



Report on EOSC

European Open Science Cloud in DCP context

B Cecconi (+ thanks to M Allen) – DCP IG – Nov-2023 Interop

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eosc EOSC vision in a nutshell

What

EOSC is the European web of FAIR data and related services for research

Research data that is easy to find, access, interoperate and reuse (FAIR)
Trusted and sustainable research outputs are available within and across scientific disciplines

Why

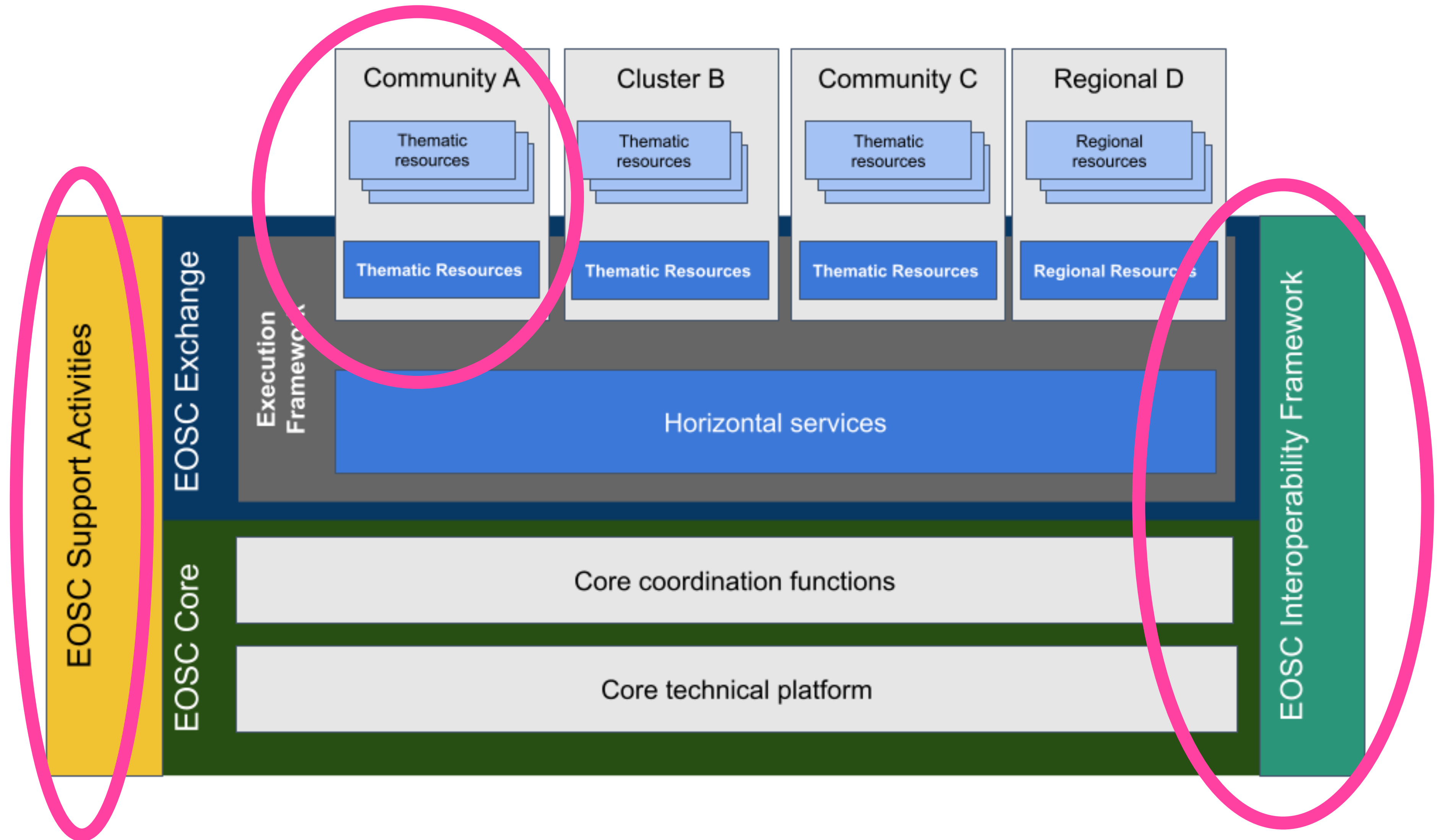
Unlock the full potential of research data to accelerate discoveries and innovation

