



Introduction to mobilityDCAT-AP

A Webinar by NAPCORE SWG4.4

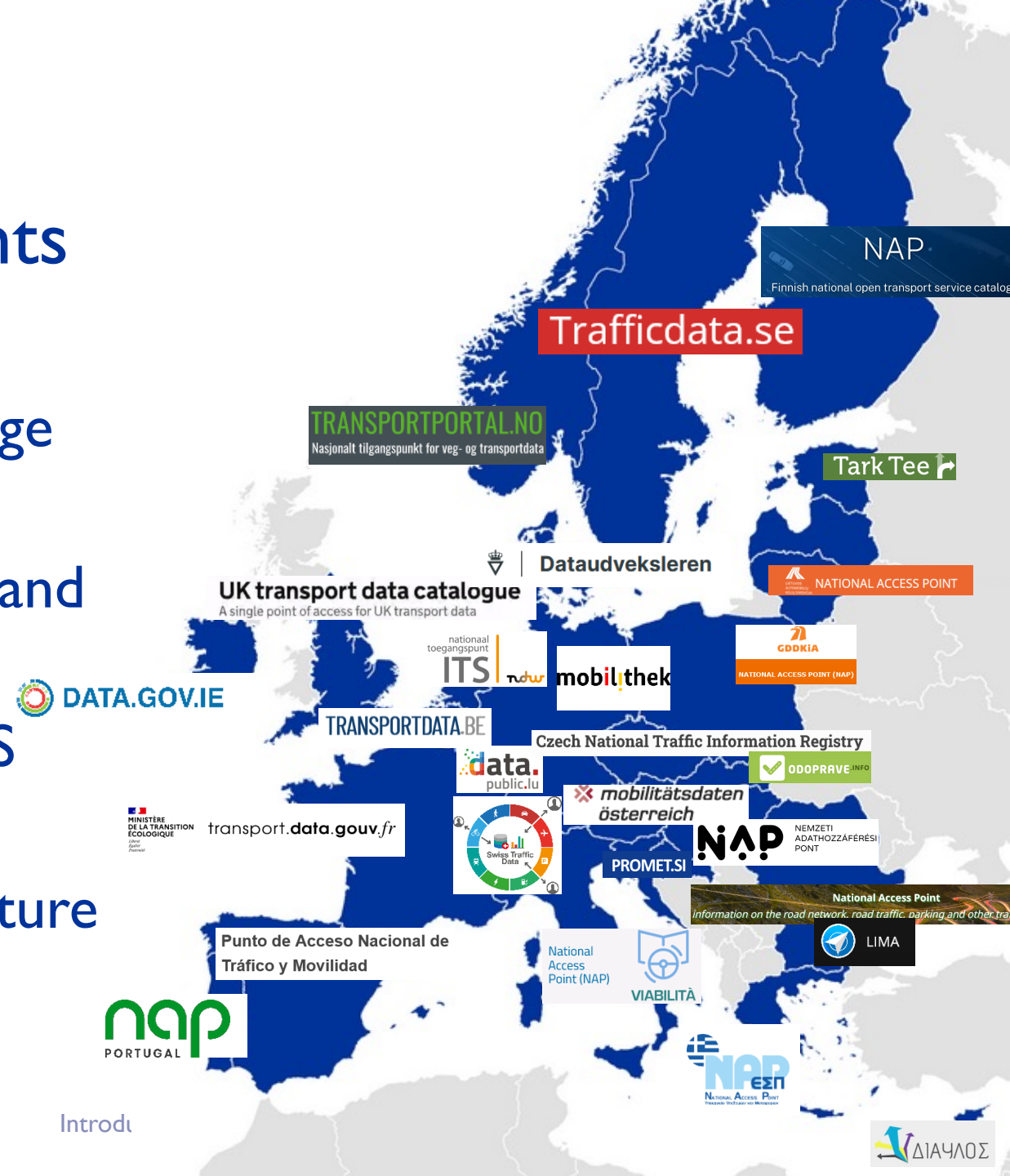
May 08th, 2024

Introduction to mobilityDCAT-AP : Agenda

- Welcome, background and goals *Peter Lubrich, BAST (DE)*
- Hosting and collaboration *Mario Scrocca, Cefriel (IT)*
- Implementation at the Danish NAP *Kenneth Sørensen, Vejdirektoratet (DK)*
- Governance concept *Ed Ooms, NDW (NL)*
- The role of DCAT-AP *Bert van Nuffelen, Digitaal Vlaanderen (BE)*
- Q&A with audience

Context

- National Access Points (NAPs)
- Facilitate access, exchange and reuse of data
- Connect data suppliers and users
- Support europewide ITS services
- Mandated by EU Legislature



