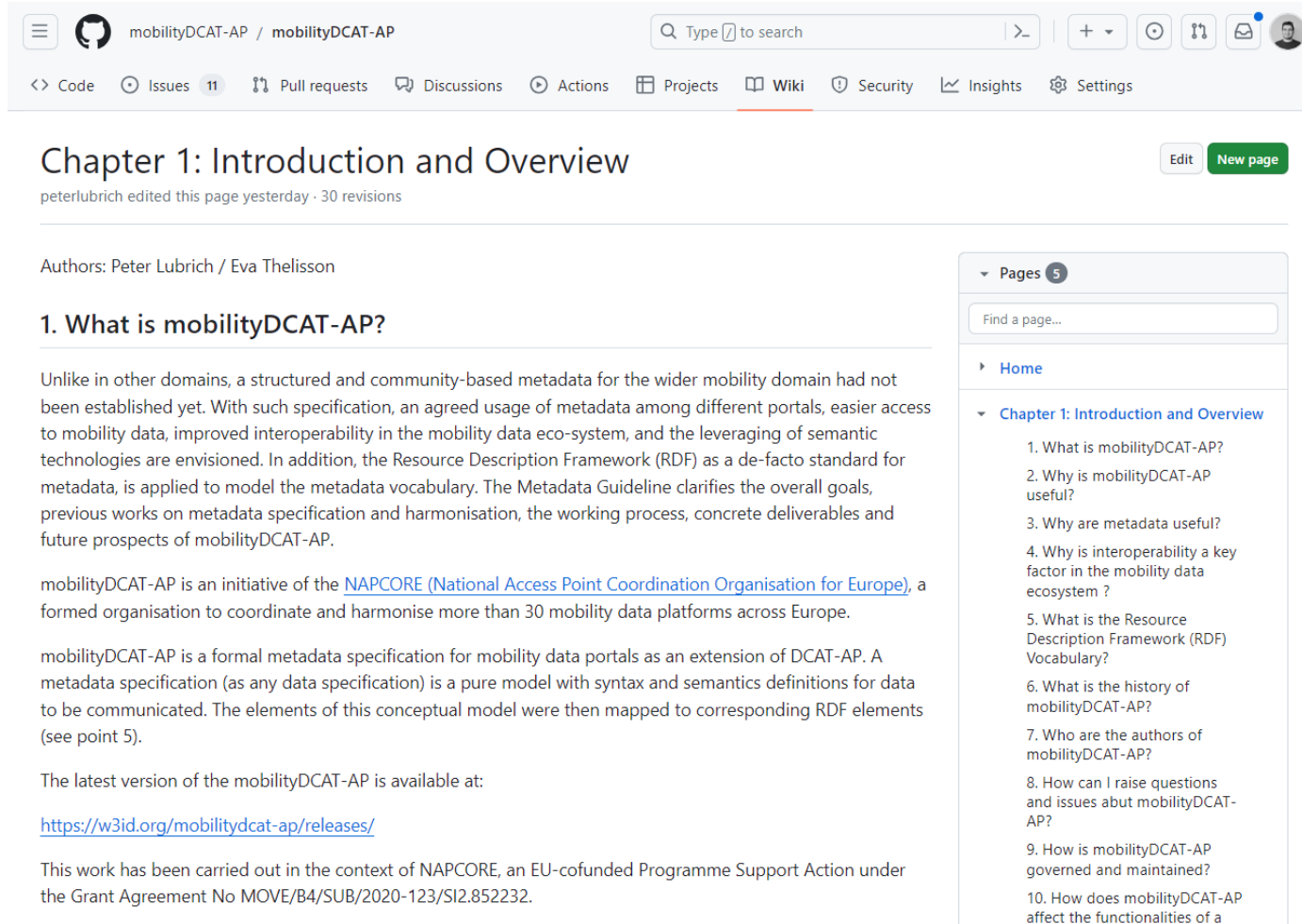
mobilityDCAT-AP Controlled Vocabularies

GitHub Repository: <https://github.com/mobilityDCAT-AP/controlled-vocabularies>

The screenshot shows the GitHub repository page for 'mobilityDCAT-AP / controlled-vocabularies'. The repository is public and has 2 stars and 0 forks. The main branch is 'main' with 1 branch and 0 tags. The repository contains a table of files and folders, each with a commit message and a timestamp. The files include '.github/ISSUE_TEMPLATE', 'application-layer-protocol', 'communication-method', 'conditions-for-access-and-usage', 'georeferencing-method', 'grammar', 'intended-information-service', 'mobility-data-standard', 'mobility-theme', 'network-coverage', and 'transport-mode'. The repository also has a README, a CC-BY-4.0 license, and 26 commits. The 'Releases' section shows no releases published, and the 'Deployments' section shows a deployment for 'github-pages' last week.

File/Folder	Commit Message	Timestamp
.github/ISSUE_TEMPLATE	Update issue templates	last week
application-layer-protocol	Release 1.0.0	6 months ago
communication-method	Release 1.0.0	6 months ago
conditions-for-access-and-usage	Release 1.0.0	6 months ago
georeferencing-method	Release 1.0.0	6 months ago
grammar	Release 1.0.0	6 months ago
intended-information-service	Release 1.0.0	6 months ago
mobility-data-standard	mobility-data-standard: fix bug in the xlsx file	2 months ago
mobility-theme	mobility-theme: fix <a> tag	last month
network-coverage	Release 1.0.0	6 months ago
transport-mode	Release 1.0.0	6 months ago

Hosting: GitHub Wiki



mobilityDCAT-AP / mobilityDCAT-AP

Type to search

<> Code Issues 11 Pull requests Discussions Actions Projects Wiki Security Insights Settings

Chapter 1: Introduction and Overview

peterlubrich edited this page yesterday · 30 revisions

Authors: Peter Lubrich / Eva Thelisson

1. What is mobilityDCAT-AP?

Unlike in other domains, a structured and community-based metadata for the wider mobility domain had not been established yet. With such specification, an agreed usage of metadata among different portals, easier access to mobility data, improved interoperability in the mobility data eco-system, and the leveraging of semantic technologies are envisioned. In addition, the Resource Description Framework (RDF) as a de-facto standard for metadata, is applied to model the metadata vocabulary. The Metadata Guideline clarifies the overall goals, previous works on metadata specification and harmonisation, the working process, concrete deliverables and future prospects of mobilityDCAT-AP.

mobilityDCAT-AP is an initiative of the [NAPCORE \(National Access Point Coordination Organisation for Europe\)](#), a formed organisation to coordinate and harmonise more than 30 mobility data platforms across Europe.

mobilityDCAT-AP is a formal metadata specification for mobility data portals as an extension of DCAT-AP. A metadata specification (as any data specification) is a pure model with syntax and semantics definitions for data to be communicated. The elements of this conceptual model were then mapped to corresponding RDF elements (see point 5).

The latest version of the mobilityDCAT-AP is available at:

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

This work has been carried out in the context of NAPCORE, an EU-cofunded Programme Support Action under the Grant Agreement No MOVE/B4/SUB/2020-123/SI2.852232.