How

- Ensure that Open Science practices and skills are rewarded and taught, becoming the 'new normal'
- Enable the definition of standards, and the development of tools and services, to allow researchers to find, access, reuse and combine results
- Establish a sustainable and federated infrastructure enabling open sharing of scientific results

Strategic
Research and
Innovation
agenda (SRIA)
eosc.eu/sria-mar

EOSC Architecture *and Astronomy connections*



eosc EOSC development (2018-2027)

EOSC phase 1: preparatory
2018 - 2020

Funding instruments:
H2020 calls/grants approach

Main purpose: To support the implementation strategy defined in the **EOSC roadmap 2018-2020** by the European Commission

EOSC phase 2: convergence
2021 - 2027

Funding instruments:
HE INFRAEOSC calls / grants approach
EOSC Procurement
In kind contributions from the EOSC Association members

Main purpose: To support the implementation of the **strategic priorities identified in the Multi Annual Roadmap 2021-2022; 2023-2024; 2025; 2026-2027** of the Strategic Research and Innovation Agenda (SRIA)

EOSC phase 3: operation
Post-2027

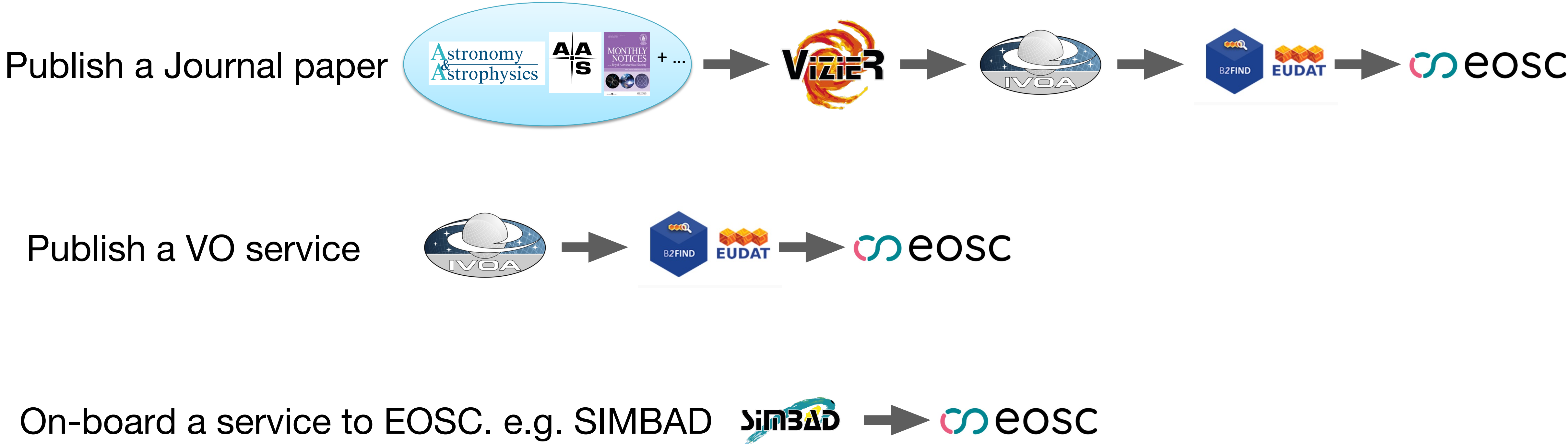
Funding instruments:
Under discussion

Main purpose: To support the **EOSC strategy and governance post 2027**





Creation of training materials - adapted for Astronomy community



...makes astronomy VO resources available in the EOSC Portal :

