Pedro Príncipe
University of Minho

Iryna Kuchma
EIFL

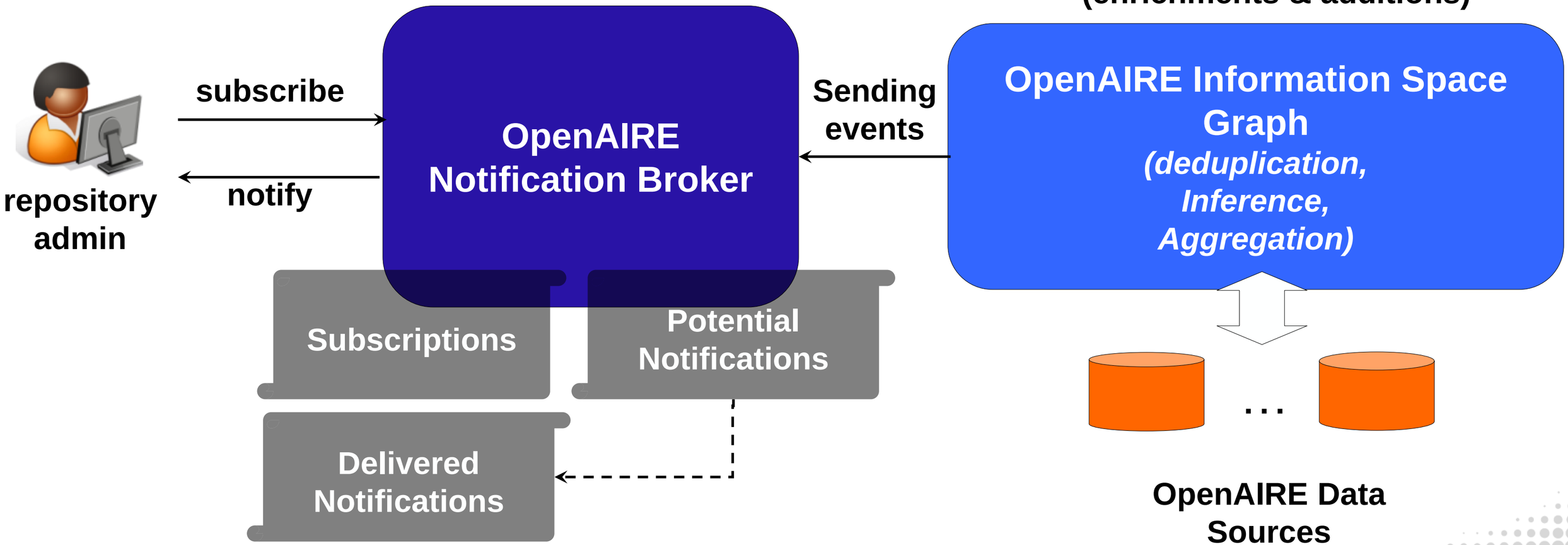
OpenAIRE Content Provider Dashboard and the OA Broker service

CC BY

OpenAIRE Broker sketch

Event (potential notification):
- *Message*
- *Topic*
- *TargetRepository*
- *Trust*

Identifying “events” relevant to repositories (enrichments & additions)



Content Provider Dashboard

In production since Oct. 2018

OpenAIRE | PROVIDE

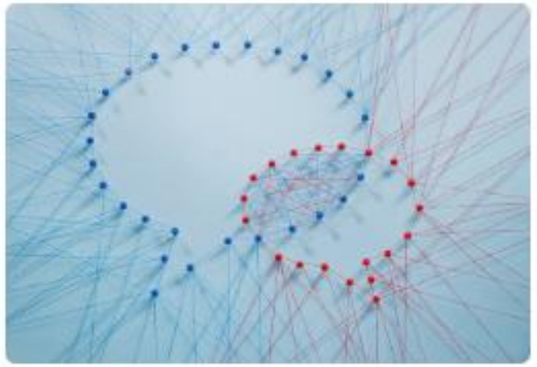
DASHBOARD SOURCES COMPATIBILITY CONTENT METRICS

Register

Register data sources in the OpenAIRE infrastructure

Validate

Validate data sources against OpenAIRE guidelines



Notifications

View notifications to enrich the metadata and the content

Metrics

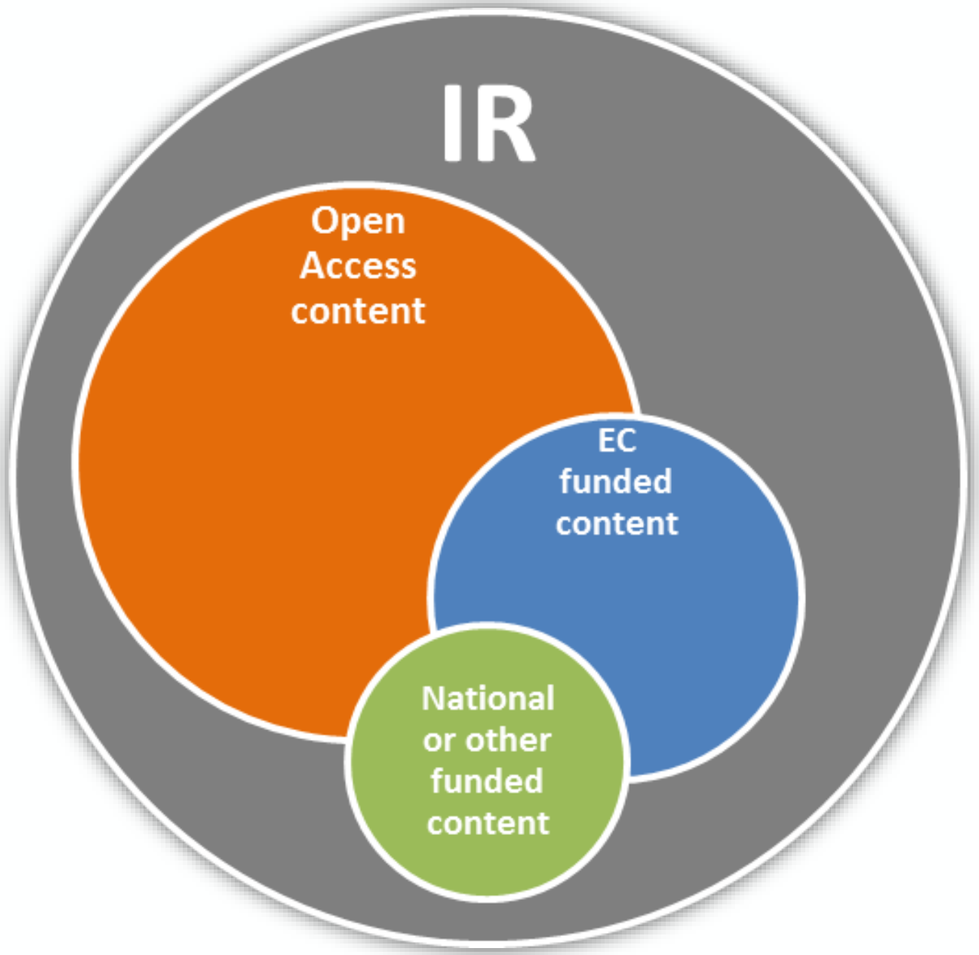
View aggregated, cleaned usage statistics for repository access

Metadata describing Open Access and non-Open Access material will be included and links to other products will be resolved where this is possible (i.e. the provided PIDs have a resolver).

as stated in the Content Acquisition Policy, published Oct. 2018
https://doi.org/10.5281/zenodo.1446408

OpenAIRE

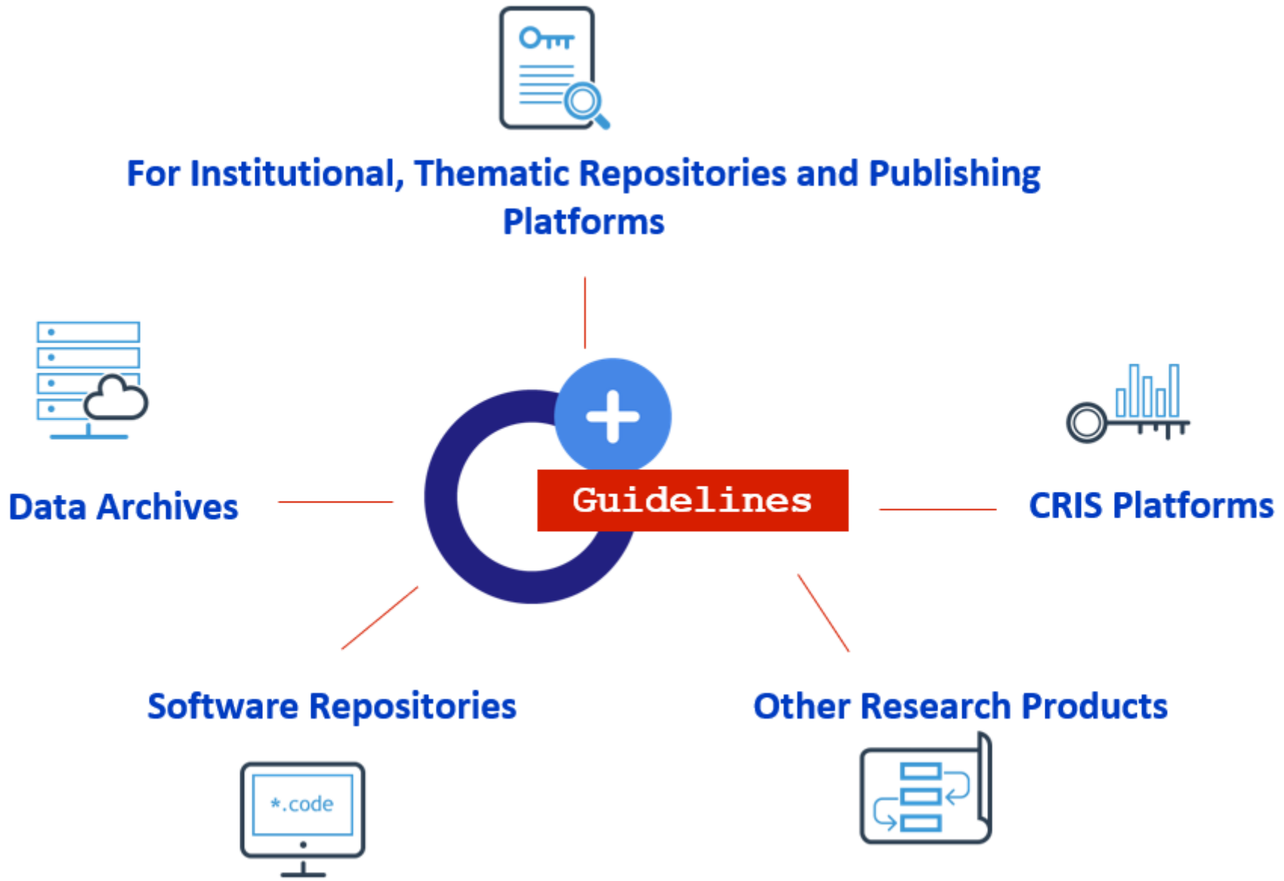
European Commission



Metadata describing Open Access and non-Open Access material will be included

www.openaire.eu

OpenAIRE‘s Guidelines for Open Science Content Providers



https://guidelines.openaire.eu

OpenAIRE Guidelines for Content Providers - new Metadata Application Profile for Literature Repositories