Pages 5

Find a page...

Home

Chapter 1: Introduction and Overview

- 1. What is mobilityDCAT-AP?
- 2. Why is mobilityDCAT-AP useful?
- 3. Why are metadata useful?
- 4. Why is interoperability a key factor in the mobility data ecosystem ?
- 5. What is the Resource Description Framework (RDF) Vocabulary?
- 6. What is the history of mobilityDCAT-AP?
- 7. Who are the authors of mobilityDCAT-AP?
- 8. How can I raise questions and issues about mobilityDCAT-AP?
- 9. How is mobilityDCAT-AP governed and maintained?
- 10. How does mobilityDCAT-AP affect the functionalities of a

- Enables the definition of additional documentation associated with the content of a repository

Hosting: mobilityDCAT-AP Generator Tool

- Available at <https://mobilitydcat-ap.github.io/mobilitydcatap-ui/>
- Web page to **experiment with the minimum profile of mobilityDCAT-AP**
- Fill the form and **view/download an RDF representation of the metadata inserted** compliant with mobilityDCAT-AP



Cefriel RDF Metadata Generator

Identifier
MY_DATASOURCE

Name
My Data Source

Description
My Data Source contains mobility data about mobility things.

Publisher name
Cefriel Data Publisher

Publisher email
no-reply@cefriel.com

Mobility themes
Other

Accrual periodicity
Unknown

Area covered
<http://publications.europa.eu/resource/authority/country/ITA>

Timeframe start

Timeframe end

Distributions

Select RDF Format
text/turtle

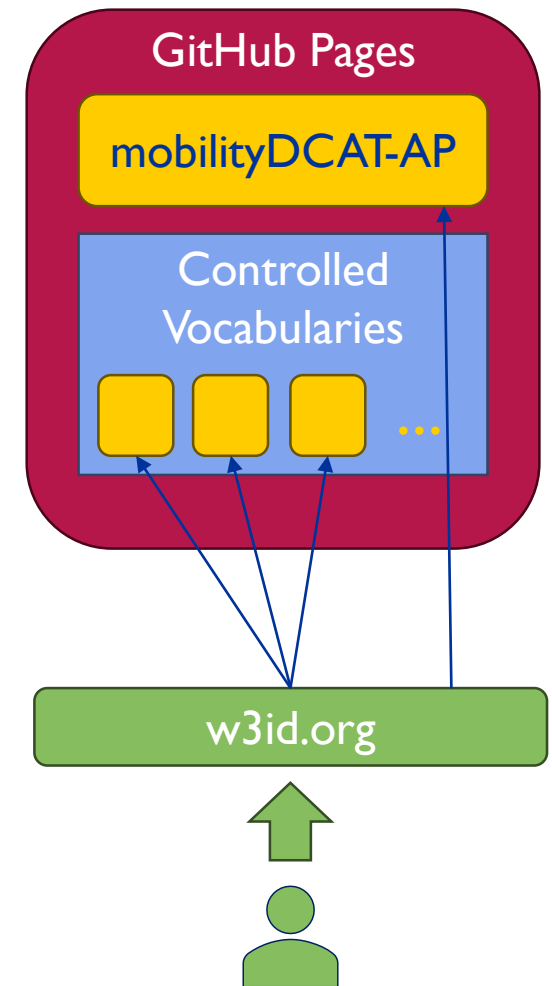
```
1 @prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
2 @prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
3 @prefix dcat: <http://www.w3.org/ns/dcat#> .
4 @prefix vcard: <http://www.w3.org/2006/vcard/ns#> .
5 @prefix foaf: <http://xmlns.com/foaf/0.1/> .
6 @prefix owl: <http://www.w3.org/2002/07/owl#> .
7
8 <https://knowledge.c-innovationhub.com/cefriel/data/CefrielDa
9   <http://purl.org/dc/terms/title> "Cefriel RDF Metadata Ge
10  <http://purl.org/dc/terms/description> "Cefriel RDF Metad
11  <http://purl.org/dc/terms/publisher> [
12    rdf:type foaf:Agent ;
13    foaf:name "Mobility Data Publisher" ;
14    foaf:mbox "no-reply@cefriel.com" ;
15  ] ;
16  <http://purl.org/dc/terms/dataset> <https://knowledge.c-i
17  <https://www.w3.org/ns/dcat#record> <https://knowledge.c-
18  foaf:homepage <https://kcong.cefriel.com/> .
19
20 <https://knowledge.c-innovationhub.com/cefriel/data/CefrielDa
21  <http://purl.org/dc/terms/modified> "2024-10-18T13:49:14.
22  <http://purl.org/dc/terms/created> "2024-10-18T13:49:14.2
23  foaf:primaryTopic <https://knowledge.c-innovationhub.com/
24
25  <https://knowledge.c-innovationhub.com/cefriel/data/MobilityD
26  <http://purl.org/dc/terms/identifier> "MY_DATASOURCE" ;
27  <http://purl.org/dc/terms/title> "My Data Source" ;
28  <http://purl.org/dc/terms/description> "My Data Source co
29  <http://purl.org/dc/terms/publisher> [
```

Hosting != Publication

- The publication of the specification online also requires the definition of a **Persistent Identifier** that should guarantee the possibility of changing the hosting solution in the future
- We selected the **w3id service** reserving the following namespace for mobilityDCAT-AP

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

- The namespace handles **the possibility** to request the **specification** and the **controlled vocabularies** in different formats, e.g., HTML, Turtle, etc.



mobilityDCAT-AP Publication

- mobilityDCAT-AP specification v1.0.1:
<https://w3id.org/mobilitydcat-ap/>

This version:

<https://w3id.org/mobilitydcat-ap/releases/1.0.1/>

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/1.0.0>

Latest Recommendation:

<https://w3id.org/mobilitydcat-ap/releases/1.0.1/>

- List of **Controlled Vocabularies** described in the “Controlled vocabularies to be used” section ([link](#))