The screenshot displays the EOSC Marketplace Resources interface. At the top, the European Open Science Cloud logo is visible. The main heading is "Browse EOSC Marketplace Resources". A search bar contains the text "Gaia" and includes a "Clear x" button, a dropdown menu set to "All catalogs", and a search icon. Below the search bar is a navigation menu with icons and labels for various resource types: ALL CATALOGS (underlined), PUBLICATIONS, DATA, SOFTWARE, SERVICES, DATA SOURCES, TRAININGS, INTEROPERABILITY GUIDELINES (marked [BETA]), BUNDLES (marked [BETA]), and OTHER. On the left side, there is a "Filters" section with a "Research step" filter. The main content area shows "2343 search results All catalogs" and a "Sort By" dropdown set to "Default". The first search result is for "Gaia EDR3", which is a dataset. It includes a date of "01 January 2020", the author "Collaboration Gaia", and the DOI "10.26093/cds/vizier.1350". A list of related keywords is provided below the result.

EUROPEAN OPEN SCIENCE CLOUD

Browse EOSC Marketplace Resources

Gaia Clear x All catalogs ▼

ALL CATALOGS PUBLICATIONS DATA SOFTWARE SERVICES DATA SOURCES TRAININGS **[BETA]** INTEROPERABILITY GUIDELINES **[BETA]** BUNDLES OTHER

Filters

Research step ^

- Discover Research Outputs (2343)
- Process and Analyse (0)
- Manage Research Data (0)
- Access Training Material (0)
- Access Computing and Storage Resources (0)
- Access Research Infrastructures (0)
- Publish Research Outputs (0)
- Find Bundles (0)

2343 search results All catalogs Sort By Default ▼

Dataset **Not Specified**

Gaia EDR3

01 January 2020 Type: dataset

Author names: Collaboration **Gaia**

DOI: 10.26093/cds/vizier.1350

[Asteroids](#) [Astrometry](#) [Astronomical object identification](#) [Optical astronomy](#) [Photographic photometry](#) [Photometry](#) [Proper motions](#) [Radial velocity](#) [Standard stars](#) [Surveys](#) [Trigonometric parallax](#) [Variable stars](#) [exoplanet astronomy](#) [galactic and extragalactic astronomy](#) [observational astronomy](#) [solar system astronomy](#) [stellar astronomy](#) [Astrophysics and Astronomy](#) [Natural Sciences](#) [Physics](#)

EOSC Portal

IVOA integration

- IVOA Resources findable in EOSC Portal thanks to Registry/B2Find mapping.
=> need improvement (ok for CDS resources, not ok for PADC resources)
- need to understand how to map VO Registry properties into metadata in portal:
 - *standard-id or table-utype => dcterms:conformsTo*
 - *subject term as an URI => dcterms:subject*
- need for landing page for each IVOA resource?

The screenshot shows the EOSC Portal interface for the 'VizieR Solar system catalogues' resource. The page features a navigation bar with links like 'About EOSC', 'Browse Marketplace', and 'Providers Hub'. Below the navigation, there's a search bar and a 'B2FIND' button. The main content area displays the resource title, authors (CDS, ObsParis), and an abstract. A yellow callout box provides a detailed view of the resource's metadata, including its IVOA identifier, keywords, and access methods.

VizieR Solar system catalogues
Virtual Observatory Resource

- Authors: CDS, ObsParis
- Published by: CDS
- Abstract: The VizieR planetary catalogue EPN-TAP service provides a selection of catalogues containing data related to the Solar System and exoplanets. VizieR (<http://vizier.unistra.fr>) is a larger service distributing astronomical catalogues related to reviewed papers. Catalogues can be downloaded in TOPCAT (sometimes as multiple tables), the external_link parameter provides access to associated files. This catalogue is the result of a common effort of CDS and ObsParis. The table is conform with EPNcore standard to be queriable throw Europlanet web site (<http://www.europlanet-vespa.eu/>).
- Keywords: Exoplanets, Observational astronomy, Solar system.
- Bibliographic source: 2018P&SS..150...65E
- See also: <https://cdsarc.cds.unistra.fr/viz-bin/cat/B/planets>
- IVOA Identifier: ivo://CDS.VizieR/B/planets
- Document Object Identifier: DOI