Jochen Schirrwagen, UNIBI
Andreas Czerniak, UNIBI
Pedro Principe, UMINHO

OpenAIRE | ADVANCE

European Commission

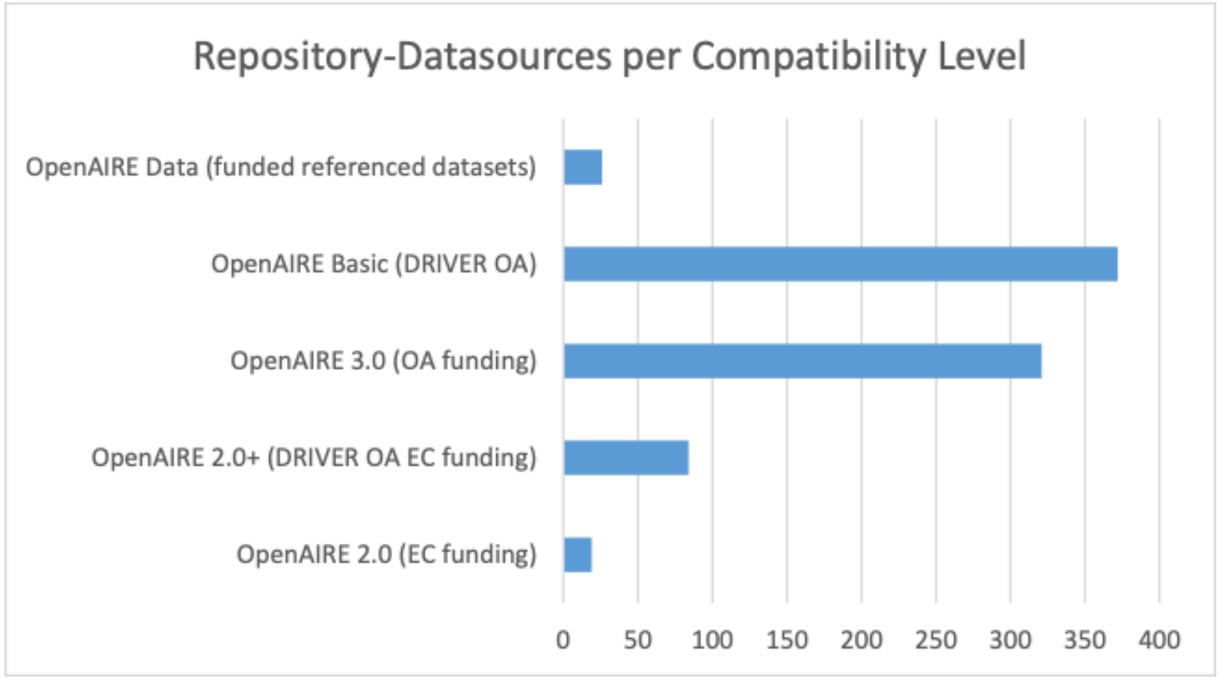
@openaire_eu

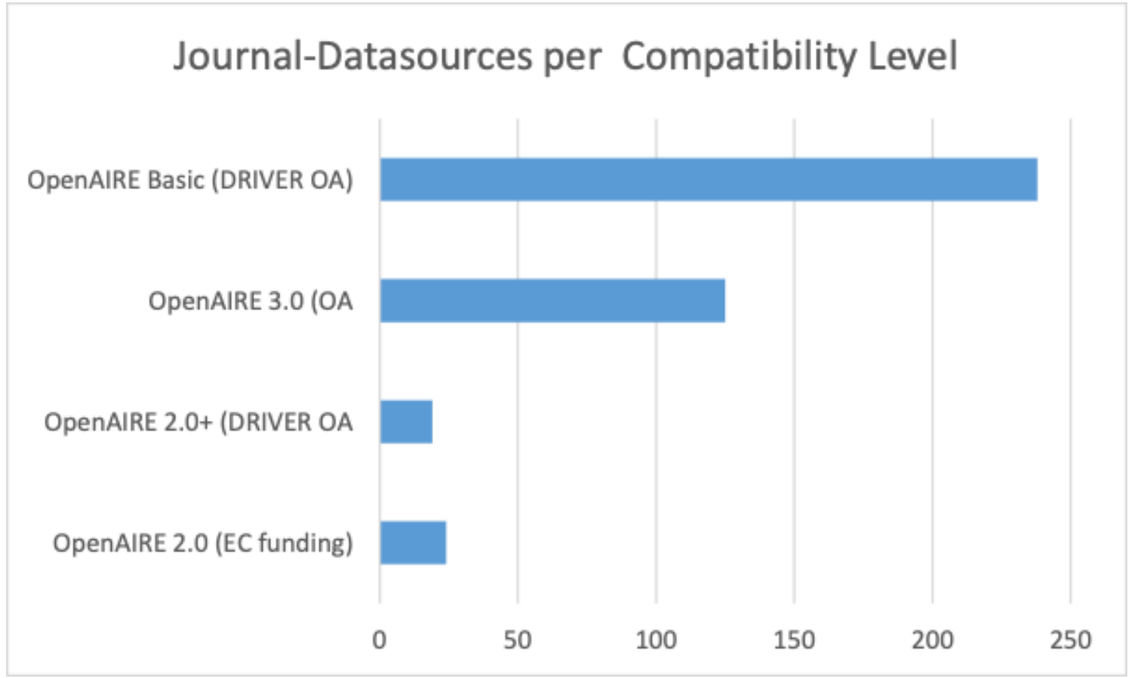
Overview of OpenAIRE Interoperability Guidelines

OpenAIRE

European Commission

Datasources Guidelines-Compatibility



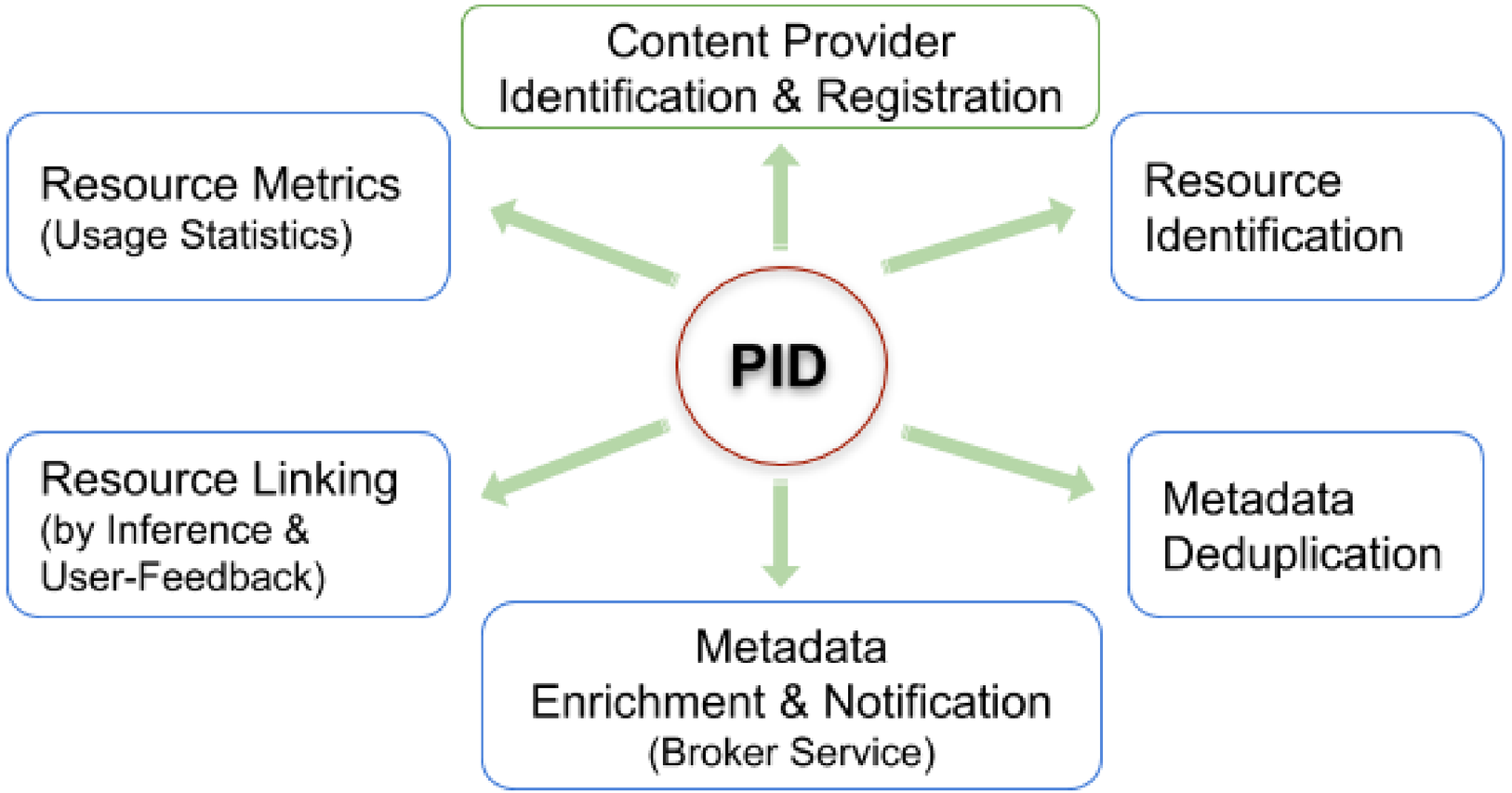


In addition:
158 repositories are collected from a compatible aggregator

In addition:
12,284 journals are collected from a compatible publisher or aggregator

last updated: Mar-2019

Role of PIDs in OpenAIRE



Guidelines v4 and Application Profile

What’s new

- Application profil based on Dublin Core & DataCite metadata schemes
- requires a new OAI metadata prefix “oai_openaire”, but requires no specific OAI-set
- supports various identifier schemes for entities like authors, organisations, funders, scholarly works
- uses controlled vocabularies defined by COAR (access rights, resource types, version types)
- compatible with OpenAIRE content acquisition policy

References

- Guidelines at https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/
- Schema and examples on github https://github.com/openaire/guidelines-literature-repositories

OpenAIRE Guidelines for Literature Repository Managers v4.0

- Based on established standards: Dublin Core and DataCite metadata scheme
- For description of textual and data publications
- Application Profile
- Controlled Vocabularies aligned with the other OpenAIRE Guidelines

http://dx.doi.org/10.5281/zenodo.1299203
(Released Nov-2018)

OpenAIRE-Field	Metadata Element	Refinement by Vocabulary
Title (M)	datacite:title	title type
Creator (M)	datacite:creator	name type
Contributor (MA)	datacite:contributor	name type contributor type
Funding Reference (MA)	oaire:fundingReference	funderIdentifier type
Alternate Identifier (R)	datacite:alternateIdentifier	alternateIdentifier type
Related Identifier (R)	datacite:relatedIdentifier	relatedIdentifier type relation type resourcetype general
Embargo Period Date (MA)	datacite:date	date type
Language (MA)	dc:language	IETF BCP 47, ISO 639-3
Publisher (MA)	dc:publisher	
Publication Date (M)	datacite:date	date type
Resource Type (M)	oaire:resourceType	COAR Resource Type Vocabulary
Description (MA)	dc:description	
Format (R)	dc:format	
Resource Identifier (M)	datacite:identifier	identifier type
Access Rights (M)	datacite:rights	COAR Access Right Vocabulary
Source (R)	dc:source	
Subject (MA)	datacite:subject	
License Condition (R)	oaire:licenseCondition	
Coverage (R)	dc:coverage	
Size (O)	datacite:size	
Geo Location (O)	datacite:geoLocation	
Resource Version (R)	oaire:version	COAR Version Vocabulary
File Location (MA)	oaire:file	
Citation Title (R)	oaire:citationTitle	
Citation Volume (R)	oaire:citationVolume	
Citation Issue (R)	oaire:citationIssue	
Citation Start Page (R)	oaire:citationStartPage	
Citation End Page (R)	oaire:citationEndPage	
Citation Edition (R)	oaire:citationEdition	
Citation Conference Place (R)	oaire:citationConferencePlace	
Citation Conference Date (R)	oaire:citationConferenceDate	
Audience (O)	dcterms:audience	