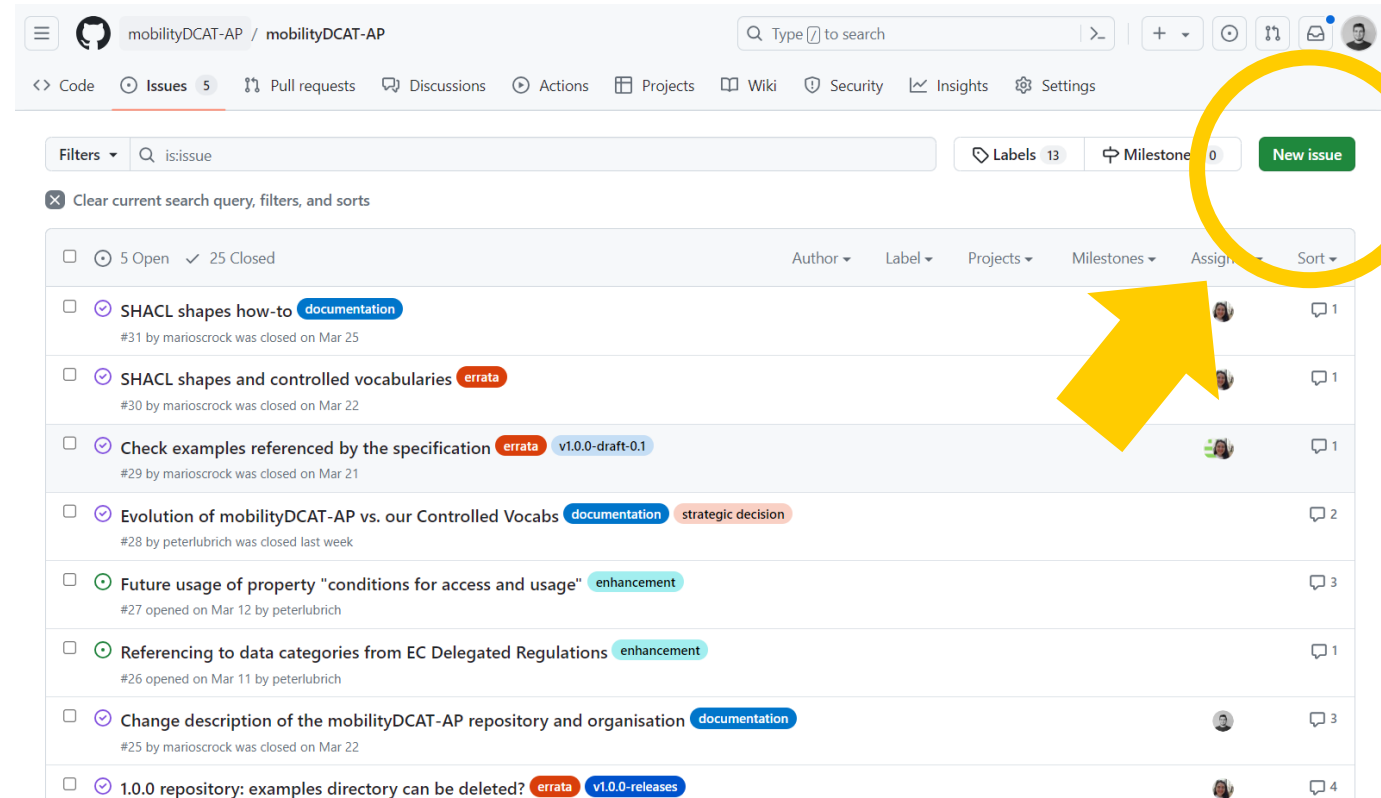
- Application Layer Protocol, <https://w3id.org/mobilitydcat-ap/application-layer-protocol>
- Communication Method, <https://w3id.org/mobilitydcat-ap/communication-method>
- Conditions for Access and Usage, <https://w3id.org/mobilitydcat-ap/conditions-for-access-and-usage>
- Mobility Theme, <https://w3id.org/mobilitydcat-ap/mobility-theme>
- Mobility Data Standard, <https://w3id.org/mobilitydcat-ap/mobility-data-standard>
- Georeferencing Method, <https://w3id.org/mobilitydcat-ap/georeferencing-method>
- Grammar, <https://w3id.org/mobilitydcat-ap/grammar>
- Network Coverage, <https://w3id.org/mobilitydcat-ap/network-coverage>
- Intended Information Service, <https://w3id.org/mobilitydcat-ap/intended-information-service>
- Transport Mode, <https://w3id.org/mobilitydcat-ap/transport-mode>
- Update Frequency, <https://w3id.org/mobilitydcat-ap/update-frequency>

Collaboration via GitHub Repositories

- <https://github.com/mobilityDCAT-AP/mobilityDCAT-AP>
 - **Hosting** of versioned drafts and releases of the mobilityDCAT-AP specification (ReSpec) and publication via GitHub Pages
 - **Serialisations** in RDF and **artefacts** for automatic validation
 - **Wiki** for mobilityDCAT-AP
 - **Maintenance** of mobilityDCAT-AP specification through Issues
- <https://github.com/mobilityDCAT-AP/controlled-vocabularies>
 - Base Excel files and scripts for the **generation/update** of vocabularies
 - **Hosting** of versioned controlled vocabularies and publication via GitHub Pages
 - **Maintenance** of the controlled vocabularies through Issues

Collaboration: GitHub Issues

- Everyone is invited to **open an issue on GitHub** to propose a use case not covered by the specification and/or to share any feedback
- Issues are discussed online and considered for the development of **new releases of mobilityDCAT-AP** or to improve the Wiki



Collaboration: List of adopters

GitHub Repository: <https://github.com/mobilityDCAT-AP/adopters>

- List of NAPs, mobility data portals and mobility data spaces adopting mobilityDCAT-AP to represent their metadata
- To create awareness, keep track of its adoption, and help potential new adopters find already implemented examples
- Are you using mobilityDCAT-AP and you are not on this list?** Feel free to [submit a pull request](#) or [answer using the dedicated issue](#) to be included!



NAPs

NAP Name	NAP Link	Contact	Status	Target Deployment Date
NAP Denmark (Dataudveksleren)	du.vd.dk	vd@vd.dk	deployed	Q2 2024
NAP Latvia	transportdata.gov.lv	-	testing	Q4 2024
NAP Cyprus	traffic4cyprus.org.cy	-	testing	Q4 2024
NAP Austria	mobilitydata.gv.at	-	preparation	Q4 2024
NAP Sweden (Trafficdata)	trafficdata.se	-	preparation	Q4 2024
NAP Finland (SRTI&RTTI)	digitraffic.fi	-	preparation	Q4 2024
NAP Belgium	transportdata.be	contact@transportdata.be	preparation	Q4 2024
NAP The Netherlands	toegangspuntmobiliteit.nl	ed.ooms@ndw.nu	preparation	Q1 2025
NAP Germany	mobilithek.info	mobilithek@bast.de	interested	Q4 2024
NAP Czechia	dopravniinfo.cz	petr.bures@tamtamresearch.com	interested	-
NAP Norway (Transportportal)	transportportal.no	kontakt@transportportal.no	interested	-

Mobility Data Portals

Portal Name	Portal Link	Contact	Status	Target Deployment Date
TRA	-	-	-	-

Thank you for your attention!

Any questions?



