

# A user journey in

### OpenAIRE services

through the lens of repository managers

Pedro Príncipe, University of Minho, André Vieira, University of Minho,
Alessia Bardi, CNR-ISTI, Jochen Schirrwagen, Bielefeld University, Dimitris Pierrakos, ATHEN









### **AGENDA**

- 13:30 Welcome and introduction, Pedro Príncipe
- 13:40 OpenAIRE catch-all Broker Service for literature and data repositories
- 13:55 Dashboard for Content Providers: Open Science as-a-Service for repositories
- 14:10 Dashboard demo and test drive (breakout groups)
- 15:00-15:30 Coffee break
- 15:30 OpenAIRE usage statistics service overview of the service
- 15:50 Service demo base on real case
- 16:10 Collection workflows
- 16:30 How to join OpenAIRE usage statistics, Tracking usage events
- 16:45 Discussion
- 17:00 Closing







### Workshops Topics – 2nd part

- 1) OpenAIRE catch-all Broker Service for literature and data repositories
- 2) Dashboard for Content Providers: Open Science as-a-Service for repositories
- >>> 14:10 Dashboard demo and test drive (breakout groups)
- 3) OpenAIRE usage statistics service overview of the service
- 4) Service demo base on real case & Collection workflows
- 5) How to join OpenAIRE usage statistics, Tracking usage events
- >>> Discussion