Metadata Goals

Goal	Metadata Groups
Discovery and Citability	Descriptive metadata
Accessibility and Reuse	Access Rights, License Conditions
Contextualization	Research Project, Linked Research Artefacts
Interoperability	Identifier for Entities, Controlled Vocabularies
Reporting	Funding Reference
TDM	File Location, License Conditions

Discovery and Citability I

Property	Requirement level	Granularity
Creator	Mandatory	Attributes for firstName, lastName, identifier
Publication Date	Mandatory	
Title	Mandatory	
Resource Identifier	Mandatory	Identifier Type
Resource Type	Mandatory / Controlled	
Contributor	Mandatory if applicable	
Language	Mandatory if applicable / Controlled	
Description	Mandatory if applicable	
Subject	Mandatory if applicable	
Publisher	Mandatory if applicable	

Discovery and Citability II

Property	Requirement level	Granularity
Source	Recommended	
Coverage	Recommended	
Audience	Optional	
GeoLocation	Optional	
Resource Version	Recommended	
Citation Title	Recommended	
Citation Volume	Recommended	
Citation Issue	Recommended	
Citation Start Page	Recommended	
Citation End Page	Recommended	
Citation Edition	Recommended	
Citation Conference Place	Recommended	
Citation Conference Date	Recommended	

Accessibility and Reuse

Property	Requirement level	Granularity
Access Rights	Mandatory / Controlled	
License Condition	Recommended	

Reporting (to Funders)

Property	Requirement level	Granularity
Funding Reference	Mandatory if applicable	funderName, award ...
Embargo Period Date	Mandatory if applicable	

Interoperability

Property	Requirement level	Granularity
Format	Recommended	
Alternate Identifier	Recommended	identifier type
Related Identifier	Recommended	identifier type, relation type, resource type

Mining and Download

Property	Requirement level	Granularity
File Location	Mandatory if applicable	
Size	Optional	
Related Identifier	Recommended	identifier type, relation type, resource type

Implementation Roadmap

Implementation in Repositories

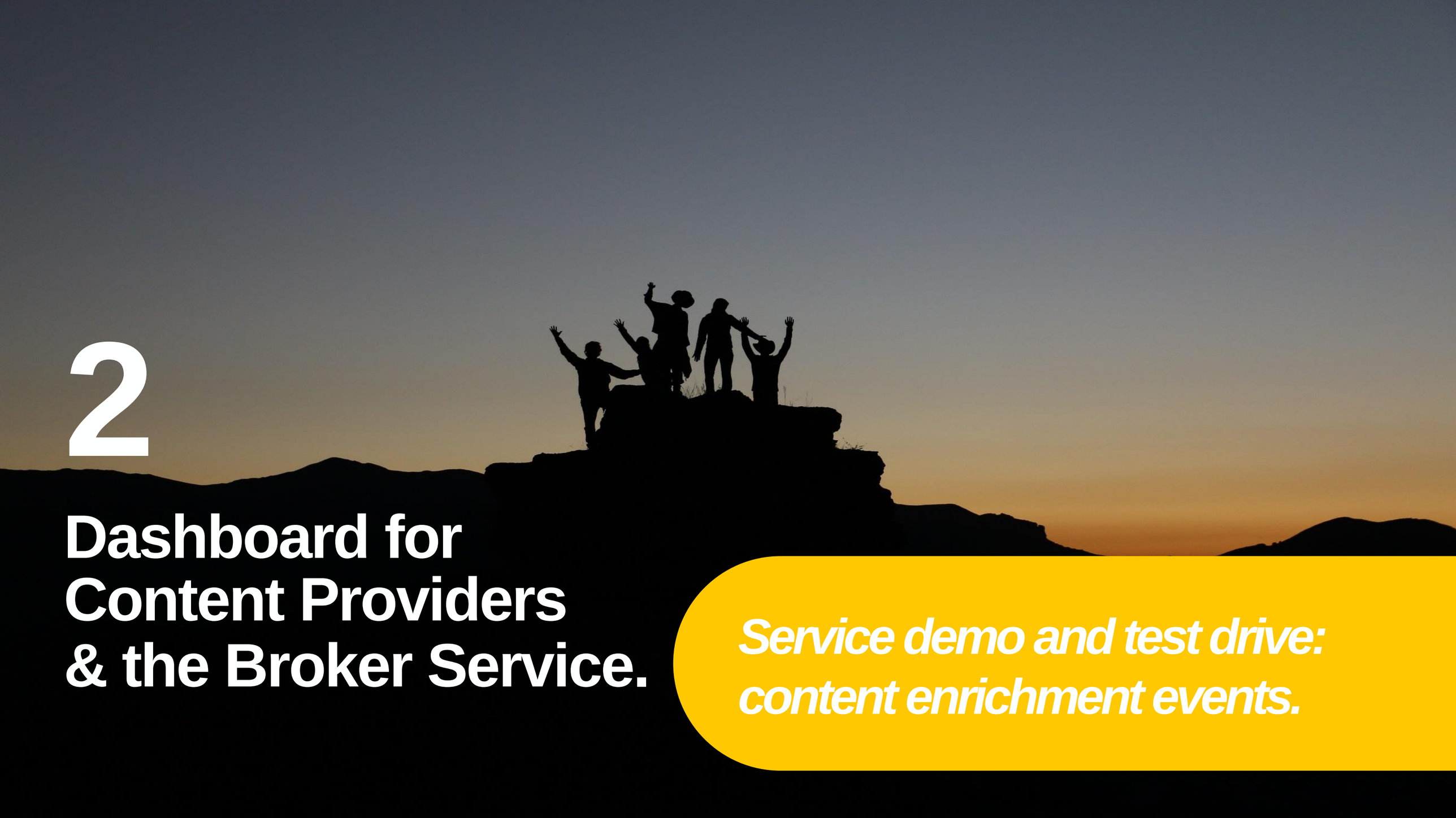
Software	Supported Version	Status	Comments
DSpace	7 (in prep.) 5 & 6 (in test)	In preparation - DSpace OpenAIRE 4.0 WG Implementations by PT repos RCAAP for v.5	70 days effort (WG timeline plans) Documentation will be available ASAP
EPrints	All	Contacted	May need funding via Jisc or OpenAIRE
Invenio / zenodo		On their roadmap	
Islandora		Contacted	
Librecat		Contacted	
OPUS	4 (in prod.)	Contacted	
MyCoRe		Contacted	
HAL		Contacted	May have very limited resources

Implementation in the OpenAIRE Infrastructure

Service	What	When	Comments
Validator	Ruleset for Guidelines v4	In preparation	also required for Guidelines implementers
DataSource Registration & Update	Compatibility Level MetadataFormat		
Aggregation	Transformation Rules	In preparation	

Thank you!

guidelines@openaire.eu



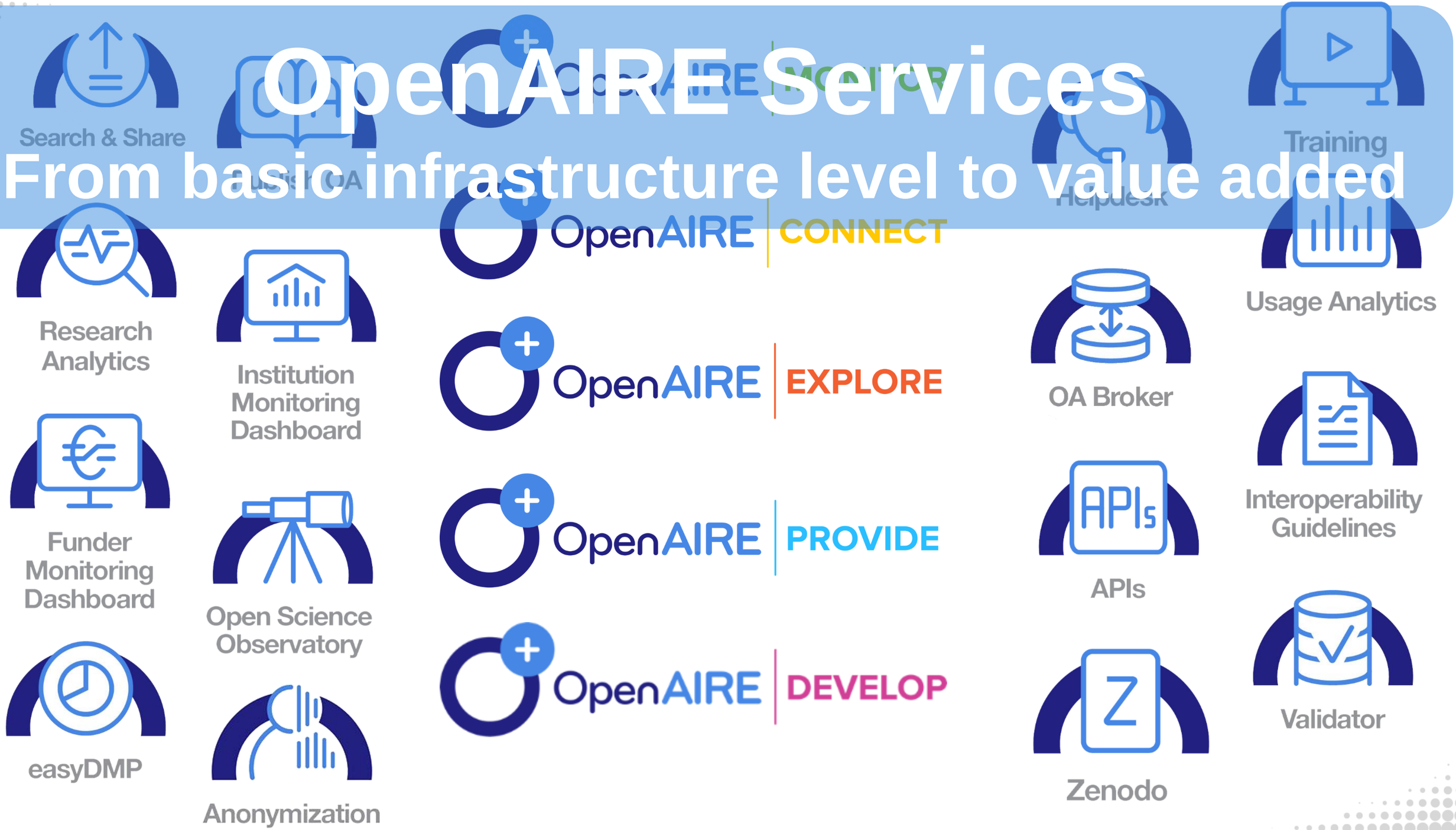
2

Dashboard for Content Providers & the Broker Service.