MARIO SCROCCA
Knowledge Engineer
Cefriel



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[@mario_srock](#)



mario.scrocca@cefriel.com



Governance and Maintenance of mobilityDCAT-AP

Ed Ooms

6 November 2024

The products of SWG4.4

- The mobilityDCAT-AP specification
- A set of Controlled Vocabularies
- Each has an own, independent GitHub repository
 - Seperate updates
 - Freedom to use different versions

Tools and Processes

- Issue handling
 - During the project lifetime of NAPCORE, SWG4.4 will take care of issues
 - Follow up after NAPCORE is to be concretised
- Issue submission:
 - On the mobilityDCAT-AP GitHub repository
 - Including issues on the Controlled Vocabulary

Tools and Processes

- Some examples of issues :
 - Problems or remarks about mobilityDCAT-AP releases
 - Changes or new functionalities for future releases
 - Changes in the data model
 - Changes in the Controlled Vocabularies

Tools and Processes

- Issues are discussed at the regular SWG4.4 meetings
- Submitters outside the SWG will be invited for the meeting
- The submitter or a SWG member can propose a solution for the issue
- Decisions will be made by consensus of the attendees of the meeting
- Decisions are documented on GitHub

Consensus on issues

- Minor issues:
 - Solution will be proposed in advance of a SWG meeting and presented during the meeting.
 - Solution will be accepted if after two weeks of the meeting there is no opposition
- Major issues:
 - Voting during the SWG meeting
 - Normally, two-thirds majority of the attendees is needed for acceptance

Release cycle

- Bugfixes
 - Corrections of errors or consistencies in the specification
 - No affection of the operability
 - Every six months released in April and October

Release cycle

- Minor semantic changes
 - May affect the interoperability only in a non-disruptive way
 - Addition of optional properties or 'deprecation' of unused, optional properties
 - Published every ach year published in October

Release Cycle

- Major semantic changes
 - (More) serious consequences for interoperability
 - For example, the addition of mandatory properties or the mandatory controlled vocabulary
 - Published every two years in October

Versioning

- Bug fix releases:
X.Y.(Z+1), e.g. 1.0.1, 1.0.2, etc.
- Minor semantic releases:
X.(Y+1).0, e.g. 1.1.0, 1.2.0, etc.
- Major semantic releases:
(X+1).0.0, e.g. 2.0.0, 3.0.0, etc.

Thank you

Implementation of DCAT-AP

About me

- Kenneth Sørensen, Denmark.
- Danish road directorate
- Danish road directorate is responsible for the national roads in Denmark.
- Product owner, Danish NAP.



CMC → Mobility DCAT-AP



- Goal → new metadata standard mobility DCAT-AP
- New design
- Our old metadata model was Coordinated Metadata Catalogue (CMC).

Type datainput	Adgangsinformation	Metadata-information	Databeskrivelse	Tidsmæssiginformation
Geografik udstrækning	Omfattede transportformer	Ansvar	Vilkår	Kvalitetsoplysninger
				Brugere tilladelser

Type

Gemt March 20, 2024 at 11:41:25 AM GMT+1

Gem og luk

Hvilket scenarie passer bedst til dit Datasæt?

☐ **Geodata**
Jeg har en geodata service som fx WFS eller geo-pakke, hvilket jeg ønsker at publicere som fx WFS, WMS, Shapefile mfl.

☐ **Statisk fil**
Jeg har en statisk fil (f.eks. pdf eller excel), som jeg vil offentliggøre.

Videre

Adgangsinformation

Gemt November 22, 2023 at 11:17:58 AM GMT+1

Gem

Kommunikationsmetode *

Pull

Dataformat - datamodel *

No Selection

Dataformat - syntaks *

No Selection

Dataformat - grammatik

No Selection

Dataformat - encoding *

UTF8

Beskrivelse af dataformat

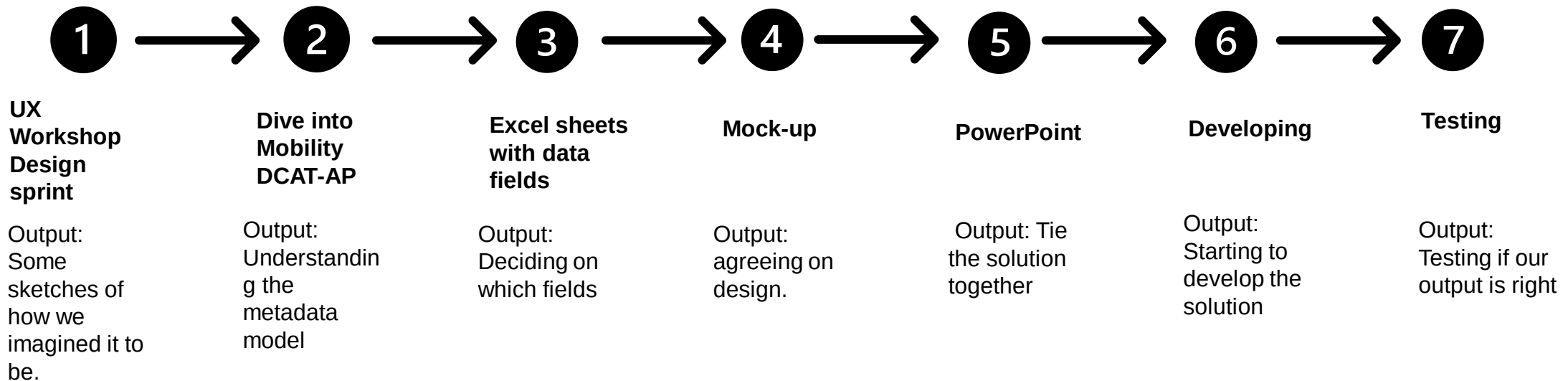
Kan valgfrit bruges til at give yderligere oplysninger om dataformatet ud over de Metadata-elementer, der blev introduceret før