### SLIDES HERE:

bit.ly/openaire or2019





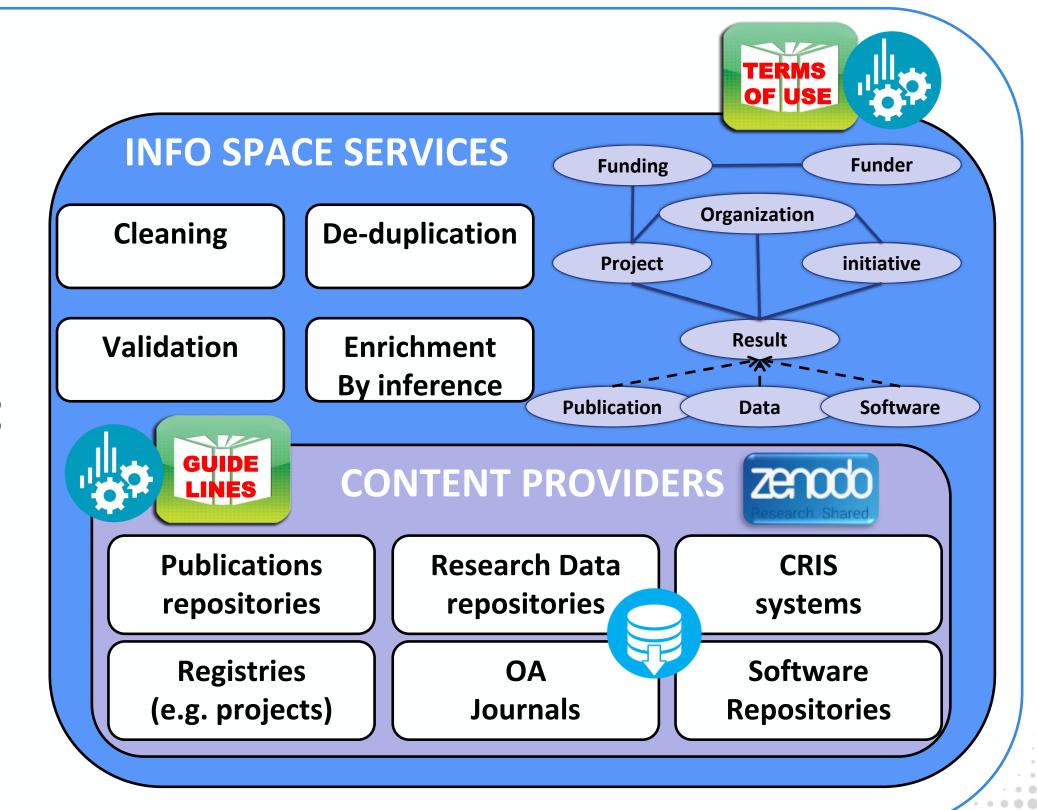


### OpenAIRE's e-infrastructure Commons – BROKER CONCEPT

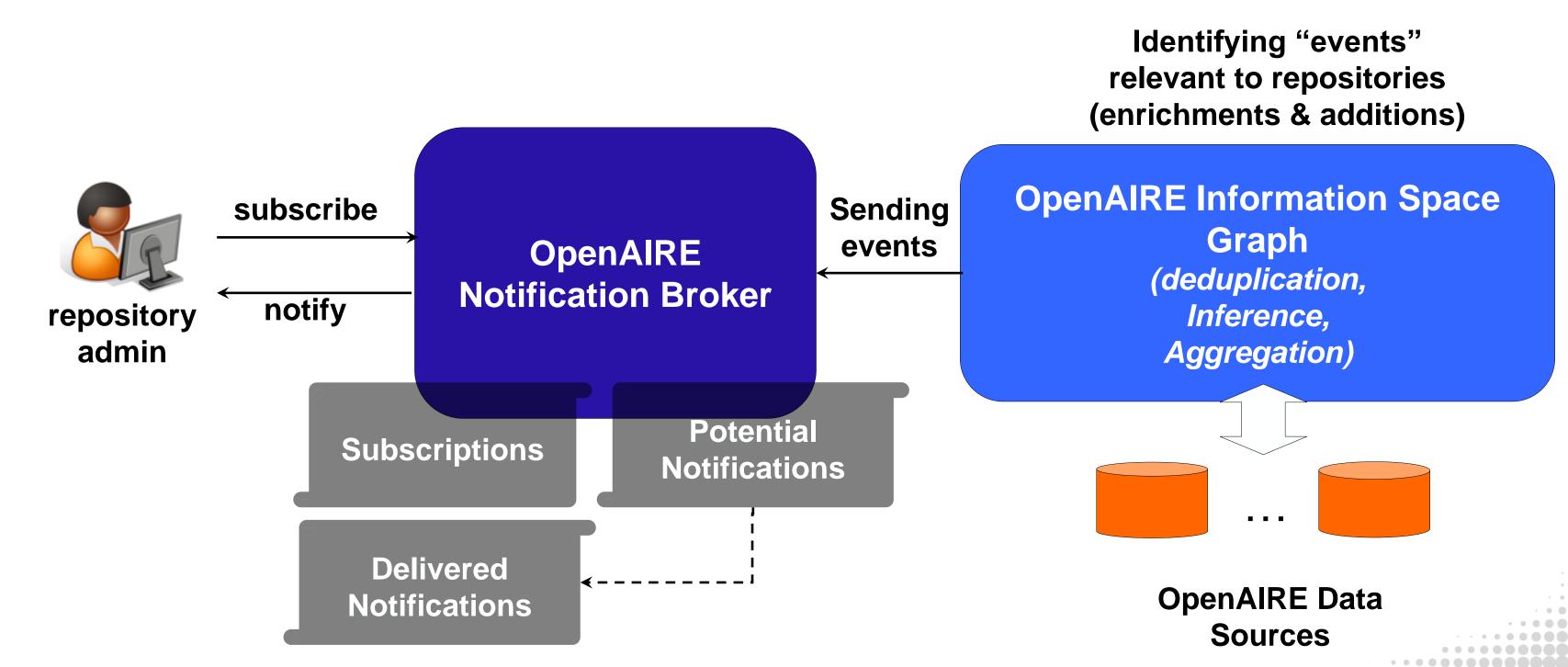
Repositories in OpenAIRE may be interested to acquire metadata information about publications that are

### "potentially of interest to them"

i.e. be part of their collection: add new records, enrich the records with extra metadata information.



### OpenAIRE Broker sketch



**Event (potential notification)**:

Message

Topic

**TargetRepository** 

Trust

### Enrichments events from the broker service

- ✓ ENRICH/MISSING/PROJECT OpenAIRE discovered references to research projects that can be associated to your publications
- ✓ ENRICH/MISSING/OPENACCESS\_VERSION OpenAIRE discovered Open Access versions of your publications
- ✓ ENRICH/MISSING/PID OpenAIRE discovered missing persistent identifiers associated to your publications
- ✓ ENRICH/MISSING/ABSTRACT OpenAIRE discovered missing abstracts among your publications
- ✓ ENRICH/MISSING/DATE OpenAIRE discovered missing date values to your publications
- ✓ ENRICH/MISSING/SUBJECT/MESHEUROPMC OpenAIRE discovered classification terms from the Medical Subject Headings that can be associated to your publications
- ✓ ENRICH/MISSING/SUBJECT/JEL OpenAIRE discovered Journal of Economic Literature (JEL) classification terms that can be associated to your publications
- ✓ ENRICH/MISSING/SUBJECT/DDC OpenAIRE discovered Dewey Decimal classification terms (DDC) that can be associated to your publications
- ✓ ENRICH/MISSING/SUBJECT/ACM OpenAIRE discovered ACM classification terms that can be associated to your publications
- ENRICH/MISSING/SUBJECT/ARXIV OpenAIRE discovered ARXIV classification terms that can be associated to your publications OpenAIRE