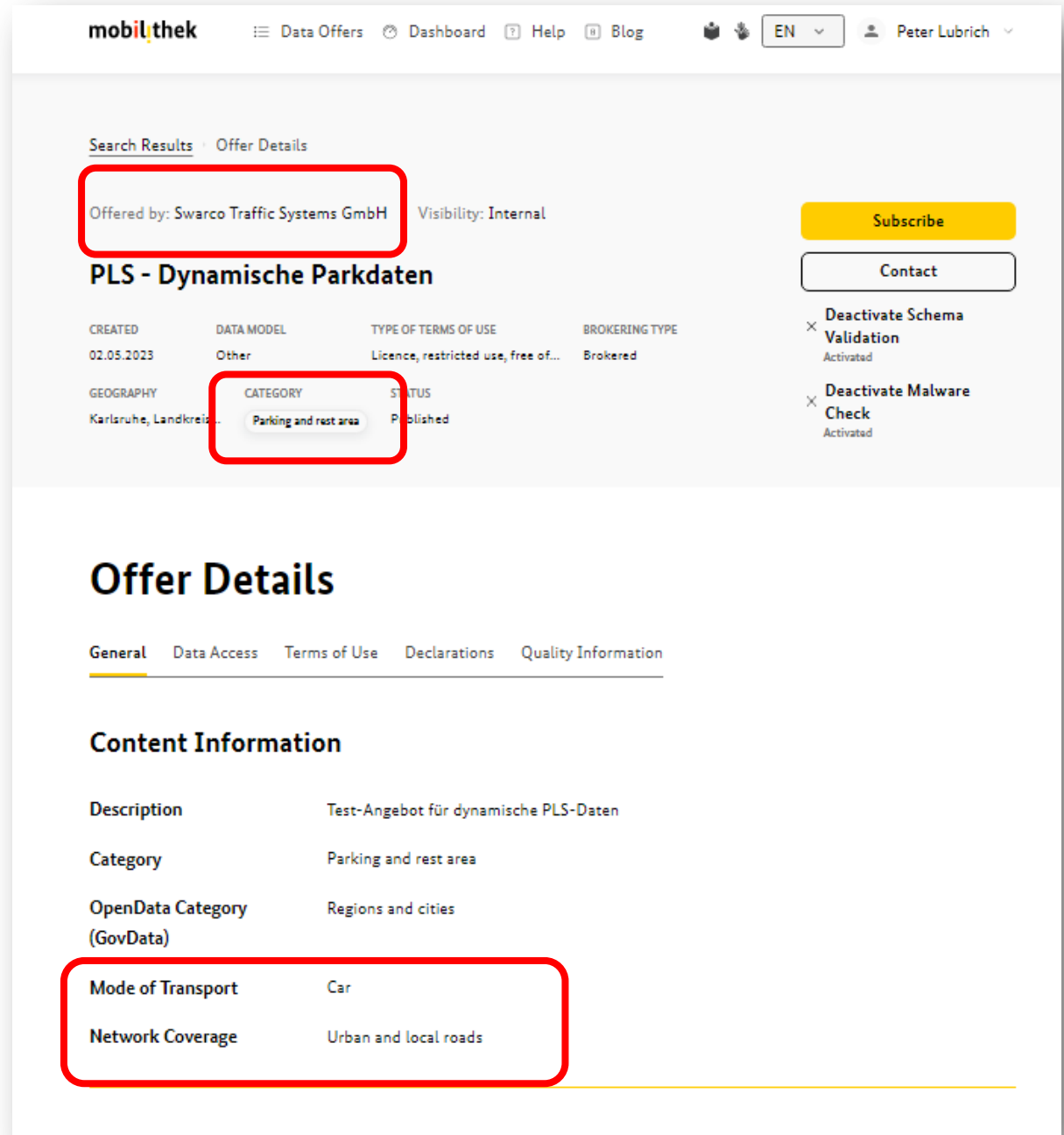
What is NAPCORE?

NAPCORE is a project to coordinate the National Access Points (NAPs) and National Bodies (NBs) established under the ITS Directive. Its goals are to

1. facilitate **EU-wide coordination of NAPs and NBs** for the harmonisation of the implementation of the European specifications on the ITS Directive
2. **increase interoperability** by (further) establishing standards and recommendations for data exchange formats, content, access and data availability in the mobility domain in Europe
3. empower the NAPs as the **backbone for ITS digital infrastructure** and mobility data exchange in Europe
4. address existing and upcoming developments and challenges with a **joint European strategy, vision, and voice.**

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 is visible, showing the offer 'PLS - Dynamische Parkdaten' by 'Swarco Traffic Systems GmbH'. The offer is marked as 'Internal' and 'Published'. A table below the offer 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 a section for 'Deactivate Schema Validation' and 'Deactivate Malware Check'. Below the search results, the 'Offer Details' section is shown, with tabs for 'General', 'Data Access', 'Terms of Use', 'Declarations', and 'Quality Information'. The 'General' tab is active, displaying 'Content Information' with a table of details: 'Description' (Test-Angebot für dynamische PLS-Daten), '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 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 highlighted with a red box, and a red arrow points to its expanded dropdown menu. The expanded 'Tags' menu lists various transportation-related categories 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 '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 across all NAPs
 - make data search easier!
e.g., via agreed keywords
 - make NAP metadata interoperable!
e.g., exchanging metadata across platforms
 - expose NAP metadata to a wider data ecosystem!
e.g., enable Google to find individual NAP datasets

This is why we work on a proper specification for Metadata exchange !

Metadata standards

List of Metadata Standards

DataCite Metadata Schema

A set of mandatory metadata that must be registered with the DataCite Metadata Store when minting a DOI persistent identifier for a dataset. The domain-agnostic properties were chosen for their ability to aid in accurate and consistent identification of data for citation and retrieval purposes.

Sponsored by the DataCite consortium, version 3.0 was recently released in 2013.

DCAT - Data Catalog Vocabulary

By using DCAT to describe datasets in data catalogs, publishers increase discoverability and enable applications easily to consume metadata from multiple catalogs. It further enables decentralized publishing of catalogs and facilitates federated dataset search across sites. Aggregated DCAT metadata can serve as a manifest file to facilitate digital preservation.

DDI - Data Documentation Initiative

A widely used, international standard for describing data from the social, behavioral, and economic sciences. Two versions of the standard are currently maintained in parallel:

DDI Codebook (or DDI version 2) is the simpler of the two, and intended for documenting simple survey data for exchange or archiving. Version 2.5 was released in January 2014.

DDI Lifecycle (or DDI version 3) is richer and may be used to document datasets at each stage of their lifecycle from conceptualisation through to publication and reuse. It is modular and extensible. Version 3.2 was published in March 2014.