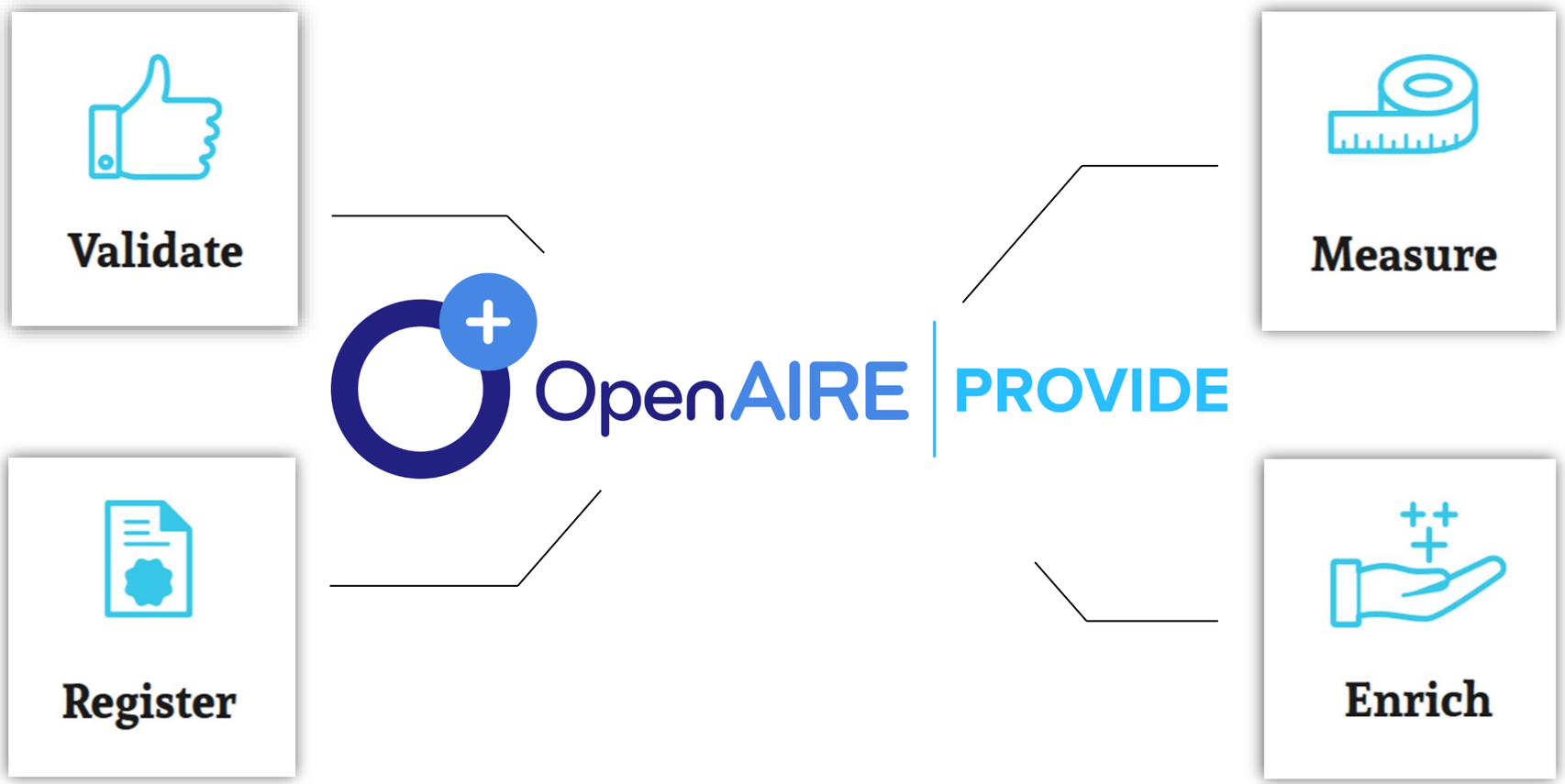
Service demo and test drive: content enrichment events.

OpenAIRE Services

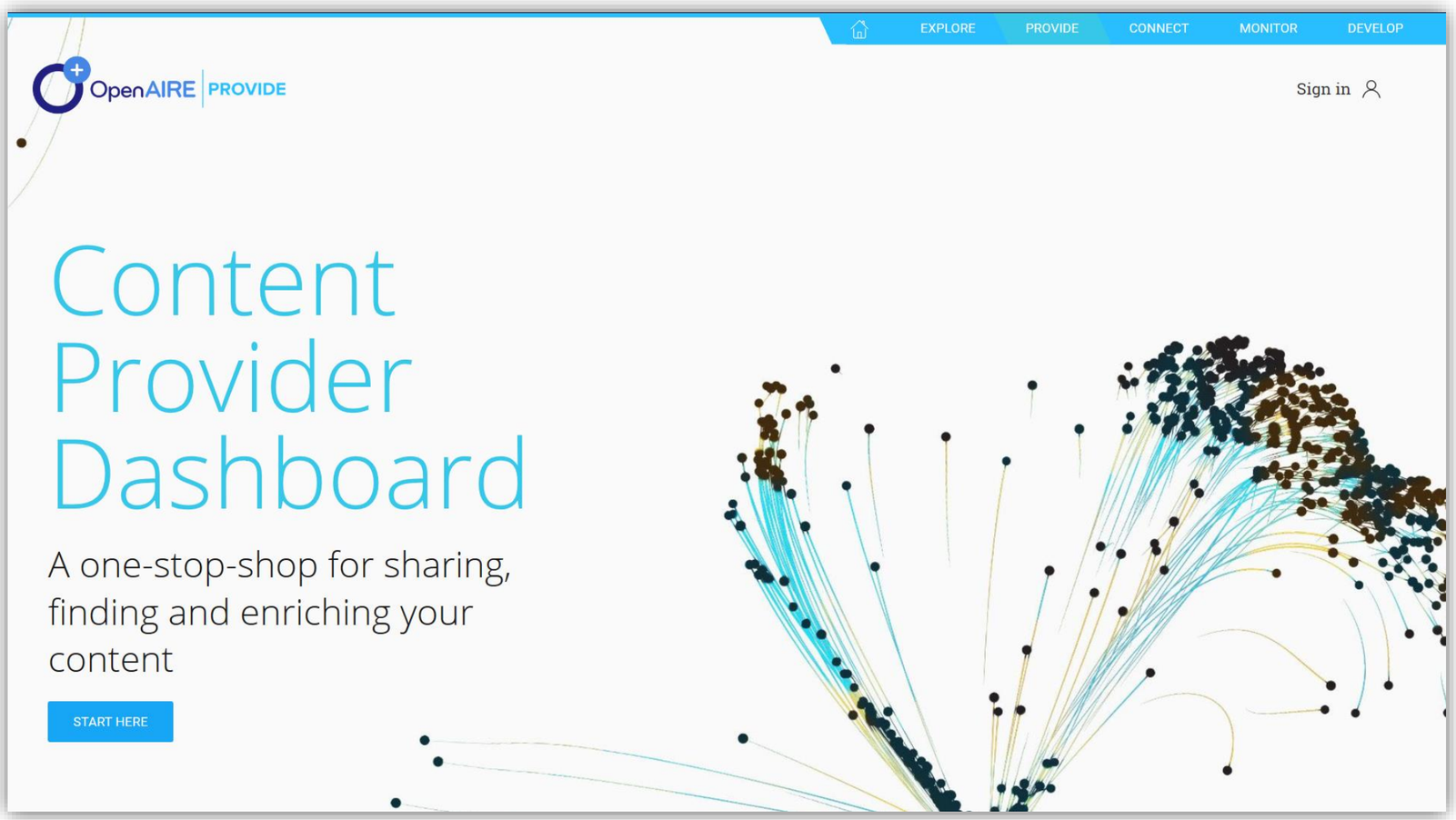
From basic infrastructure level to value added



OpenAIRE Content Provider Dashboard – *what it is*



One-stop-shop web service where content providers (repositories, data archives, journals, aggregators, CRIS systems) **interact with OpenAIRE.** It provides the front-end access to many of OpenAIRE's backend services.



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Validator

Interoperability Guidelines

OA Broker

Usage Analytics

...

Validate

Interoperable metadata is key for effective content sharing.

Register

Reach a wider audience around the world

Enrich

Improve your metadata. Get more connections

Measure

Open research impact empowers Open Science

one stop shop for all
OpenAIRE content providers
Services for repository managers,
Data Archive managers,
OA publishers...
SUPPORT, PROMOTE, ENRICH

Dashboard usage

TARGET USERS

Repository managers (literature, data), libraries, content providers, publishers, national aggregators.

USER BASE

800 content providers have used the registration and validation service *(V1 focused on literature repositories*, 1200 all types for V2).

USER VALUE

Improve repository collections and content for **enhanced visibility** and access. Improved institution memory. Better institution research assessment. **Compliance to funder rules**. Improved repository **interoperability**.

OpenAIRE Content Provider Dashboard

what it does

Content Provider Dashboard

OpenAIRE | PROVIDE

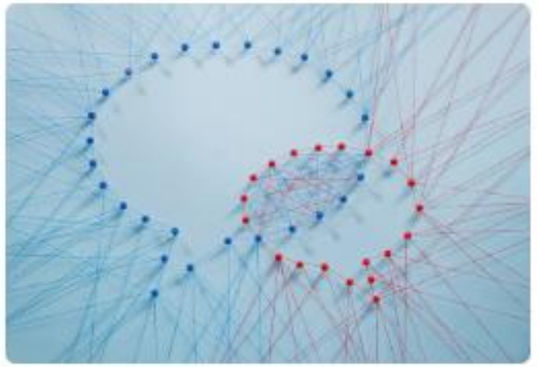
DASHBOARD SOURCES COMPATIBILITY CONTENT METRICS

Register

Register data sources in the OpenAIRE infrastructure

Validate

Validate data sources against OpenAIRE guidelines



Notifications

View notifications to enrich the metadata and the content

Metrics

View aggregated, cleaned usage statistics for repository access

Interoperable metadata is key for effective content sharing

VALIDATE

Use our validation service and see how you can apply the OpenAIRE Guidelines to expose your contents using global standards.

OpenAIRE | PROVIDE

Reach a wider audience around the world

Register your datasource in OpenAIRE and be part of a global interlinked network.

REGISTER

OpenAIRE | PROVIDE

ENRICH

Improve your metadata.
Get more connections

OA Broker service offers a wealth of information on scholarly communication data.

Find out what interests you and subscribe to enrich your records.

More & Missing events that may enrich your Repository:

- **Persistent identifiers**
- **Open Access Versions**
- **Projects**
- **Subjects**
- **Abstracts**

… datasets, software

OpenAIRE | PROVIDE

MEASURE

Open research impact empowers Open Science

Open Metrics service by sharing your usage data.

Get the benefit of an aggregated environment to broaden the mechanisms for impact assessment.

Get usage statistics reports for your datasource

AR1	IR1	RR1	BR1	BR2
Article Report 1, number of successful article download requests by month and repository.	Item Report 1, number of successful item download requests by month and repository.	Repository Report 1, number of successful item downloads for all repositories participating in the usage statistics service.	Book Report 1, number of successful title requests by month and title.	Book Report 2, number of successful section requests by month and title.