### **Enrichments:**

MORE metadata

or

MISSING metadata







E

CONNECT

8623

MONITOR

University Minho



Home Sources Compatibility Content Metrics

#### Enrichments for Universidade do Minho: RepositoriUM

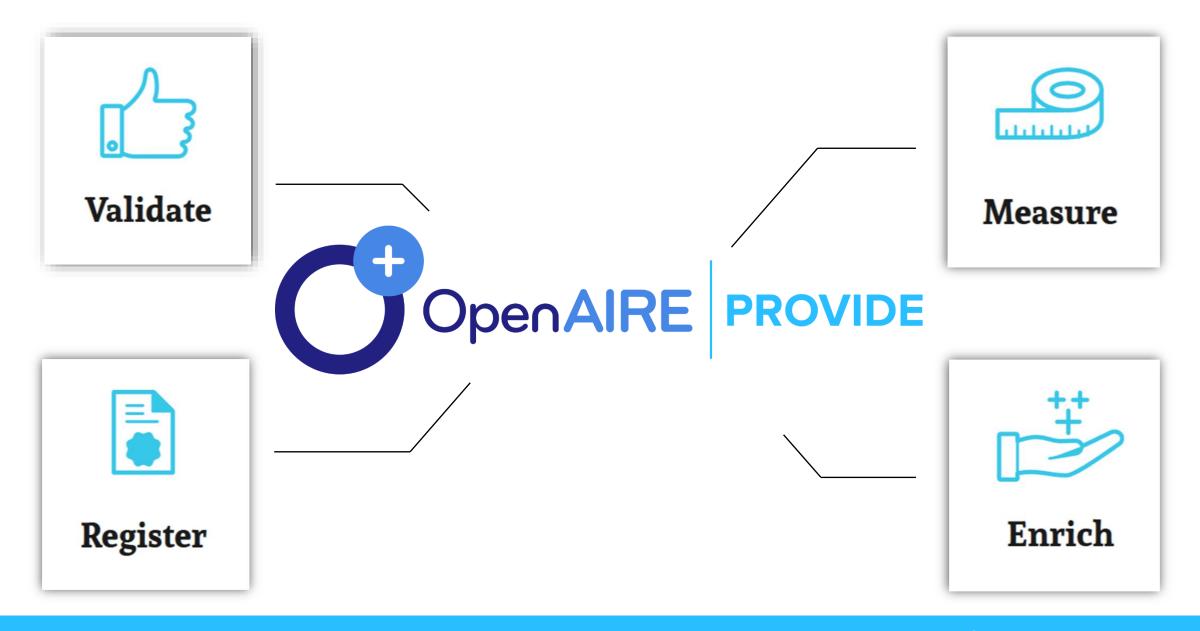
MORE		MISSING	
EVENTS THAT MAY ENRICH UNIVERSIDADE DO MINHO: REPOSITORIUM CONTENT	# OF EVENTS	EVENTS THAT MAY ENRICH UNIVERSIDADE DO MINHO: REPOSITORIUM CONTENT	# OF EVENTS
ENRICH/MORE/OPENACCESS_VERSION  OpenAIRE discovered another Open Access version of a publication	18296	ENRICH/MISSING/PROJECT  OpenAIRE discovered references to research projects that can be associated to your publications	3422
ENRICH/MORE/PID  OpenAIRE discovered another persistent identifier associated to your publications	5725	ENRICH/MISSING/PID	3132
ENRICH/MORE/SUBJECT/JEL  OpenAIRE discovered more Journal of Economic Literature (JEL)  classification terms that can be associated to your publications	4151	ENRICH/MISSING/SUBJECT/DDC  OpenAIRE discovered Dewey Decimal classification terms (DDC) that can be associated to your publications	736
ENRICH/MORE/SUBJECT/DDC  OpenAIRE discovered more Dewey Decimal classification terms (DDC) that can be associated to your publications	1028	ENRICH/MISSING/SUBJECT/ARXIV  OpenAIRE discovered ARXIV classification terms that can be associated to your publications	364
ENRICH/MORE/SUBJECT/MESHEUROPMC  OpenAIRE discovered more classification terms from the Medical Subject	799	ENRICH/MISSING/ABSTRACT  OpenAIRE discovered missing abstracts among your publications	293
Headings (MeSH) that can be associated to your publications  ENRICH/MORE/SUBJECT/ARXIV  OpenAIRE discovered more ARXIV classification terms that can be associated	636 158 30793	ENRICH/MISSING/SUBJECT/MESHEUROPMC  OpenAIRE discovered classification terms from the Medical Subject Headings (MeSH) that can be associated to your publications	289
to your publications		ENRICH/MISSING/OPENACCESS_VERSION  OpenAIRE discovered Open Access versions of your publications	193
ENRICH/MORE/SUBJECT/ACM  OpenAIRE discovered more ACM classification terms that can be associated to your publications		ENRICH/MISSING/SUBJECT/JEL  OpenAIRE discovered Journal of Economic Literature (JEL) classification	162
Total		ENRICH/MISSING/SUBJECT/ACM  OpenAIRE discovered ACM classification terms that can be associated to your publications	32