Both versions are XML-based and defined using XML Schemas. They were developed and are maintained by the DDI Alliance.

DIF - Directory Interchange Format

An early metadata initiative from the Earth sciences community, intended for the description of scientific data sets. It includes elements focusing on instruments that capture data, temporal and spatial characteristics of the data, and projects with which the dataset is associated. It is defined as a W3C XML Schema.

Sponsored by the Global Change Master Directory, the DIF Writer's Guide Version 6 is from November 2010.

Dublin Core

A basic, domain-agnostic standard which can be easily understood and implemented, and as such is one of the best known and most widely used metadata standards.

Sponsored by the Dublin Core Metadata Initiative, Dublin Core was published as ISO Standard 15836 in February 2009.

EML - Ecological Metadata Language

Ecological Metadata Language (EML) is a metadata specification particularly developed for the ecology discipline. It is based on prior work done by the Ecological Society of America and associated efforts (Michener et al., 1997; Ecological

ds good data

Encoded Archival Description (EAD)

A standard for encoding archival finding aids using XML in archival and manuscript repositories, implementing the recommendations of the International Council on Archives ISAD(G): General International Standard Archival Description.

The scheme is maintained by the Technical Subcommittee for Encoded Archival Standards of the Society of American Archivists, in partnership with the Library of Congress.

FGDC/CSDGM - Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata

A widely-used, but no longer current standard defining the information content for a set of digital geospatial data required by the US Federal Government.

CSDGM was sponsored by the US Federal Geographic Data Committee. However, in September 2010 the FGDC endorsed ISO 19115 and began encouraging federal agencies to transition to ISO metadata.

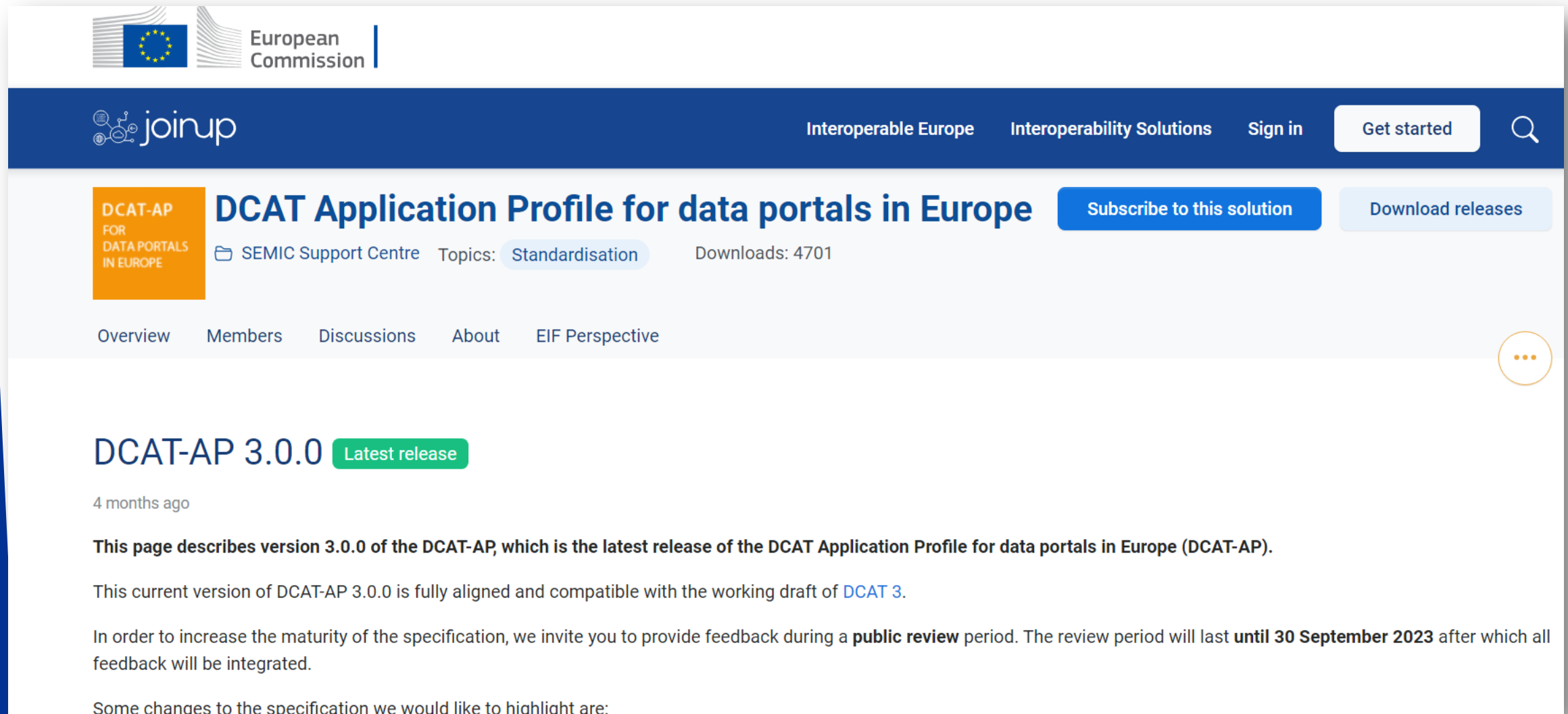
FITS - Flexible Image Transport System

FITS is an image data file format for encoding astronomical data. The WCS (World Coordinate System) conventions map elements in data arrays to standard physical coordinates in the sky. FITS has provisions for image metadata encoded in an ASCII header at the beginning of files.

Genome Metadata

Genome metadata on PATRIC consists of 61 different metadata fields, called attributes, which are organized into the following seven broad categories: Organism Info, Isolate Info, Host Info, Sequence Info, Phenotype Info, Project Info, and Others.