OpenAIRE | PROVIDE

Novelties

EXPLORE PROVIDE CONNECT MONITOR DEVELOP

OpenAIRE | PROVIDE

Home Sources Compatibility Content Metrics University Minho

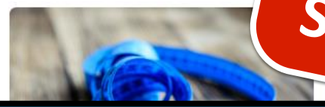
Register

Register data sources in the OpenAIRE infrastructure

Validate

Validate data sources against

Notifications



METADATA ENRICHMENTS FROM THE OPENAIRE BROKER SERVICE (monthly notifications)

EXPLORE PROVIDE

OpenAIRE | PROVIDE

Home Sources Compatibility Content Metrics University Minho

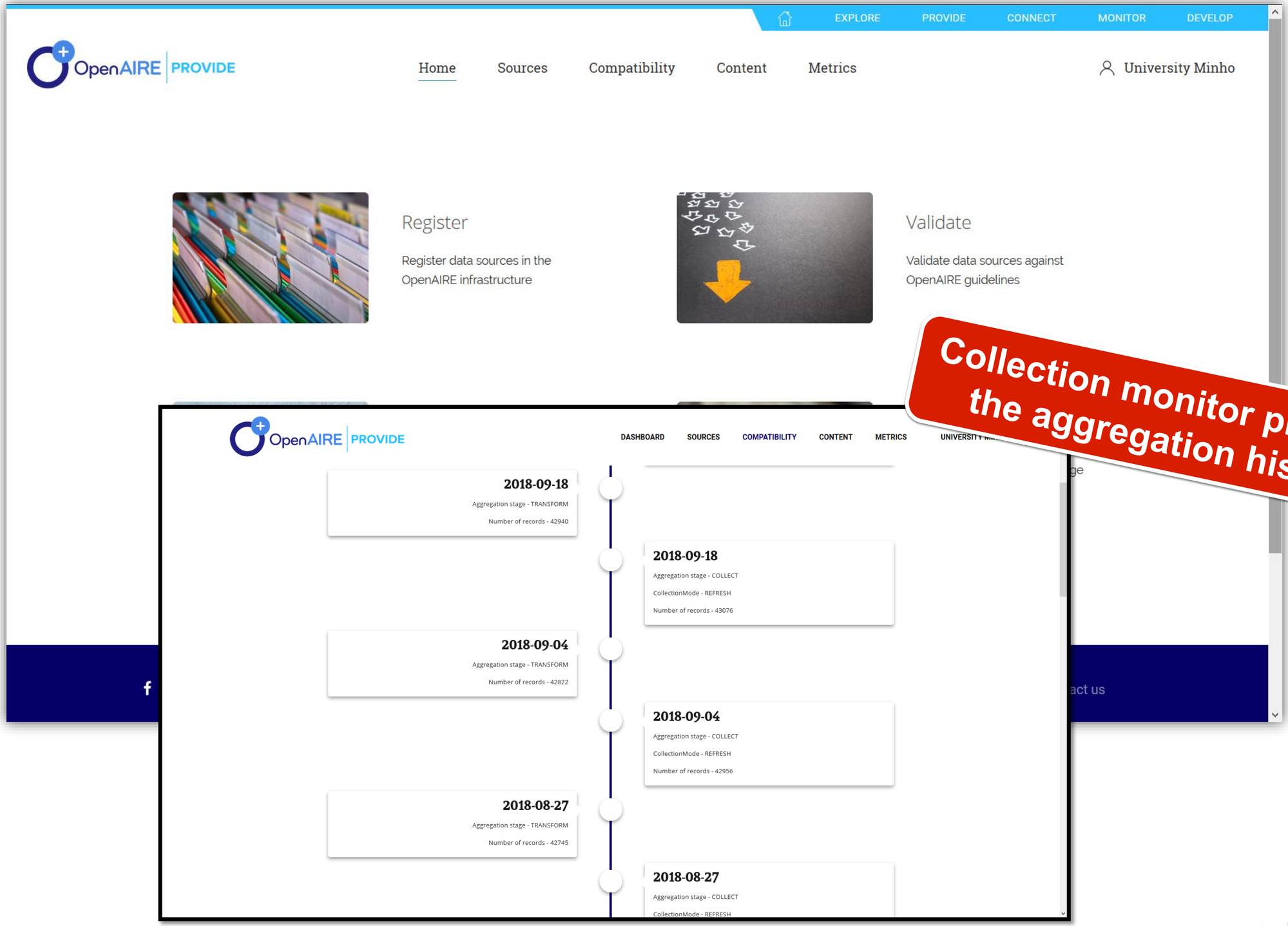
Enrichments for Universidade do Minho: RepositoriUM

MORE

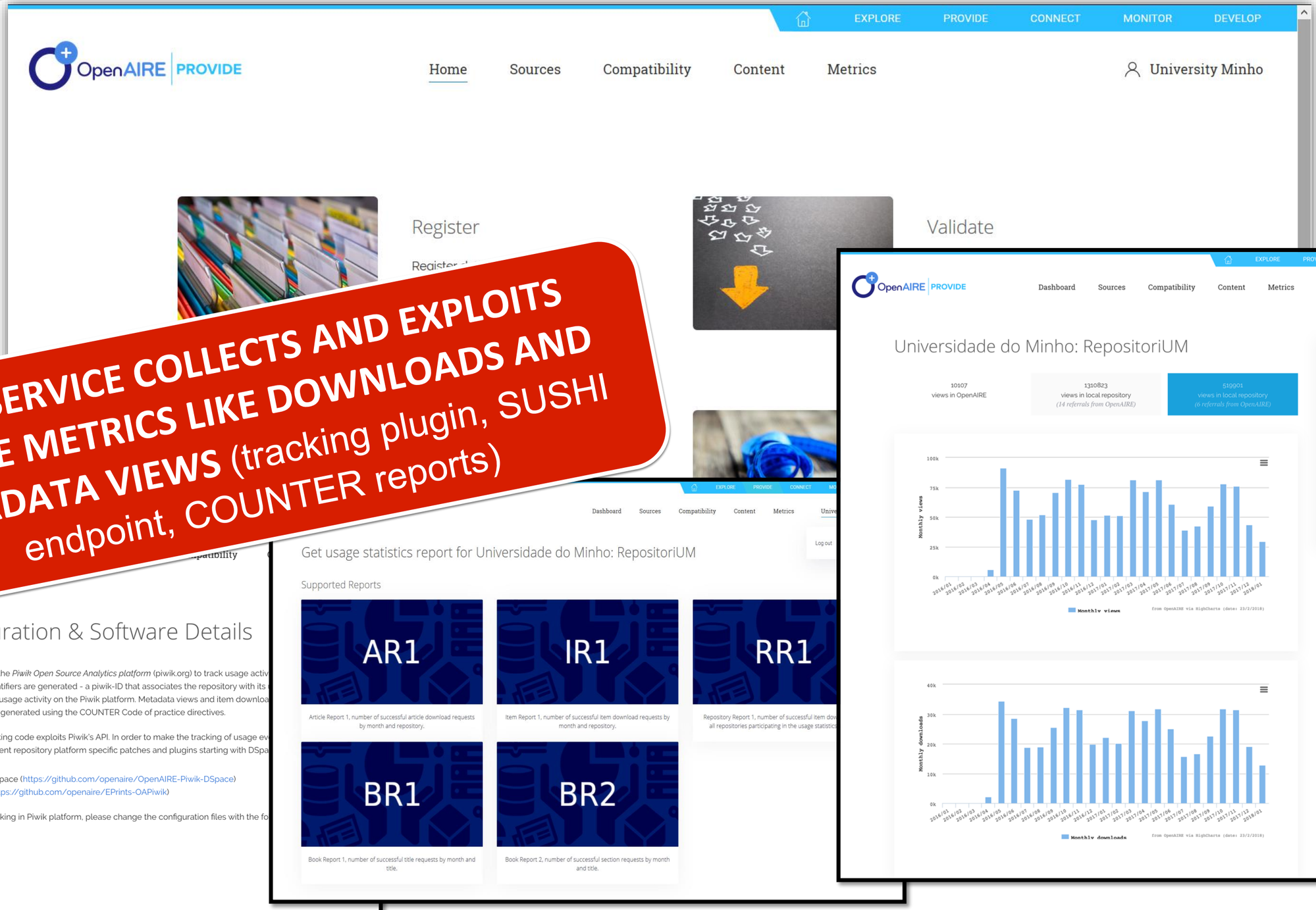
EVENTS THAT MAY ENRICH UNIVERSIDADE DO MINHO: REPOSITORIUM CONTENT	# OF EVENTS
ENRICH/MORE/OPENACCESS_VERSION *OpenAIRE discovered another Open Access version of a publication*	18296
ENRICH/MORE/PID *OpenAIRE discovered another persistent identifier associated to your publications*	5725
ENRICH/MORE/SUBJECT/JEL *OpenAIRE discovered more Journal of Economic Literature (JEL) classification terms that can be associated to your publications*	4151

MISSING

EVENTS THAT MAY ENRICH UNIVERSIDADE DO MINHO: REPOSITORIUM CONTENT	# OF EVENTS
ENRICH/MISSING/PROJECT *OpenAIRE discovered references to research projects that can be associated to your publications*	3422
ENRICH/MISSING/PID	3132
ENRICH/MISSING/SUBJECT/DDC *OpenAIRE discovered Dewey Decimal classification terms (DDC) that can be associated to your publications*	736


EXPLORE
PROVIDE
CONNECT
MONITOR
DEVELOP
OpenAIRE PROVIDE
Home
Sources
Compatibility
Content
Metrics
University Minho
Register
Register data sources in the OpenAIRE infrastructure
Validate
Validate data sources against OpenAIRE guidelines
Collection monitor provides the aggregation history
OpenAIRE PROVIDE
DASHBOARD
SOURCES
COMPATIBILITY
CONTENT
METRICS
2018-09-18
Aggregation stage - TRANSFORM
Number of records - 42940
2018-09-18
Aggregation stage - COLLECT
CollectionMode - REFRESH
Number of records - 43076
2018-09-04
Aggregation stage - TRANSFORM
Number of records - 42822
2018-09-04
Aggregation stage - COLLECT
CollectionMode - REFRESH
Number of records - 42956
2018-08-27
Aggregation stage - TRANSFORM
Number of records - 42745
2018-08-27
Aggregation stage - COLLECT
CollectionMode - REFRESH

THE SERVICE COLLECTS AND EXPLOITS USAGE METRICS LIKE DOWNLOADS AND METADATA VIEWS (tracking plugin, SUSHI endpoint, COUNTER reports)



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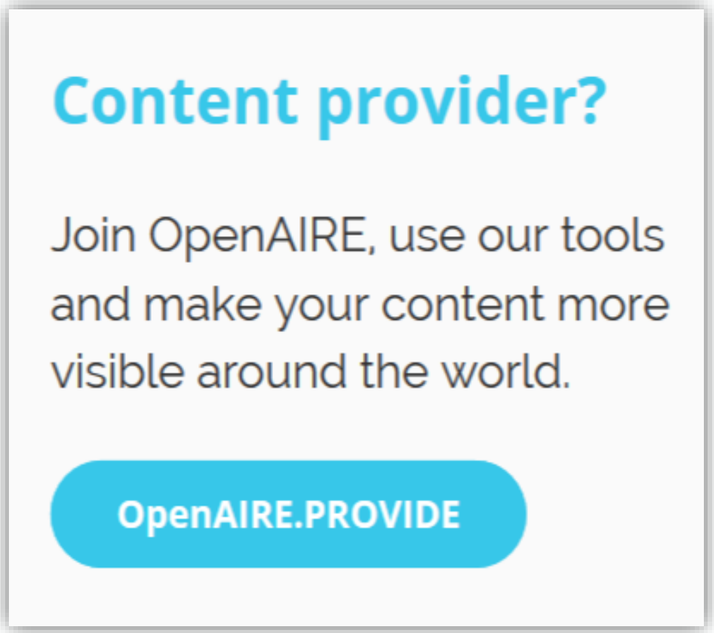


In production since October!