Total

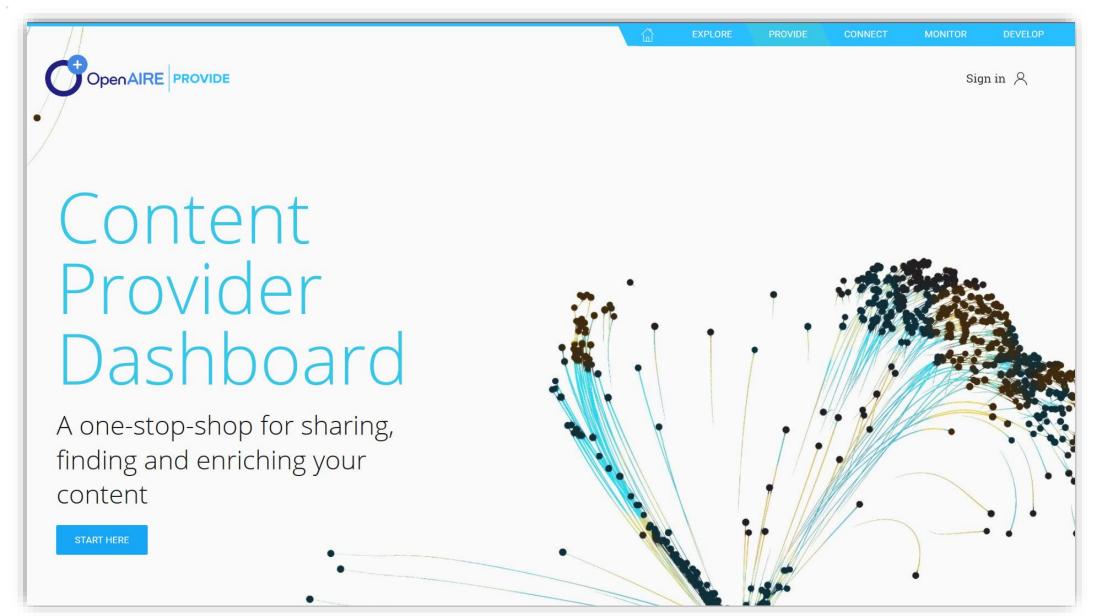


content enrichment events.