DCAT-AP framework



The screenshot shows the DCAT-AP framework page on the joinup platform. At the top, there is a header with the European Commission logo and the joinup logo. The main navigation bar includes links for Interoperable Europe, Interoperability Solutions, Sign in, and Get started. The page title is "DCAT Application Profile for data portals in Europe". Below the title, there is a section for SEMIC Support Centre, Topics (Standardisation), and Downloads (4701). A navigation bar below the title includes links for Overview, Members, Discussions, About, and EIF Perspective. The main content area features a section for "DCAT-AP 3.0.0" with a "Latest release" badge. Below this, there is a paragraph stating that the page describes version 3.0.0 of the DCAT-AP, which is the latest release. It also mentions that the current version is fully aligned and compatible with the working draft of DCAT 3. A public review period is announced, lasting until 30 September 2023, after which all feedback will be integrated. Some changes to the specification are highlighted.

European Commission

joinup

Interoperable Europe Interoperability Solutions Sign in Get started

DCAT-AP FOR DATA PORTALS IN EUROPE

DCAT Application Profile for data portals in Europe

SEMIC Support Centre Topics: Standardisation Downloads: 4701

Subscribe to this solution Download releases

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).

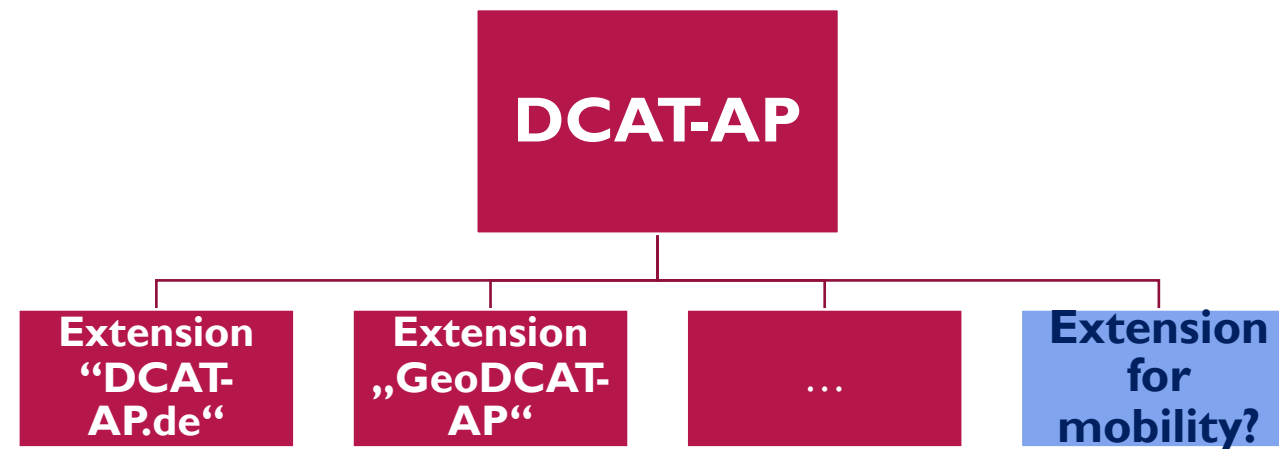
This current version of DCAT-AP 3.0.0 is fully aligned and compatible with the working draft of [DCAT 3](#).

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

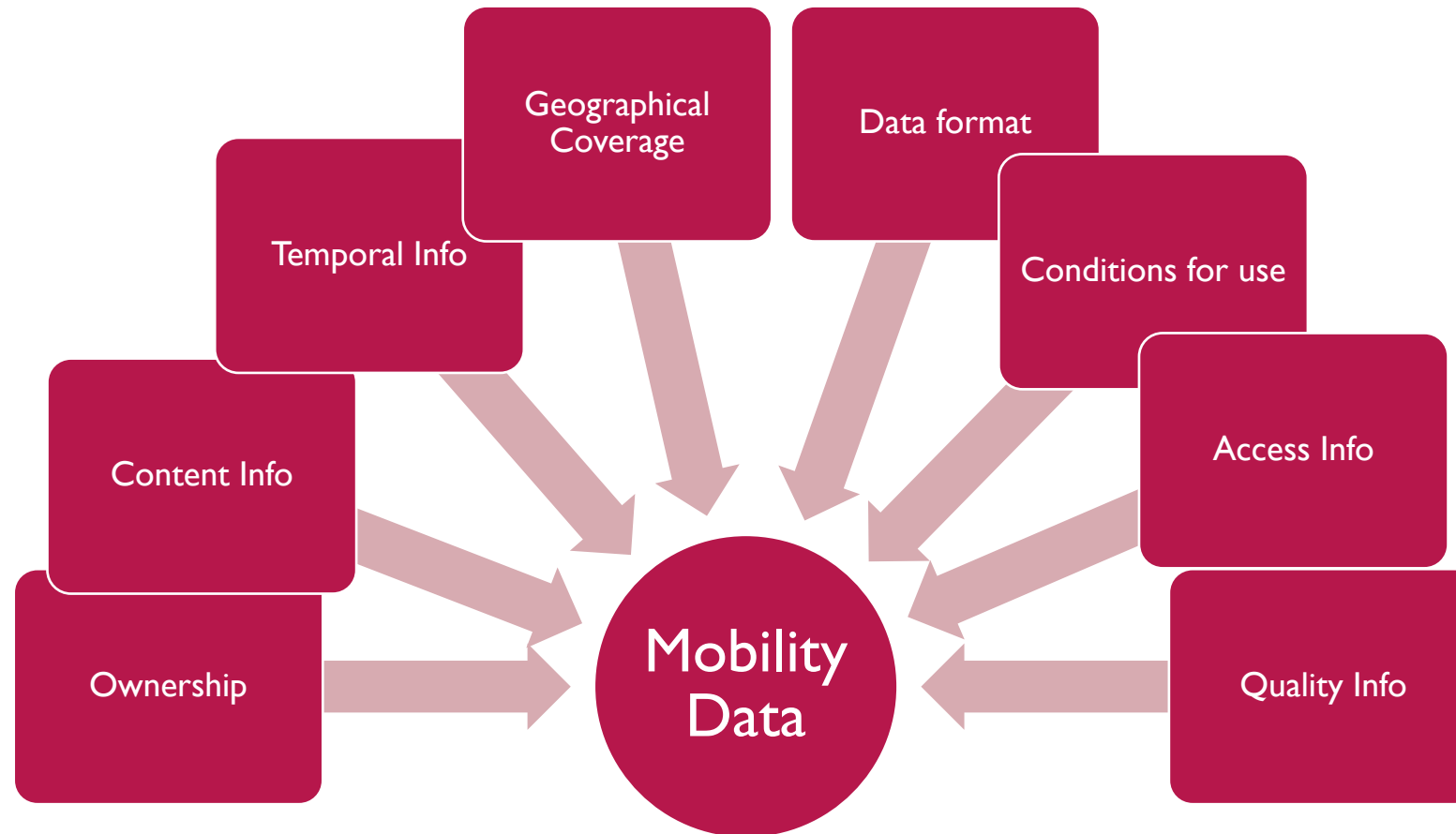
- Idea: a DCAT-AP extension for mobility data