DEMO

OpenAIRE | PROVIDE

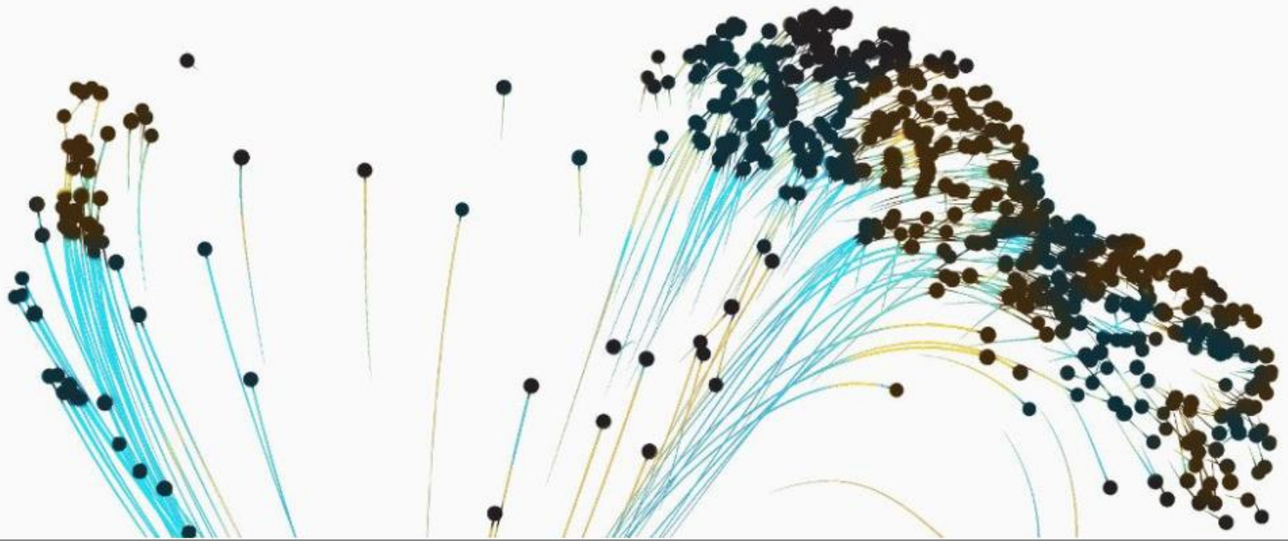
EXPLORE | PROVIDE | CONNECT | MONITOR | DEVELOP

SIGN IN

Content Provider Dashboard

A one-stop-shop for sharing, finding and enriching your content

Start here



provide.openaire.eu

provide.openaire.eu

Content provider?

Join OpenAIRE, use our tools and make your content more visible around the world.

OpenAIRE.PROVIDE

For test drive: repositorium openaire1!

Support materials for Content Providers Dashboard uptake

Support – guides

- Provide - How to validate and register your repository
- Provide - How to enrich research artifacts
- Usage Statistics – How to track the usage activity of your repository
- ScholExplorer - Literature & Data interlinking
- Making your repository Open

Training – webinars

- Make your content count - OpenAIRE Content providers Dashboard: service for repository managers
- OpenAIRE metrics service: usage statistics
- OpenAIRE Guidelines for data providers: new Metadata Application Profile for Literature Repositories

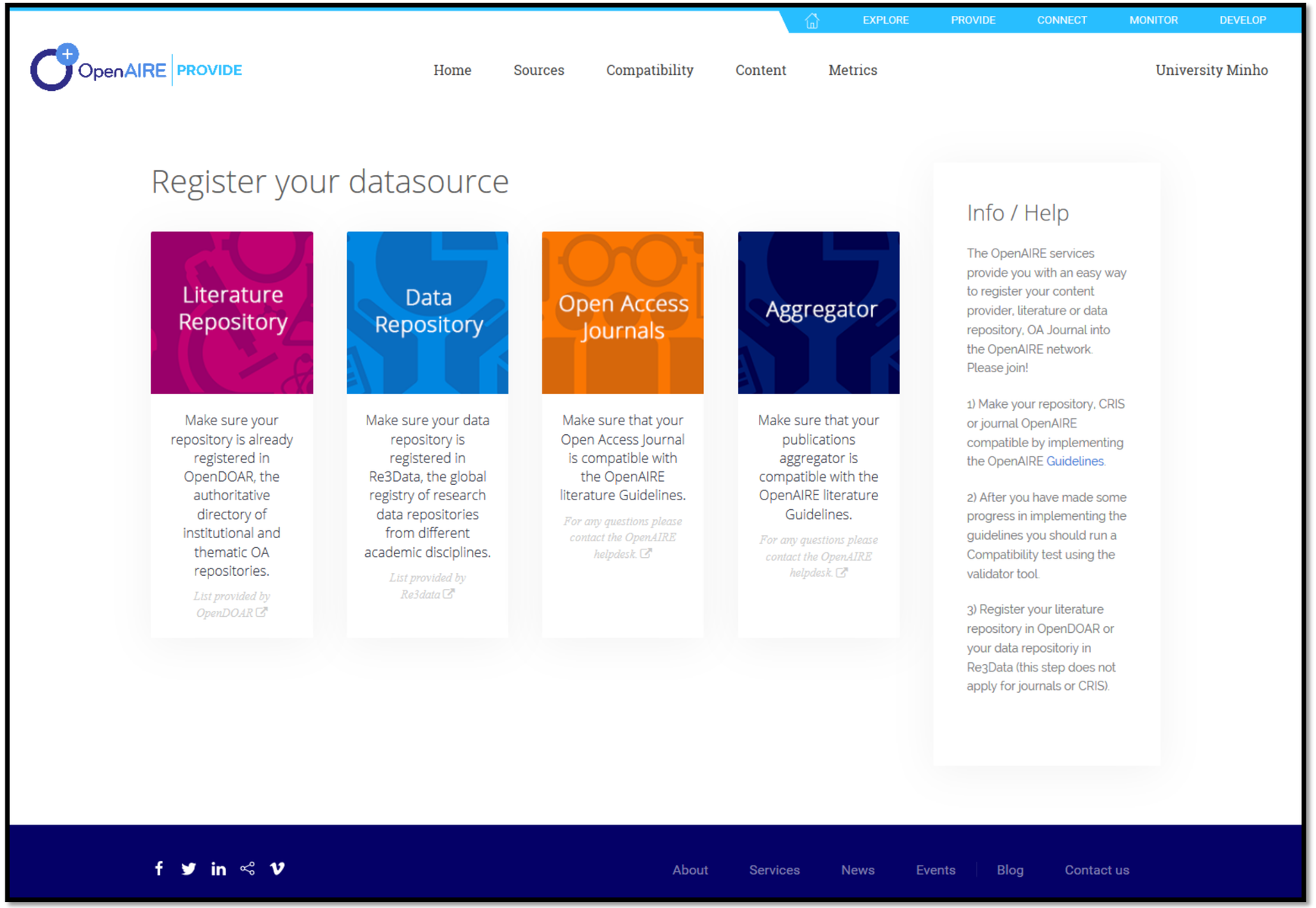
OpenAIRE

European Commission

OpenAIRE Content Provider Dashboard

what comes next

1. SOURCES ☛ Register & Update



STATUS:

READY FOR PRODUCTION

Changes done for the update your data source form.

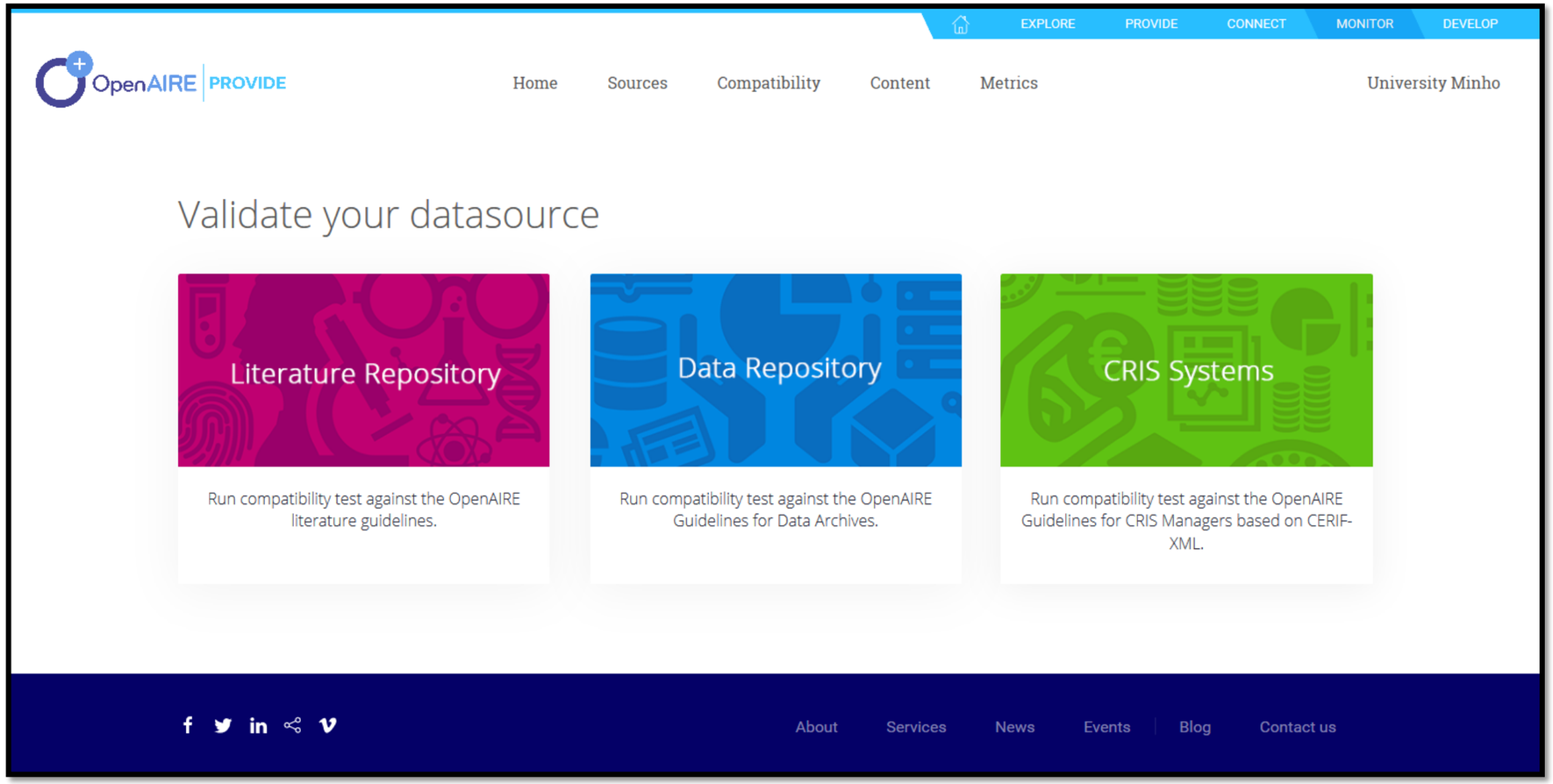
::