### 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.



### provide.openaire.eu



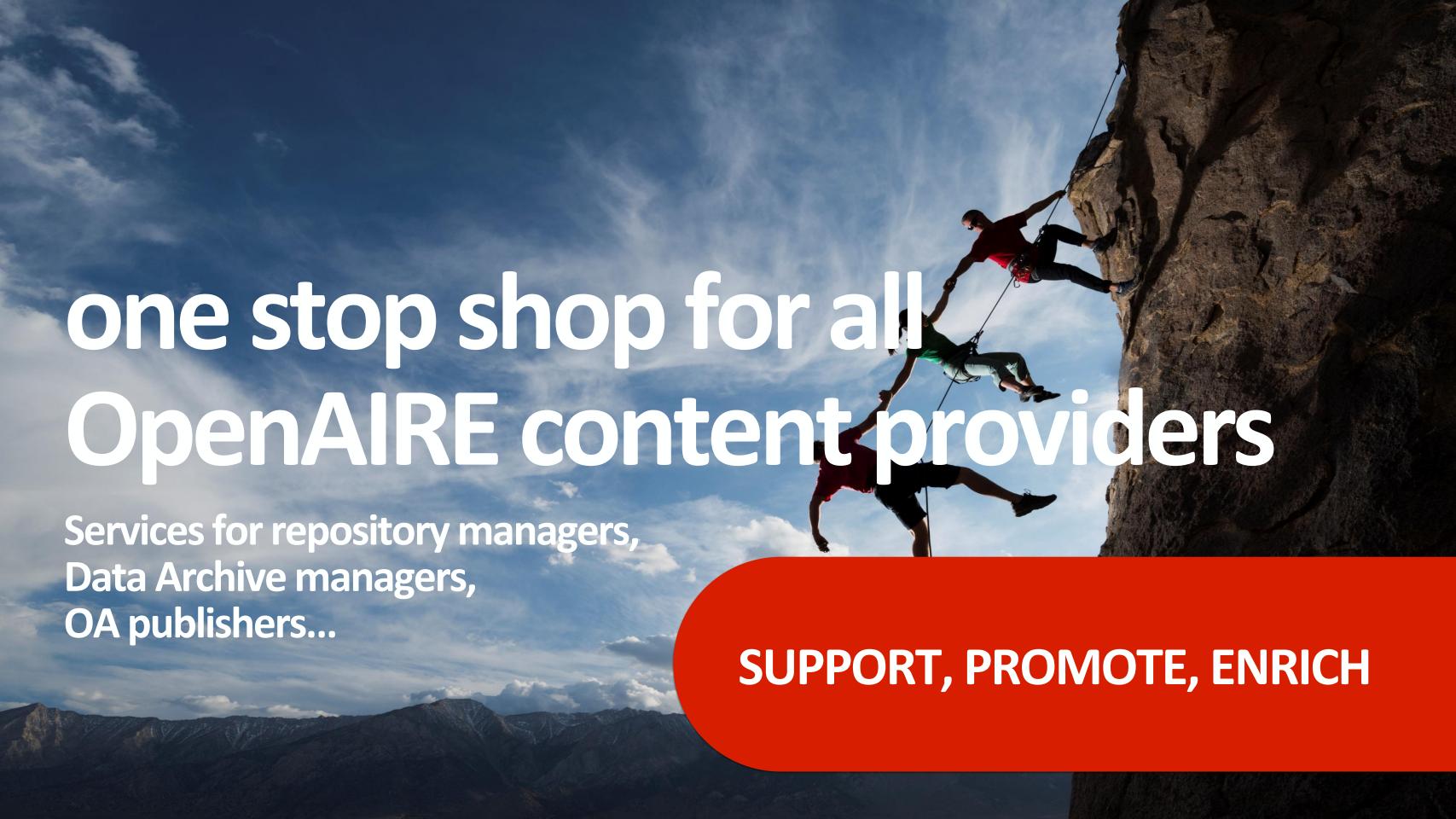












### Dashboard usage

### **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**



DASHBOARD

SOURCES

COMPATIBILITY

CONTENT

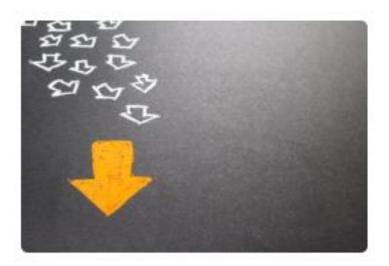
METRICS





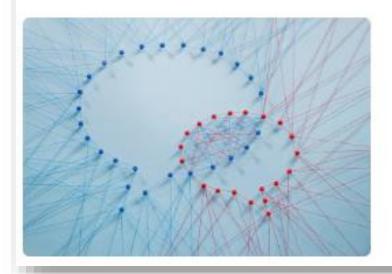
#### Register

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

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







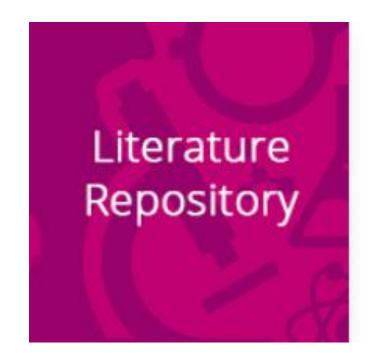




### Reach a wider audience around the world

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

### REGISTER

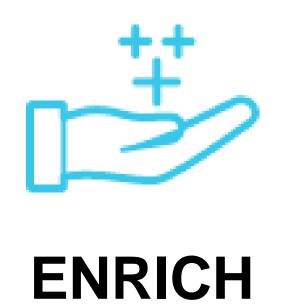












### Improve your metadata. Get more connections

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

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

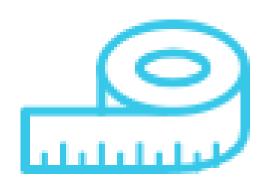
More & Missing events that may enrich your Repository:

- Persistent identifiers
- Open Access Versions
- Projects

- Subjects
- Abstracts

... datasets, software





### **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



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.