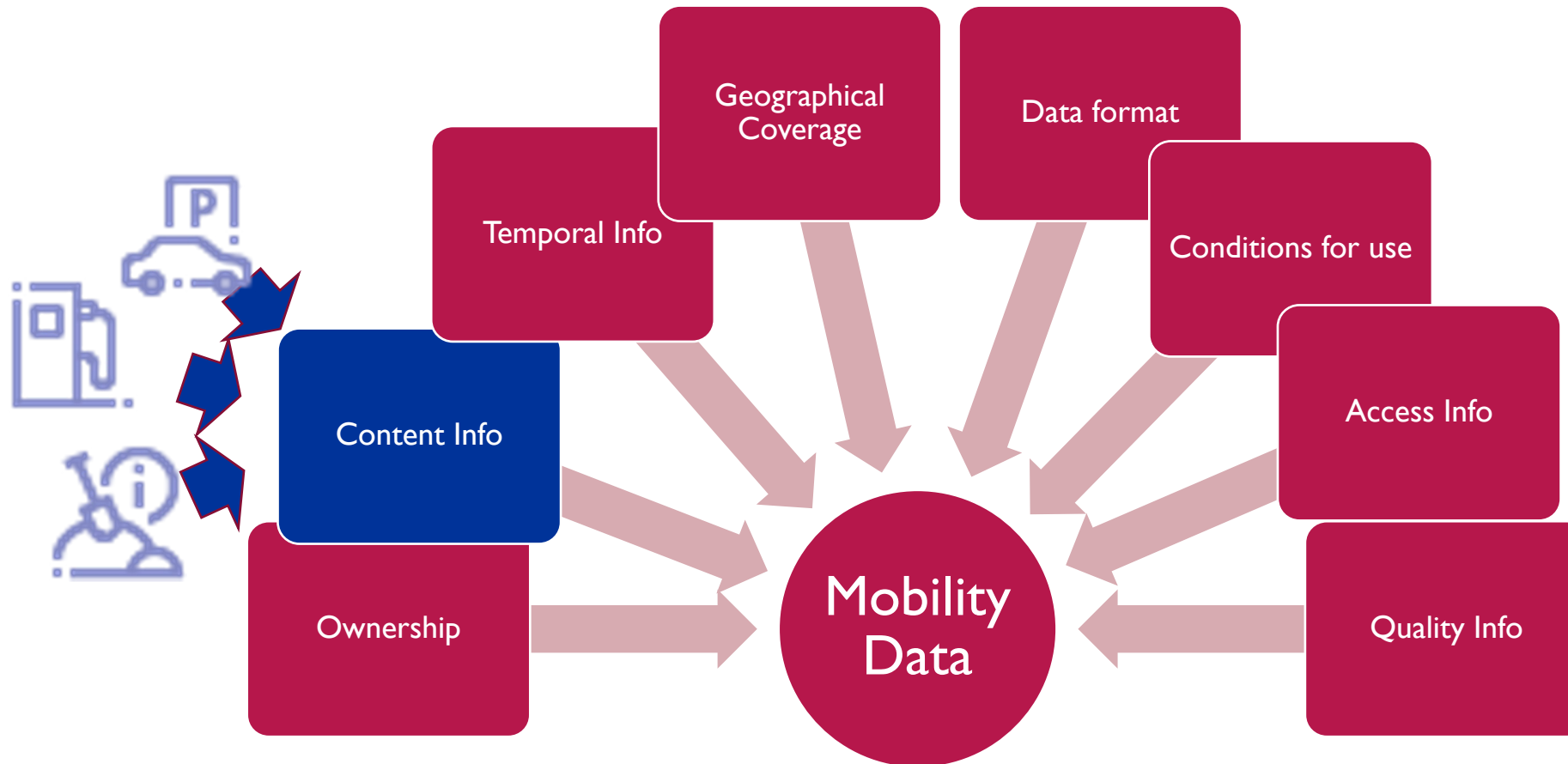
A new Metadata specification



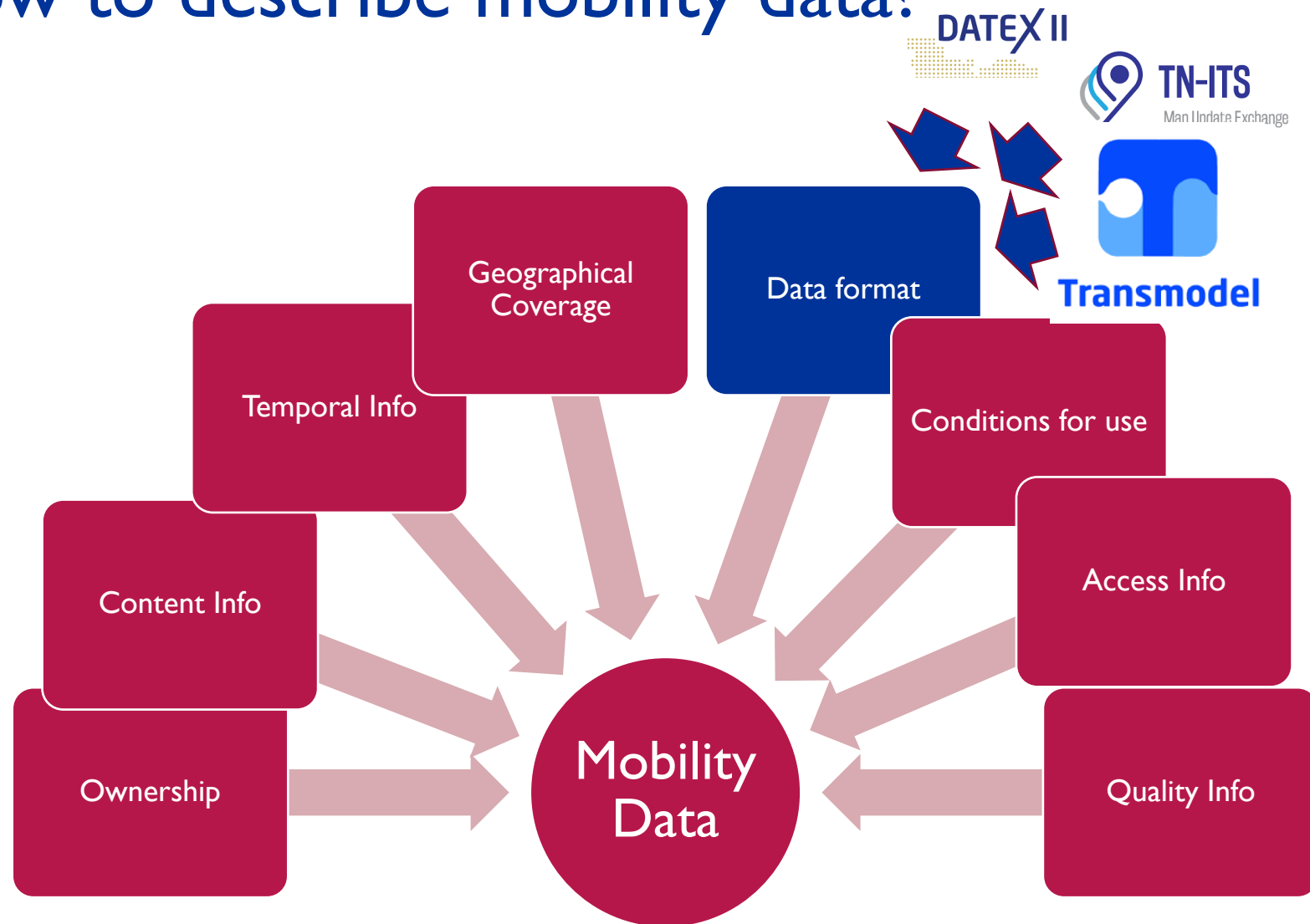
How to describe mobility data?



How to describe mobility data?



How to describe 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/>
- Intensified exchange with DCAT-AP/SEMIC group
- October 16th 2023: official release of mobilityDCAT-AP v1.0.0

Documentation

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



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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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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:

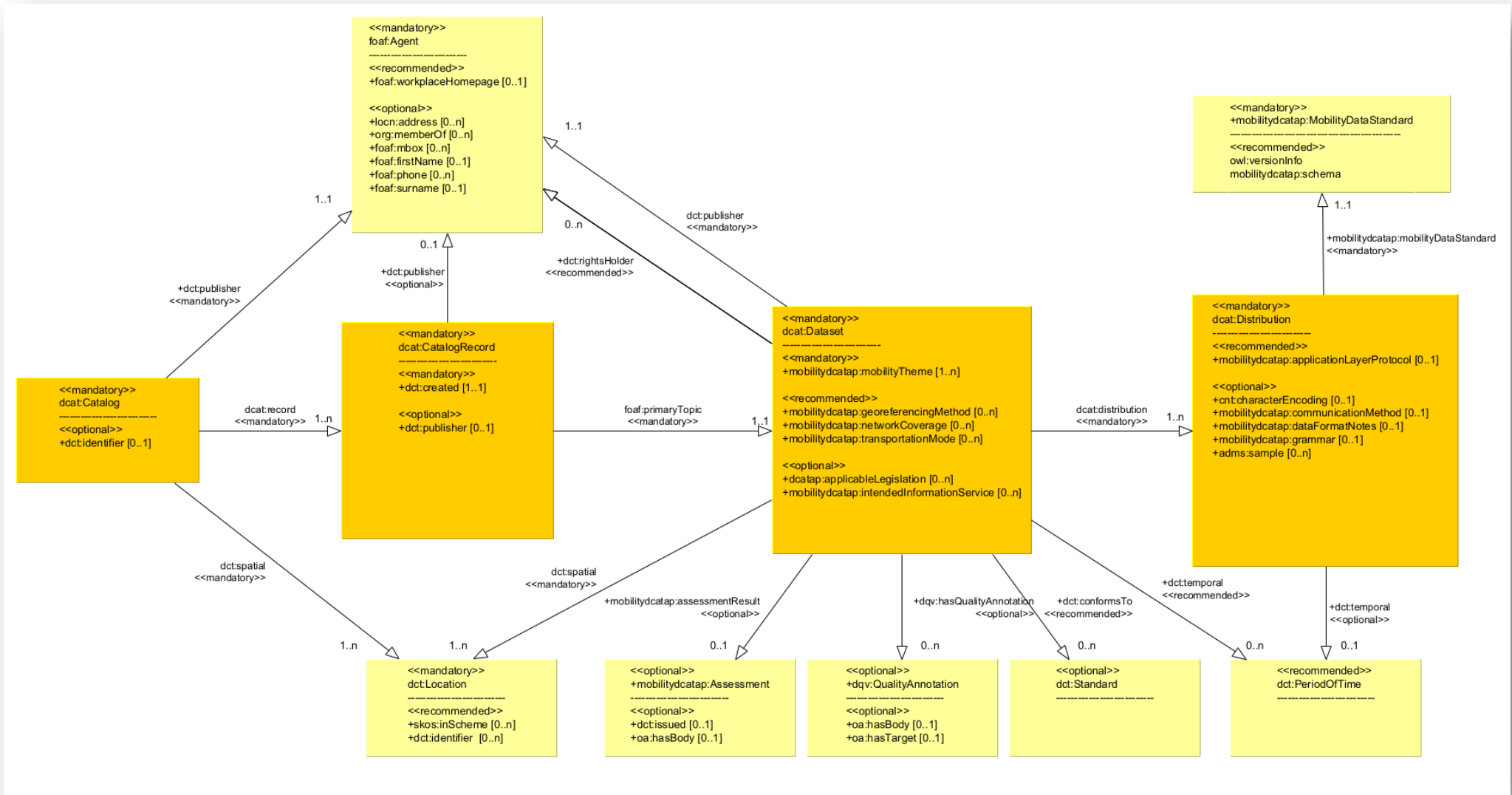
NAPCORE SWG 4.4

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

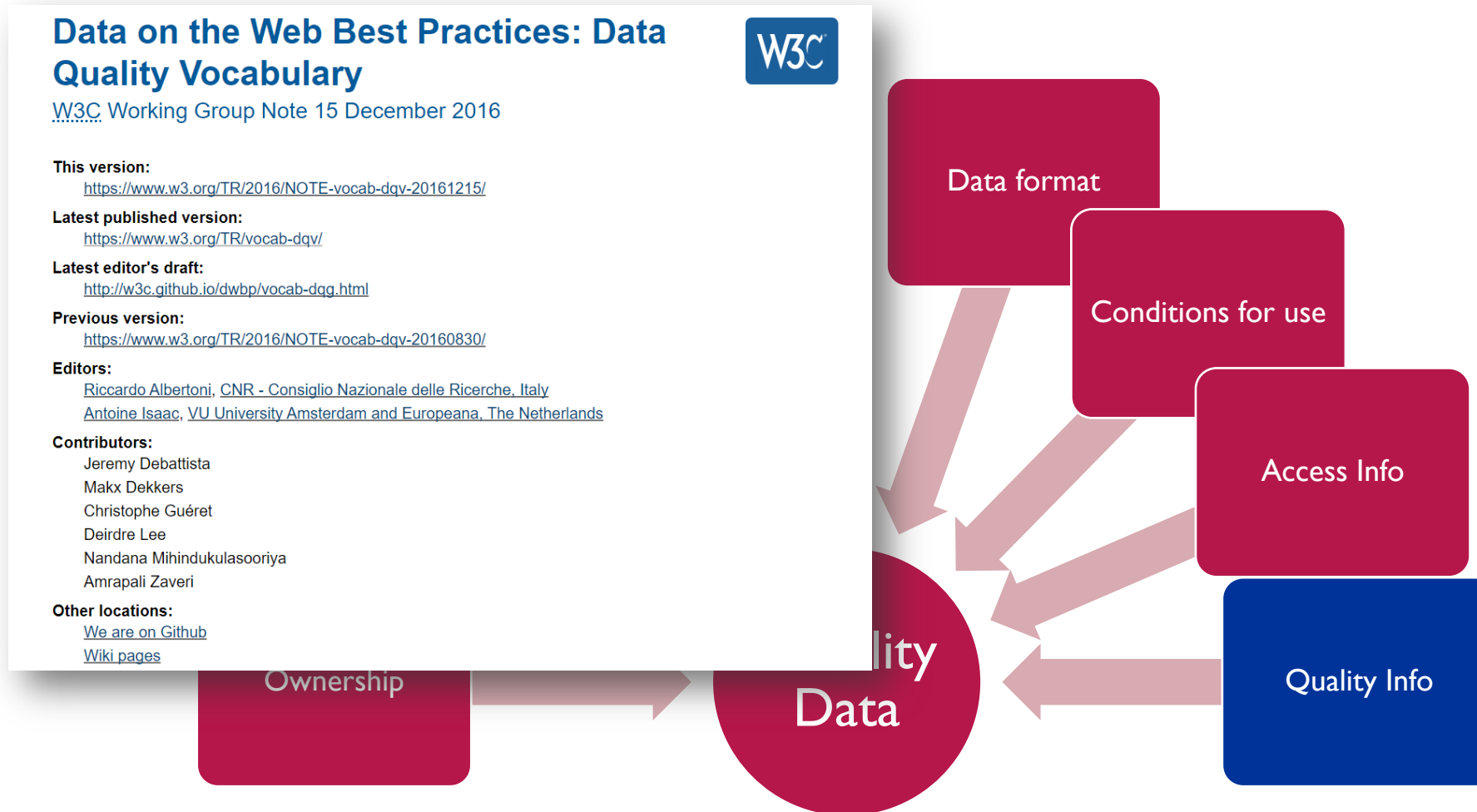
This document is also available in these non-normative formats: [RDF/XML](#), [Turtle](#), [JSON-LD](#), and [SHACL \(Turtle\)](#)