Hjælp

Nødvendig i Skemaet

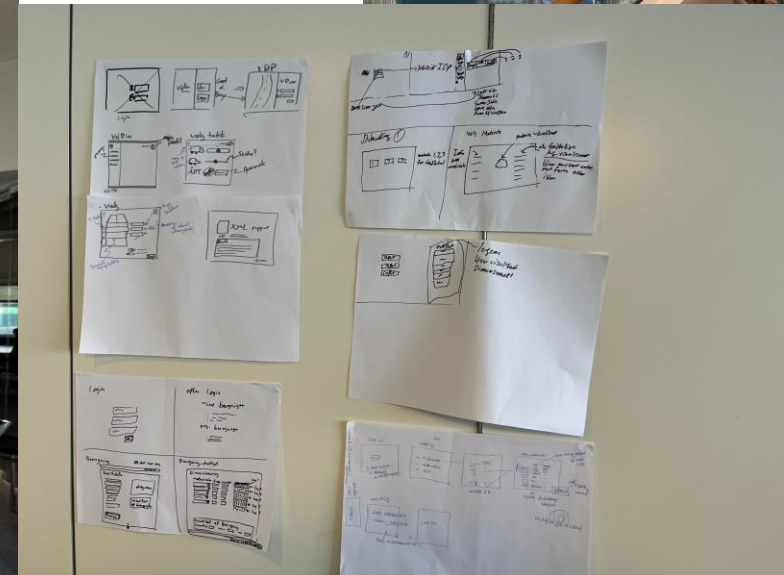
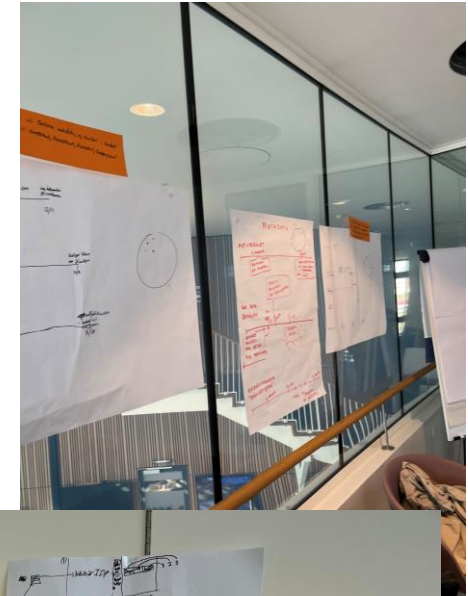
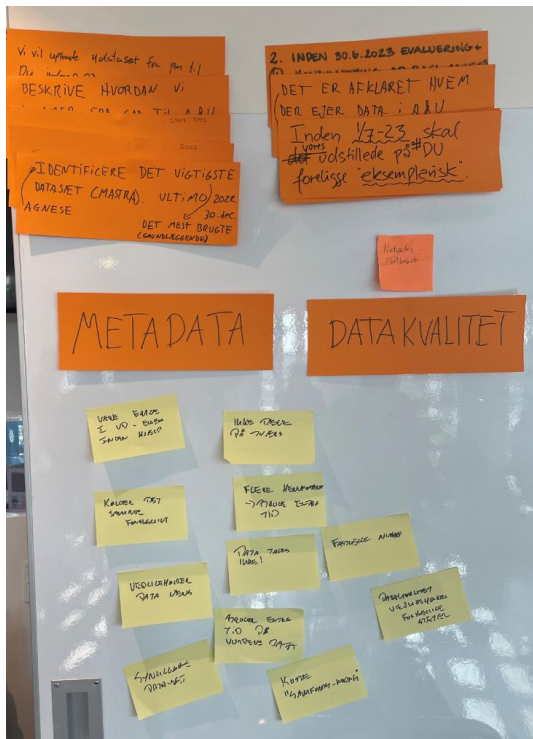
NB! Rediger kun disse information hvis absolut nødvendigt.
Kommunikationsmetode
Beskriver transmissions proceduren fra Dataudveksleren til data modtageren.
Adgang til interface / Applikations logs protokol
Beskriver den IT protokol for data interface hvilke vil blive benyttet til at overføre data.
Dataformat - Datamodel
Beskriver den konkrete datamodel der benyttes.
Data Format - Syntaks
Beskriver datasættens base syntaks
Dataformat - Grammatik
Beskriver standers oven på den den grundlæggende syntaks der beskriver datas struktur.
Data Format - Encoding
Beskriver encoding
Data Format - Description
Valgfrit beskrivelse af yderligere information om dataformat.

Our method



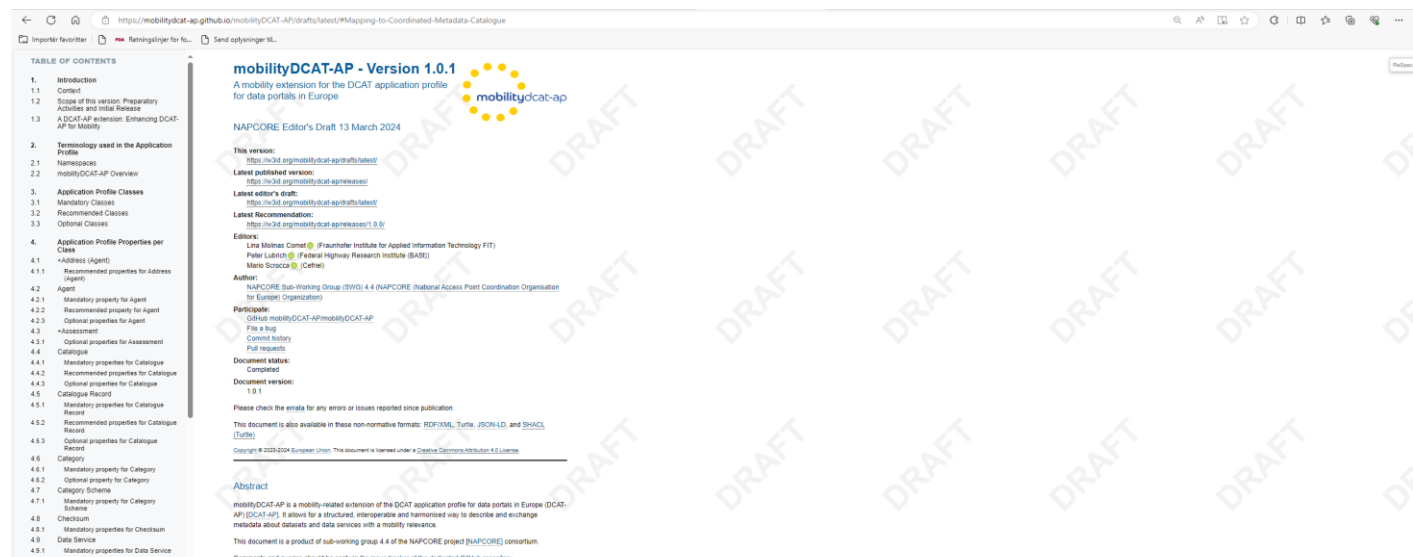
Step 1 – UX workshop

- Internal
- Design sprint ended → sketches
- Aligning



Step 2 – Diving into Mobility DCAT-AP

- Understanding the metadata model, structure, and Vocabulary
- [mobilityDCAT-AP - Version 1.0.1](https://mobilitydcat-ap.github.io/mobilityDCAT-AP/drafts/latest/Mapping-to-Coordinated-Metadata-Catalogue)
- Effective implementation
- Webpage