V2

CRIS registration (Software/other research outputs datasources)

Update: Multi-user (delegate admin rights)

2. COMPATIBILITY ☛ Validator & validation history



STATUS:

READY FOR PRODUCTION

::

V2

1) Compatibility test for CRIS (Software/other research outputs datasources?)
2) New guidelines versions

2. COMPATIBILITY ☛ Collection monitor

STATUS:

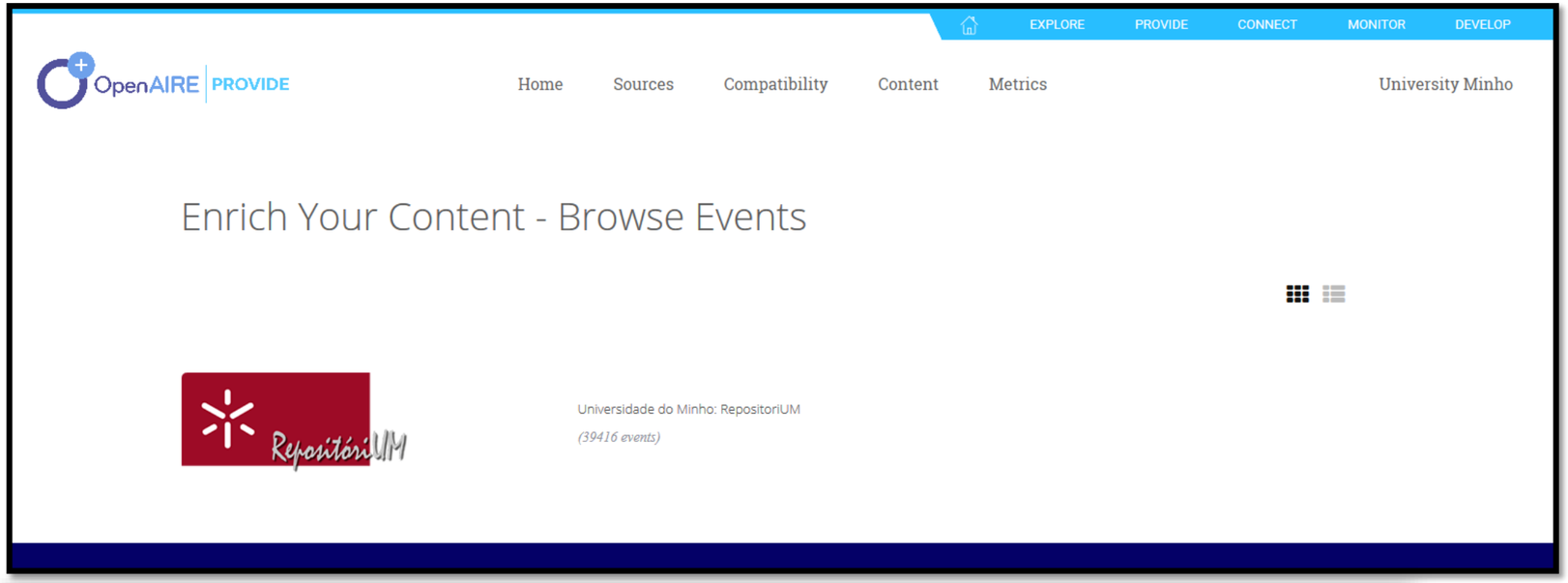
READY FOR PRODUCTION

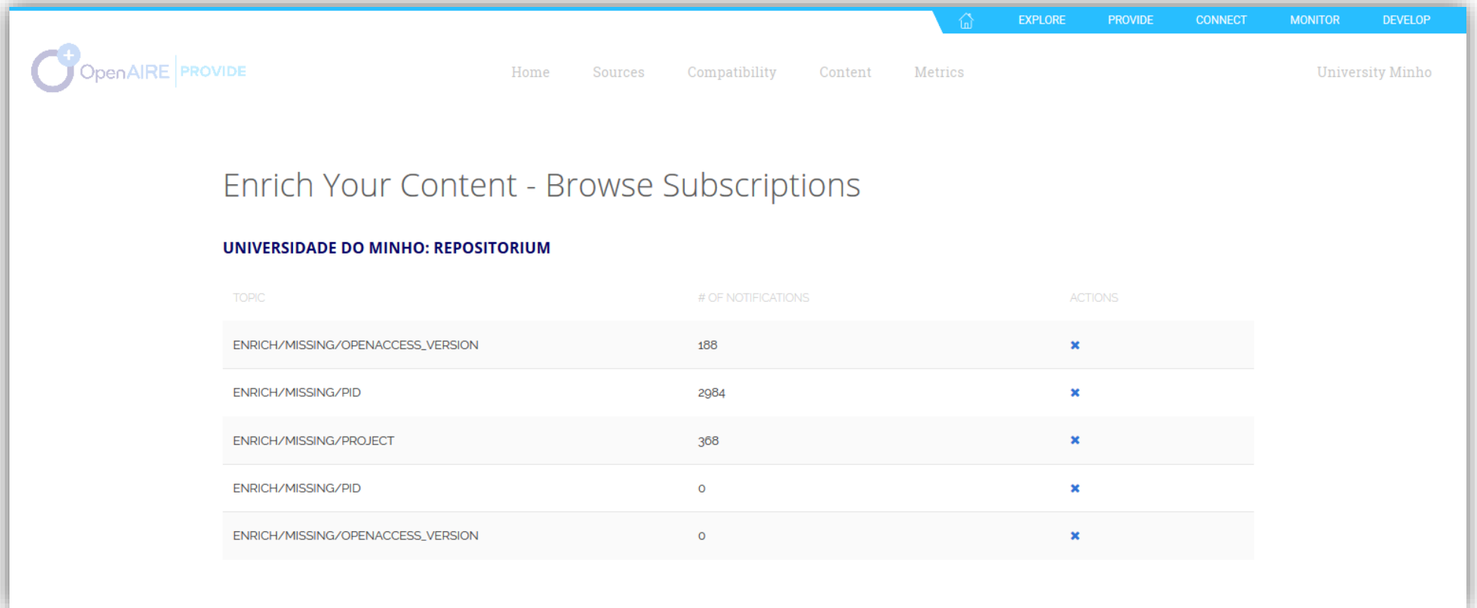
WIP: Improve User Interface (add colours)
Fix issues with date

::

V2
Continuous validation (history)

3. CONTENT ☛ Events & notifications (broker)





STATUS:

READY FOR PRODUCTION

Fix issues identified during the testing phase.

::

V2

Alerts (discarded records and metadata errors)

New enrichments (catch-all broker – datasets & software)

More info in projects links

Additions (V3?)

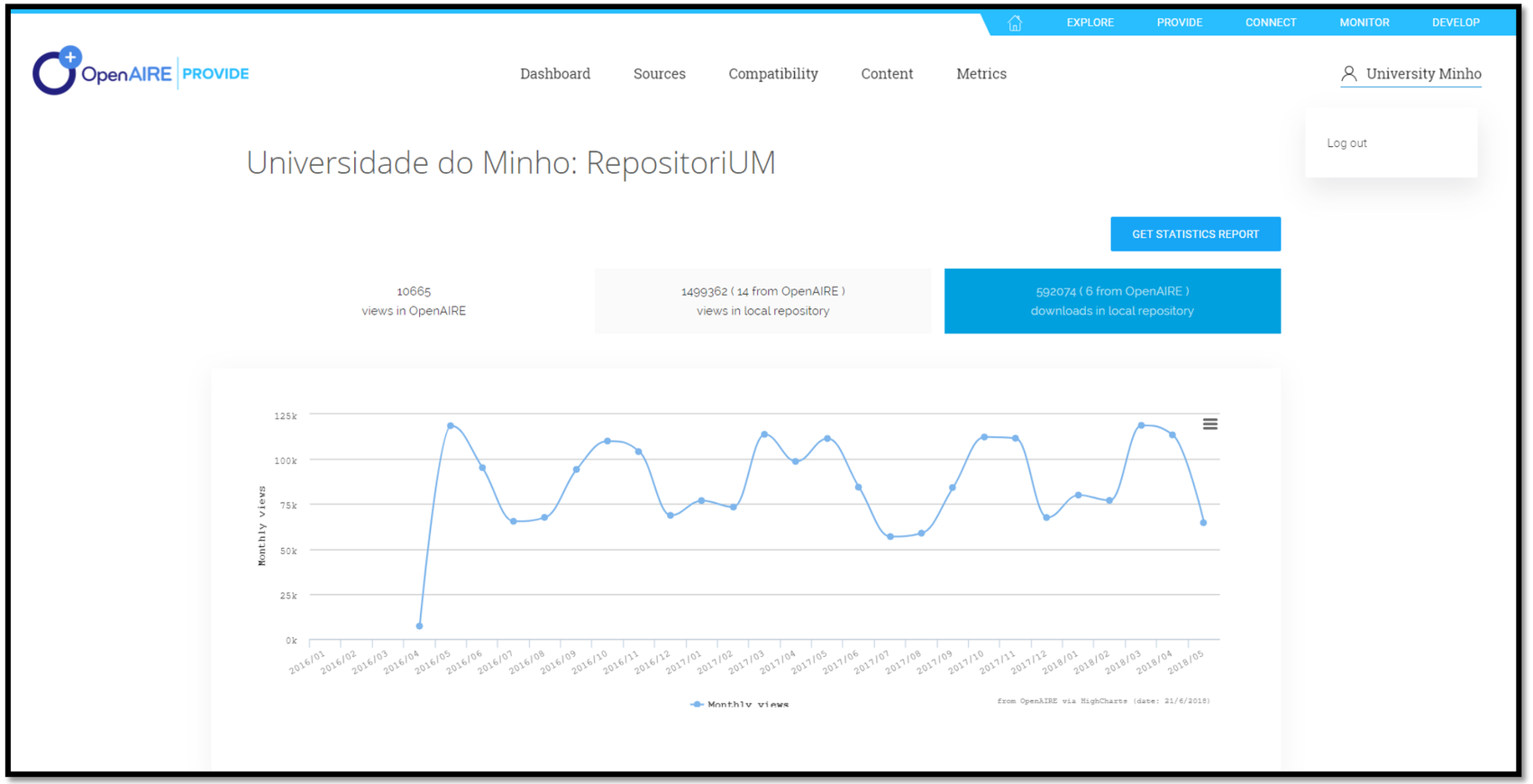
New broker events

- ORCID > Publications/Datsets/software
- Datasets > Projects
- Publications <-> Software
- Publications <-> Datasets

EVENTS THAT MAY ENRICH UNIVERSIDADE DO MINHO: REPOSITORIUM CONTENT	# OF EVENTS
ENRICH/MORE/OPENACCESS_VERSION OpenAIRE discovered another Open Access version of a publication	20029
ENRICH/MORE/PID OpenAIRE discovered another persistent identifier associated to your publications	3288
ENRICH/MORE/SUBJECT/ARXIV OpenAIRE discovered more ARXIV classification terms that can be associated to your publications	1579
ENRICH/MORE/SUBJECT/JEL OpenAIRE discovered more Journal of Economic Literature (JEL) classification terms that can be associated to your publications	1257
ENRICH/MORE/SUBJECT/DDC OpenAIRE discovered more Dewey Decimal classification terms (DDC) that can be associated to your publications	978
ENRICH/MORE/SUBJECT/MESHEUROPMC OpenAIRE discovered more classification terms from the Medical Subject Headings (MeSH) that can be associated to your publications	757
ENRICH/MORE/SUBJECT/ACM OpenAIRE discovered more ACM classification terms that can be associated to your publications	146
Total	**28034**