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UML model



Reusing other RDF vocabularies



Deployment

[Search Results](#) · Offer Details

Offered by: Landesbetrieb Straßenbau NRW, Verkehrszentrale Visibility: Public

LVZ.NRW Arbeitsstellen im nachgeordneten Netz in Nordrhein-Westfalen

dct:title

dct:issued

CREATED
08.11.2023

DATA MODEL
DATEX II V2

mobilitydcatap:mobilityDataStandard

dct:spatial

GEOGRAPHY
Nordrhein-Westfale...

CATEGORY
Road work information

mobilitydcatap:mobilityTheme

Offer Details

General Data Access Terms of Use Declarations

Content Information

Description

Die Daten umfassen Informationen über geplante und aktuelle Arbeitsstellen längerer und kürzerer Dauer außerhalb von Autobahnen in Nordrhein-Westfalen.
Im Einzelnen umfasst die Publikation die folgenden Angaben (sofern verfügbar):
- Zeitraum der Baumaßnahme ...

dct:description

⌵ **Show more**

Category

Road work information

mobilitydcatap:mobilityTheme

OpenData Category (GovData)

Transport

dcat:theme

Mode of Transport

Truck, Car, Bus, Long-distance coach

mobilitydcatap:transportMode

Network Coverage

Federal and state roads

mobilitydcatap:networkCoverage

Language

German

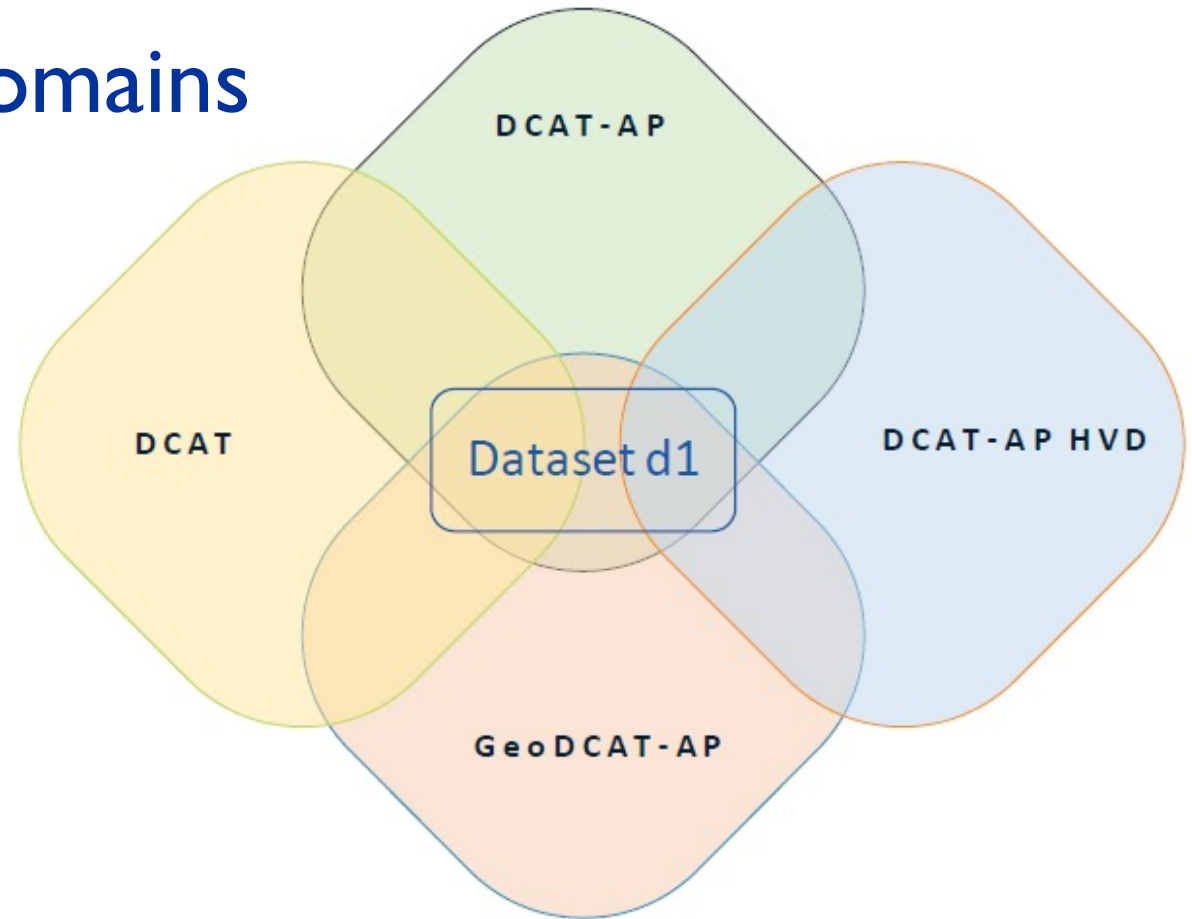
dct:language

Ongoing tasks

- **Governance & maintenance** (see later)
- **User support** (Wikipage, webinars, bilateral consulting,...)
- **Metadata aggregator as Proof-of-concept**

Ongoing tasks

- Alignment with other domains



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- Q&A with audience

Thank you!



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