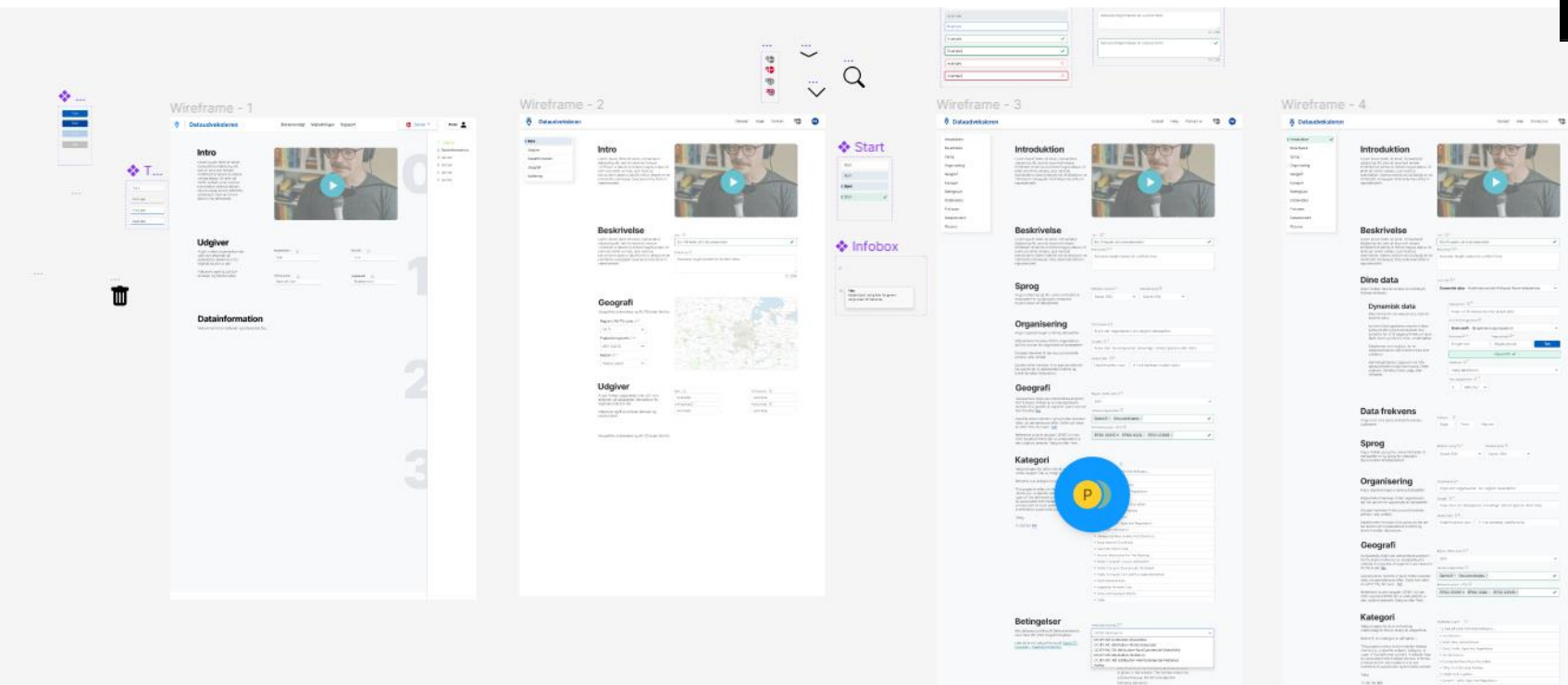
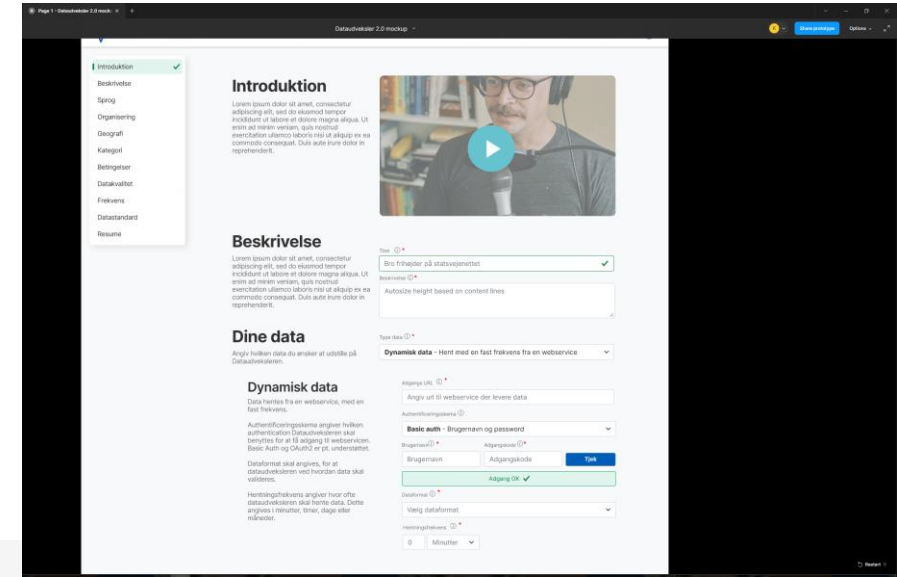
Step 3 – Mapping tabel

- CMC → Mobility DCAT-AP
- Philosophy
- Obligation vs. DRD obligation.
- UI
and How it should be physical implemented.

CMC section	CMC element name	Class	Class URI	Property	Property URI	Krav	VD krav	Navn i UI	Beslutning	UI	Fysisk implementering
2.2.1.1	Metadata date	Catalogue Record	dc:CatalogRecord	creation date	dct:created	Mandatory	Mandatory	N/A	Feltet skal udfyldes maskinelt	Nej	xsd:dateTime
				update / modification date	dct:modified	Mandatory	Mandatory	N/A	Feltet skal udfyldes maskinelt	Nej	xsd:dateTime
2.2.1.2	Metadata language	Catalogue Record	dc:CatalogRecord	language	dct:language	Mandatory	Mandatory	Metadatasprog	Det er muligt at vælge et sprog jf. vocabulary	Ja	Controlled Vocabulary
2.2.1.3	Metadata point of contact	Catalogue Record	dc:CatalogRecord	publisher	dct:publisher	Optional	Fravalgt	N/A			
		Dataset	dc:Dataset		dcat:contactPoint	Recommended	mandatory	Dataforvalter			
2.2.2.1	Name of dataset	Dataset	dc:Dataset	title	dct:title	Mandatory	Mandatory	Titel		Ja	Vcard Fritekst felt

Step 4 – Mock up

- Sketches → mock-up
- Figma



Step 5 – PowerPoint

- We used the power point to tie the Excel Sheet and the Mock-up together
- For every category/input field

Slide 7: Data opdaterings frekvens

Data frekvens
Angiv hvor ofte datas indhold forventes opdateres

Frekvens: Dage Timer Minutter

CMC location	CMC element name	Class	Class URI	Property	Property URI	Krav	VD krav
2.2.1.1	Update frequency	Class	class:Dataclass	frequency	class:Dataclass	Mandatory	Mandatory

Slide 8: Organisering

Organisering
Angiv den organisering, der vil blive benyttet til at organisere dataet.
Angiv den, for dataet, der vil blive benyttet til at organisere dataet.
Angiv den, for dataet, der vil blive benyttet til at organisere dataet.

CMC location	CMC element name	Class	Class URI	Property	Property URI	Krav	VD krav
2.2.6.1	Publisher	Class	class:Publisher	publisher	class:Publisher	Mandatory	Mandatory
2.2.6.2	Data owner	Class	class:Dataowner	rights holder	class:Dataowner	Recommended	Mandatory
2.2.1.3	Metadata point of contact	Class	class:Dataowner	contact point	class:Dataowner	Recommended	Mandatory

SPØRGSMÅL:

- Dataejer bør have en funktionspostkasse?
- Skal vi opsamle Dataejer e-mail?