EVENTS THAT MAY ENRICH UNIVERSIDADE DO MINHO: REPOSITORIUM CONTENT	# OF EVENTS
ENRICH/MISSING/PROJECT OpenAIRE discovered references to research projects that can be associated to your publications	8735
ENRICH/MISSING/OPENACCESS_VERSION OpenAIRE discovered Open Access versions of your publications	1754
ENRICH/MISSING/PID OpenAIRE discovered missing persistent identifiers associated to your publications	726
ENRICH/MISSING/ABSTRACT OpenAIRE discovered missing abstracts among your publications	146
ENRICH/MISSING/SUBJECT/MESHEUROPMC OpenAIRE discovered classification terms from the Medical Subject Headings (MeSH) that can be associated to your publications	87
ENRICH/MISSING/SUBJECT/JEL OpenAIRE discovered Journal of Economic Literature (JEL) classification terms that can be associated to your publications	44
ENRICH/MISSING/SUBJECT/DDC OpenAIRE discovered Dewey Decimal classification terms (DDC) that can be associated to your publications	23
ENRICH/MISSING/SUBJECT/ACM OpenAIRE discovered ACM classification terms that can be associated to your publications	16
ENRICH/MISSING/SUBJECT/ARXIV OpenAIRE discovered ARXIV classification terms that can be associated to your publications	14
Total	**11545**

4. METRICS ☛ Usage events ☛ Views & downloads



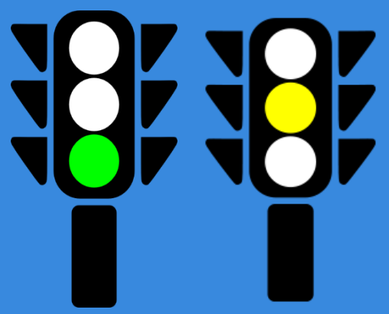
STATUS:

WIP

Improve documentation (guidance), explanations on COUNTER usage statistics reports…
Be more explicit about the potential users (dspace, eprints repos)

::

V2
More software platforms



Support & Training materials

Support materials for Content Providers

Guides

- Making your repository Open
- Literature & Data interlinking
- How to validate and register your repository
- How to enrich research artifacts
- How to track the usage activity of your repository

Webinars

- Provide Dashboard

Planned support materials & training activities

Support materials

- Guide about the new CAP
- Guides per type of guidelines
- Fact sheet for repository managers (update)
- Fact sheets per type of guidelines
- FAQs related with the new guidelines

Training activities

- Webinar for NOADs on the new guidelines
- Online meetings with platforms developers

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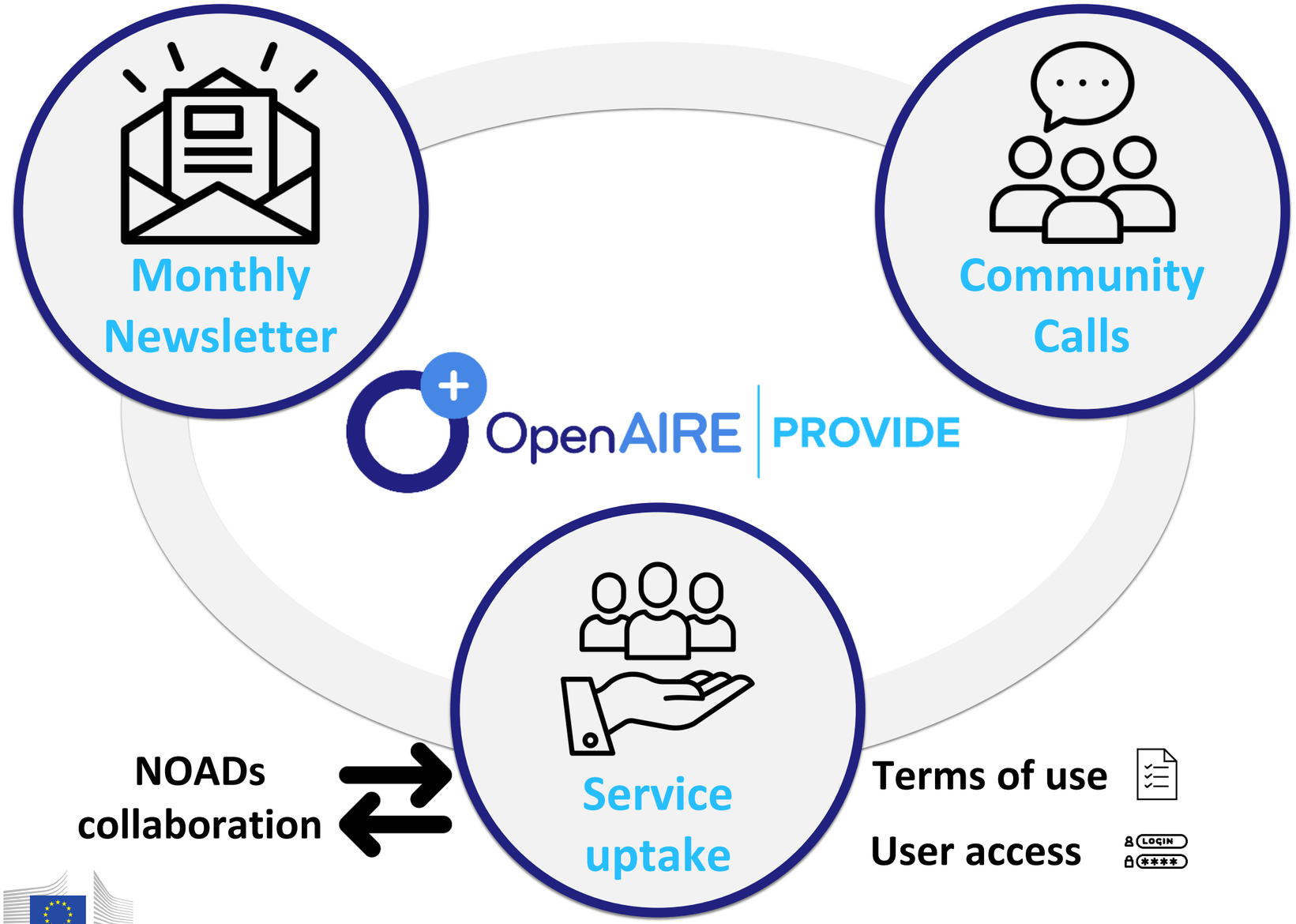
Support & Dissemination campaign



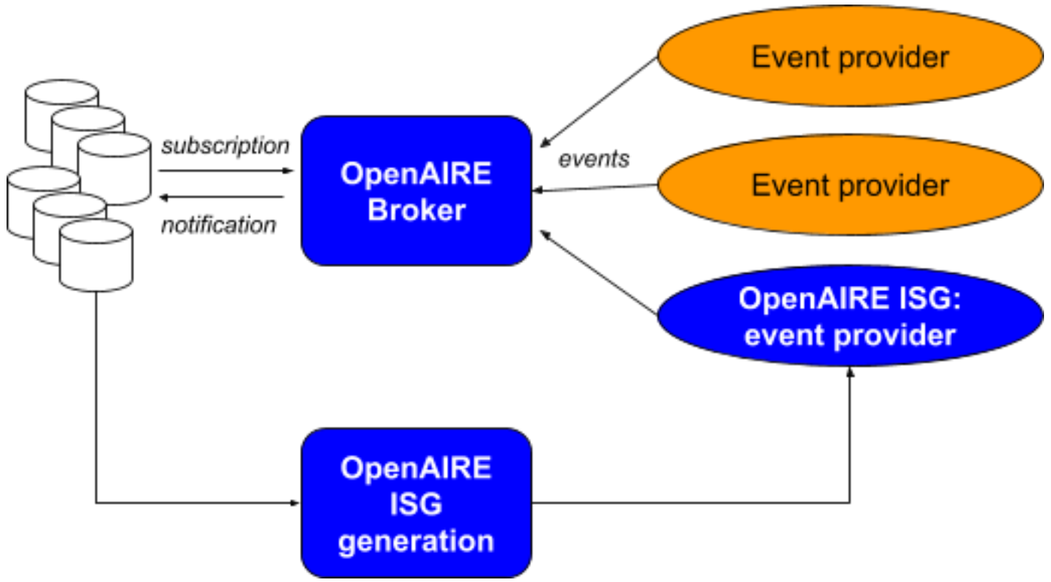
OpenAIRE USER FEEDBACK FORM:

https://forms.gle/uQZQ8954q47az7Vn8

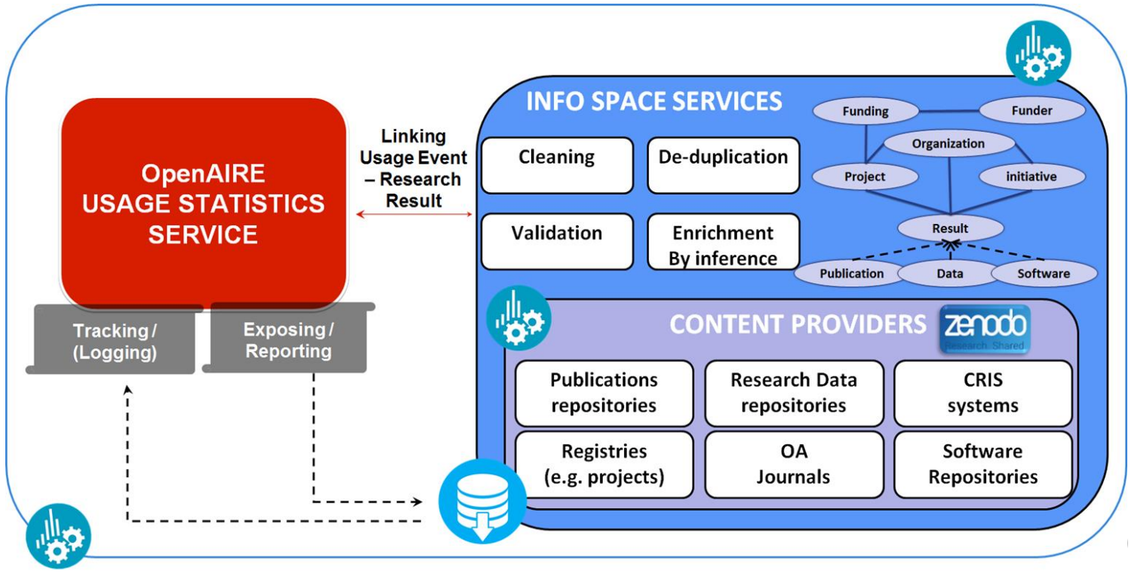
WHAT COMES NEXT

PROVIDE

- Broker service
  - Extend approach to other providers
  - Extend to other subscriptions
  - Interoperate with other brokers (e.g. Jisc)
  - Integrate with repositories (Zenodo)



- Usage statistics service
  - Bring it to production
  - Broaden adoption (e.g. repo platforms)



Aggregator and Broker as-a-service

- National aggregator as-a-service
  - Spain, Argentina, Turkey, Poland
  - In the queue: Canada, Poland, Ireland
- Broker as-a-service
  - La Referencia (South America), Italy
- Models
  - OpenAIRE as-a-service
  - Stand-alone installation

Thank you!

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