Access

- Web browser access: <http://vizier.cds.unistra.fr/viz-bin/VizieR-2?-source=B/planets>, <https://vizier.iucaa.in/viz-bin/VizieR-2?-source=B/planets>, <http://vizieridia.sao.ac.za/viz-bin/VizieR-2?-source=B/planets>
- IVOA Table Access: <http://tapvizier.cds.unistra.fr/TAPVizieR/tap>
Run SQL-like queries with TAP-enabled clients (e.g., TOPCAT).

History

2018-06-15T06:33:04Z	Resource record created
2018-06-15T06:33:04Z	Created
2023-08-28T11:50:41Z	Updated

EOSC Portal Services

- EOSC-Future outcome: new « profiles » for services and datasets in Portal
- Several IVOA-related services are registered. Requirement on legal documents (SLA, privacy policy...)
- Currently: only web portals are directly registered. More to come, but still evaluating impact.

The screenshot shows the profile for the Paris Astronomical Data Centre (PADC). It includes a header with navigation links, a search bar, and a main content area with a 'Go to Search' button. Below this, there are sections for 'ABOUT', 'DETAILS', 'GUIDELINES', and 'REVIEWS (0)'. The 'DETAILS' section is expanded, showing various metadata fields such as 'Classification', 'Target Users', 'Access Types', 'Availability', 'Dependencies', 'Order', 'Public Contacts', 'Maturity Information', 'Persistent Identity Systems', 'Datatype Content', 'Management', 'Research Product Licensing', 'Research Product Access Policies', 'Research Product Metadata Licensing', and 'Research Product Metadata Access Policies'.

The screenshot shows the profile for the VAMDC Species Database. It features a header with navigation links, a search bar, and a main content area with a 'Go to Search' button. The 'DETAILS' section is expanded, displaying metadata fields like 'Classification', 'Research Steps', 'Target Users', 'Access Types', 'Access Modes', 'Tags', 'Public Contacts', 'Maturity Information', 'Management', 'Availability', 'Dependencies', 'Attribution', and 'Order'.

The screenshot shows the profile for the SIMBAD astronomical database. It includes a header with navigation links, a search bar, and a main content area with a 'Go to Search' button. The 'DETAILS' section is expanded, showing metadata fields such as 'Classification', 'Research Steps', 'Target Users', 'Access Types', 'Access Modes', 'Tags', 'Public Contacts', 'Maturity Information', 'Management', 'Availability', 'Dependencies', 'Attribution', and 'Order'.

The screenshot shows the profile for the VESPA (Virtual European Solar and Planetary Access) query portal. It features a header with navigation links, a search bar, and a main content area with a 'Go to Search' button. The 'DETAILS' section is expanded, displaying metadata fields like 'Classification', 'Target Users', 'Access Types', 'Access Modes', 'Tags', 'Public Contacts', 'Maturity Information', 'Management', 'Availability', 'Dependencies', 'Attribution', and 'Order'.

The screenshot shows the profile for the CDS (Strasbourg astronomical Data Centre). It includes a header with navigation links, a search bar, and a main content area with a 'Go to Search' button. The 'DETAILS' section is expanded, showing metadata fields such as 'Classification', 'Tags', 'Networks', 'Areas of Activity', 'Affiliations', 'ESFRI Type', 'ESFRI Domain', 'MERIL Scientific Categorisation', 'Hosting Legal Entity', 'Structure Types', 'Societal Grand Challenges', 'National Roadmaps', 'Certifications', and 'Catalogue'.

FAIR-IMPACT



enhancing semantic interoperability

- Goal: improve portal with semantic interoperability in portal and in DCP tools
=> *example: DANS (Denmark) developed plug-in for Dataverse to include controlled vocabularies URI in subjects fields (it is only plain text by default)*
- Astronomy is new comer: a lot to do in terms of mapping
- However, our information is already well described, not so difficult
- Prototypes coming out next year (on MASER service)