Step 6 – Starting devolping

- User stories
- Water Fall approach
- 8 Weeks



Step 7 –Testing

- Testcases
- SHACLFILES

```
SE NAP, dataset, expressed in mobilityDCAT-AP_minimum population_240205.xml - Notepad
File Edit Format View Help
<!-- -->
<rdf:RDF
  xmlns:foaf="http://xmlns.com/foaf/0.1/"
  xmlns:ext="http://trafficdata.se/dcatext/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:dcat="http://www.w3.org/ns/dcat#"
  xmlns:dc="http://purl.org/dc/terms/"
  xmlns:vcard="http://www.w3.org/2006/vcard/ns#"
  xmlns:mobilitydcatap="https://w3id.org/mobilitydcat-ap#"
  xmlns:dcatap="http://data.europa.eu/r5r/"

  <!-- The Class "Catalog" is mandatory. It describes the concrete NAP system. Thus, the block below is added with all mandatory properties for class Catalogue.-->
  <dcat:Catalog rdf:about="https://trafficdata.se/">
    <dc:title xml:lang="en">Trafficdata.se </dc:title> <!-- ADDED; mandatory property for class Catalogue -->
    <dc:description xml:lang="en">The portal Trafficdata.se is a national service in which we gather information on, and provide you with access to, traffic and road network data. </dc:
    <foaf:homepage rdf:resource="https://trafficdata.se/"> <!-- ADDED; mandatory property for class Catalogue -->
    <dc:publisher> <!-- ADDED; mandatory property for class Catalogue -->
    <foaf:Agent rdf:about="https://www.trafikverket.se/">
      <foaf:name>Trafikverket</foaf:name>
    </foaf:Agent>
    <dc:publisher>
      <dc:spatial> <!-- ADDED; mandatory property for class Catalogue -->
      <dc:location> <!-- ADDED; class location is the range of property spatial-->
      <dc:identifier rdf:resource="http://publications.europa.eu/resource/authority/country/SWE"> <!-- ADDED; recommended property for class location-->
    </dc:location>
    <dc:spatial>
      <dcat:dataset rdf:resource="https://www.trafficdata.se/dataset/ec459578-a11f-4728-acaa-16b08ae45cfa"> <!-- ADDED; mandatory property for class Catalogue -->
      <dcat:record rdf:resource="https://www.trafficdata.se/dataset/traffic-signs-expressing-traffic-regulations-and-identifying-dangers-speed-limits"> <!-- ADDED; mandatory property for c
    </dcat:Catalog>

  <!-- The Class "Catalogue Record" is mandatory. It describes the metadata entry in the NAP. Thus, the block below is added with all mandatory properties for "Catalogue Record". -->
  <dcat:CatalogRecord rdf:about="https://www.trafficdata.se/dataset/traffic-signs-expressing-traffic-regulations-and-identifying-dangers-speed-limits">
    <foaf:primarytopic rdf:resource="https://www.trafficdata.se/dataset/ec459578-a11f-4728-acaa-16b08ae45cfa"> <!-- ADDED; mandatory property for class Catalogue Record-->
    <dc:created rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2019-12-04</dc:created> <!-- ADDED with arbitrary date; mandatory property for class Catalogue Record-->
    <dc:modified rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2019-12-04</dc:modified> <!-- ADDED with arbitrary date; mandatory property for class Catalogue Record-->
    <dc:language rdf:resource="http://publications.europa.eu/resource/authority/language/ENG"> <!-- ADDED; mandatory property for class Catalogue Record-->
  </dcat:CatalogRecord>

  <dcat:Dataset rdf:about="https://www.trafficdata.se/dataset/ec459578-a11f-4728-acaa-16b08ae45cfa">
    <dc:title>Traffic signs expressing traffic regulations and identifying dangers, speed limits</dc:title> <!-- OK; mandatory property for class Dataset-->
    <dc:description>Traffic signs expressing traffic regulations and identifying dangers from the Swedish Transport Administration. Data</dc:description> <!-- OK; mandatory property
    <mobilitydcatap:mobilityTheme rdf:resource="https://w3id.org/mobilitydcat-ap/mobility-theme/dynamic-traffic-signs-and-regulations"/> <!-- MODIFIED from originally <dcat:theme rdf:re
    <mobilitydcatap:mobilityTheme rdf:resource="https://w3id.org/mobilitydcat-ap/mobility-theme/dynamic-speed-limits"/> <!-- MODIFIED from originally <dcat:theme rdf:resource="http://t
```

SHACL Playground

A constraint validator for the [Shapes Constraint Language](#), written in JavaScript. See also [Zazuko SHACL Playground](#) for a newer implementation

Shapes Graph

```
sh:maxCount 1 ;
sh:Class rdfs:Literal ;
sh:path locn:adminUnitL2 ;
  sh:name "administrative area" ;
  sh:description "The administrative area of an Address of the Agent."
Depending on the country, this corresponds to a province, a county, a region,
or a state." ;
sh:severity sh:Violation
], [
  # Recommended property for Address (Agent)
  sh:maxCount 1 ;
  sh:Class rdfs:Literal ;
  sh:path locn:postName ;
  sh:name "city" ;
  sh:description "The city of an Address of the Agent." ;
  sh:severity sh:Violation
], [
  # Recommended property for Address (Agent)
  sh:maxCount 1 ;
  sh:Class rdfs:Literal ;
  sh:path locn:adminUnitL1 ;
  sh:name "country" ;
  sh:description "The country of an Address of the Agent." ;
  sh:severity sh:Violation
], [
  # Recommended property for Address (Agent)
```

Update Format: Turtle Always included: shacl.ttl dash.ttl

Parsing took 71 ms. Preparing the shapes took 4 ms. Validation the data took 10 ms.

☐ Show function call sequence

Shapes Graph Structure

Data Graph

Example Data in JSON-LD Format ▾

```
<transport> <mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>dynamic traffic signs and
regulations</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>static traffic signs and
regulations</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>road width</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>identification of tolled
roads</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>freight delivery
regulations</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>other</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>air and space
travel</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>environmental standards for vehicles
1</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>fares</mobilitydcatap:mobilityTheme>
<mobilitydcatap:mobilityTheme>lane closures and access
conditions</mobilitydcatap:mobilityTheme>
<dcat:distribution>
<dcat:Distribution>
<dcat:accessURL>https://du-portal-
ui.dataudveksler.app.syndev.vd.dk/data/6368/overview</dcat:accessURL>
<mobilitydcatap:mobilityDataStandard>ETSI_ISO_MODEL</mobilitydcatap:mobilityDa
taStandard>
<dc:licenseDocument>CC_BY_SA_ATTRIBUTION_SHAREALIKE</dc:licenseDocument>
</dcat:Distribution>
```

Update Format: Turtle

Validation Report (0 results)

Conclusion

- The Mix
- Mobility DCAT-AP
- Mass notification

Introduktion	
Beskrivelse	✓
Dine data	
Opdateringsfrekvens	✓
Sprog	✓
Organisering	✓
Geografi	✓
Kategori	✓
Licens	✓
Datakvalitet	✓
Datastandard	✓
National Body	✓
Ressourcer	✓
Brugerrettigheder	✓
Godkendelse	
Gem og luk	

Organisering

Organisation: Den ansvarshavende organisation, for indholdet - og udgivelsen af datasættet.

Dataejer: Ansvarshavende person (organisatorisk rolle eller navngiven person).

Dataforvalter: Navngiven person, der har kendskab til datasættets indhold, fysisk forvalter datasættet og er kontaktpunkt.

Geografi

NUTS-koder: Datasættets regionale udbredelse angives i NUTS-koder, hvilket er en standardiseret metode til angivelse af regioner. [Læs mere om NUTS koder her](#)

Georeferencemetode: Refererer til den metode hvor data er tilknyttet en geografisk lokation. Hvis data er georefereret, bør det angives efter hvilken metode.

Referencesystem: Angiv hvilken geografisk projektion dine data leveres i.

Pt. understøttes kun EPSG: 25832, EPSG: 4326 og EPSG: 7416

Organisation ⓘ*

Vejdirektoratet

Dataejer ⓘ*

kenneth Sørensen

Dataforvalter ⓘ*

kenneth sørensen

kens@vd.dk

NUTS-koder ⓘ*

DK ×

Georefereringsmetode ⓘ

No Selection ×

Referencesystem - EPSG ⓘ

No Selection ×

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mobilityDCAT-AP - Version 1.0.1

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



NAPCORE Recommendation 04 April 2024

This version:

<https://w3id.org/mobilitydcat-ap/releases/1.0.1/>

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/1.0.1/>

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Participate:

GitHub [mobilityDCAT-AP/mobilityDCAT-AP](#)
File a bug
Commit history

Question & comments!

- Welcome to reach out on LinkedIn



Implementation of mobility DCAT-AP at Austrian NAP

NAPCORE Mobility Data Days 2024

Session: Update on mobilityDCAT-AP – Metadata demonstrator

06 November 2024 – Benjamin Witsch (AustriaTech)

NAP-A Overview

- Implementation of the NAP-A regarding delegated regulations
- www.mobilitaetsdaten.gv.at / www.mobilitydata.gv.at
- Online Meta data Catalogue (no data exchange)
Usage of the Coordinated Meta Data Catalogue V2 with extensions
- **34 data provider – 94 data sets – 7 additional registered organizations**

DR No. 886/2013

Data and procedures to generate a min. standard of safety through safety relevant free traffic information

DR No. 2015/962

Providing EU-wide real-time traffic information services

DR No. 885/2013

Providing information services for secure truck park spaces and other industrial vehicles

DR No. 2017/1926

Providing EU-wide multimodal travel information services

Concept NAP Austria

<https://mobilitydata.gv.at/> or <https://mobilitaetsdaten.gv.at/>

Dual Language (EN/DE)

Simple usage of NAP

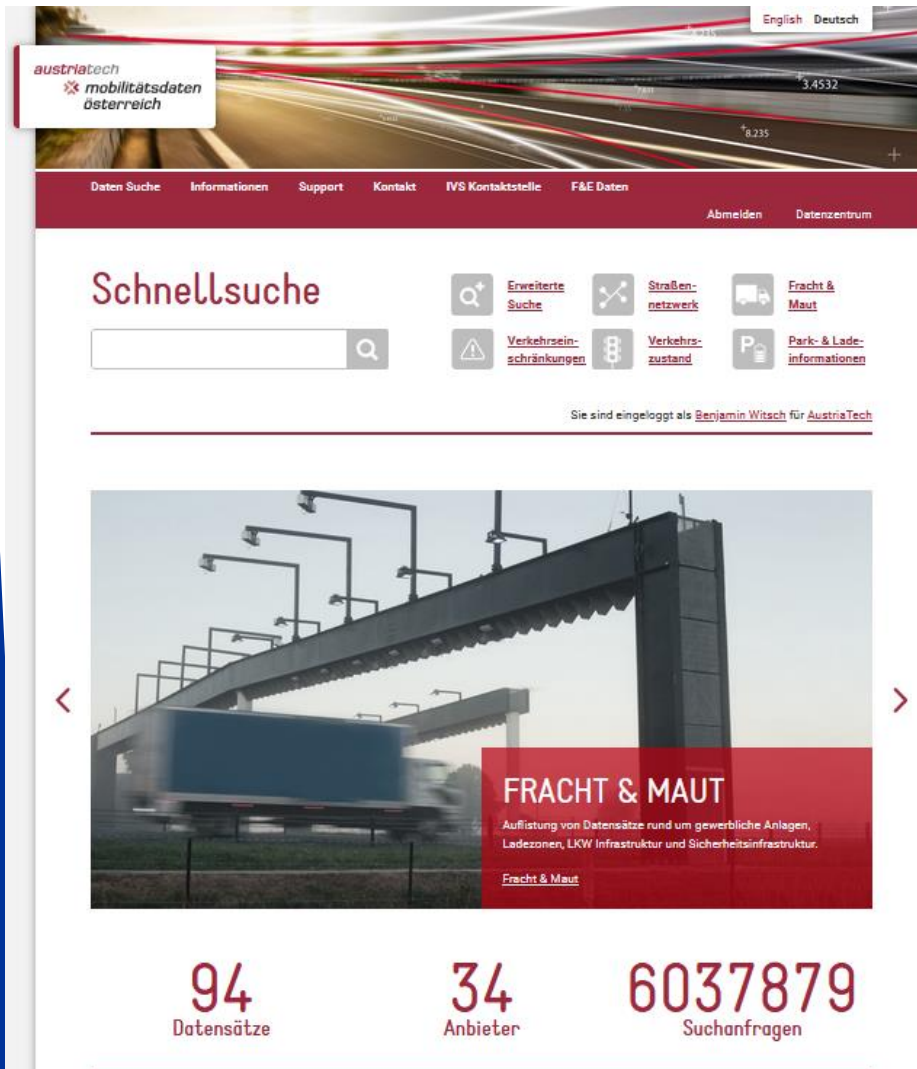
- Easy registration process for data owner
- Search and getting in contact without permissions

Direct contact to data provider

- Few main data authorities in Austria
- Provide information about the delegated regulations and the responsibilities directly

Close Cooperation with the National Body who is responsible for review the self declarations

NAP Austria 2024



Decision mobility DCAT-AP

- Development of new NAP in 2026
 - 6 years of good practise
 - Extended national functionalities
 - New requirements from national stakeholders
 - will include mobility DCAT-AP for metadata exchange, harvesting and description
 - Status: Conceptual phase

Decision:

Using mobility DCAT-AP only for metadata export via new API

Implementation requirements

- No data loss at all
- The actual data descriptions should not be affected to prevent effort for stakeholder
 - No new description of data sets
- No adoption of processes or forms
- Export of metadata should cover all mandatory fields and existing matched data informations

Implementation Step I

Comparison of actual metadata description fields with mandatory fields of mobility DCAT-AP

Problem: Mandatory fields are missing:

- data catalogue fields
- Service category

Solution:

Data catalogue fields are static values and hard coded

New Metadata field “Service category”: As standard value is set as “Information service”

For data sets which are using one of the services categories a matching is done

Implementation steps (II)

Adoption of controlled vocabulary

Problem: Actual used vocabulary based on CMC is not international referenced

Solution:

- Change of metadata values accordingly to referenced vocabulary
- Add missing values
- Use of referenced vocabularies within the export

Implementation steps (III)

Implementation of **API** with mobility **DCAT-AP**

- Need for experienced developer
- Knowledge of API and RDF needed
- Support from WG4.4

Update of “Terms of Use” needed

Implementation status: Testing phase

API is functional

- Data export is filterable due to data category and publishing organization
- Data export testing of inconsistencies and technical issues

Update procedure of “Terms of Use” in progress

- Clarification reaccepting the “Terms of Use”

Thank you for your attention!



NAP-Austria

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