### Novelties



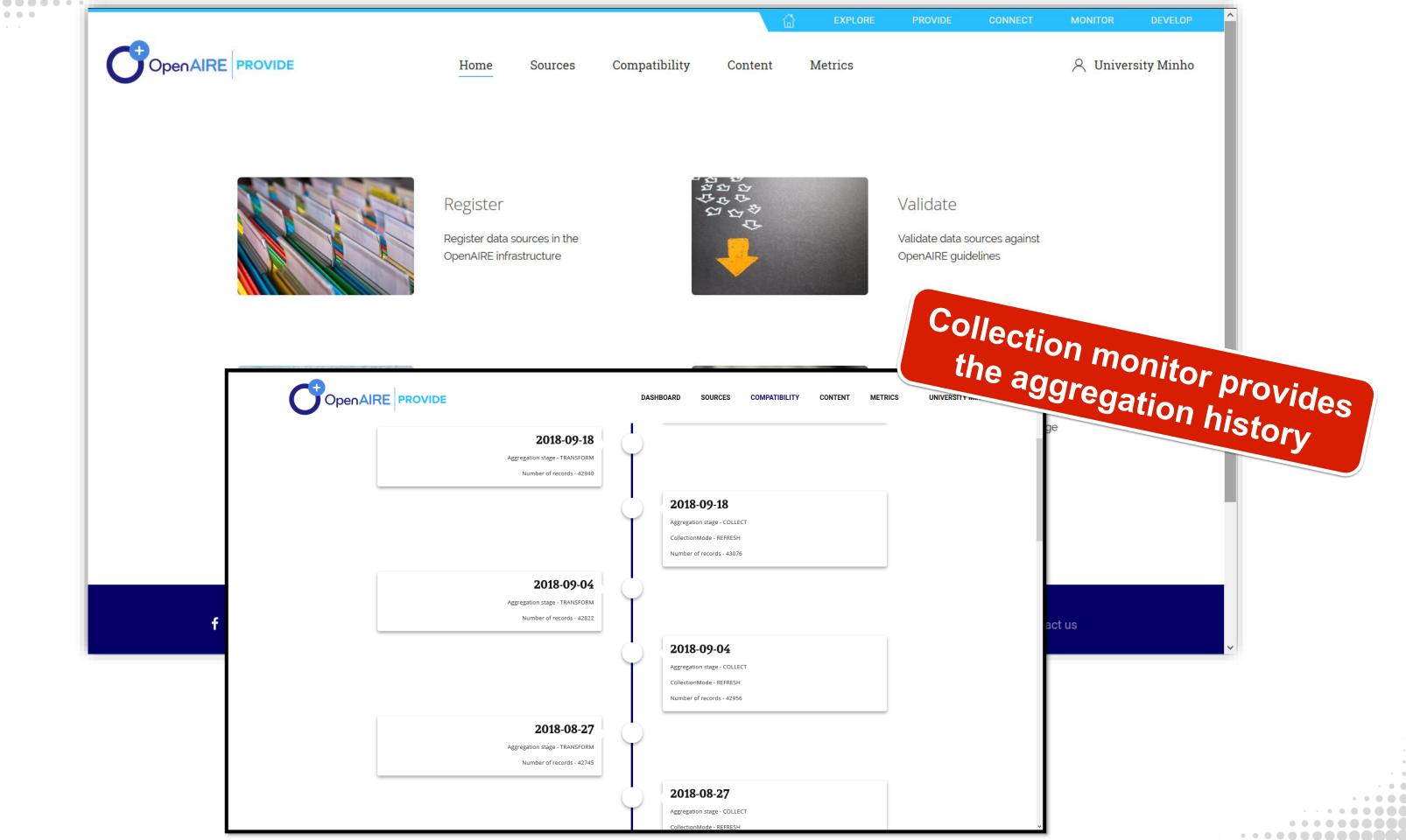


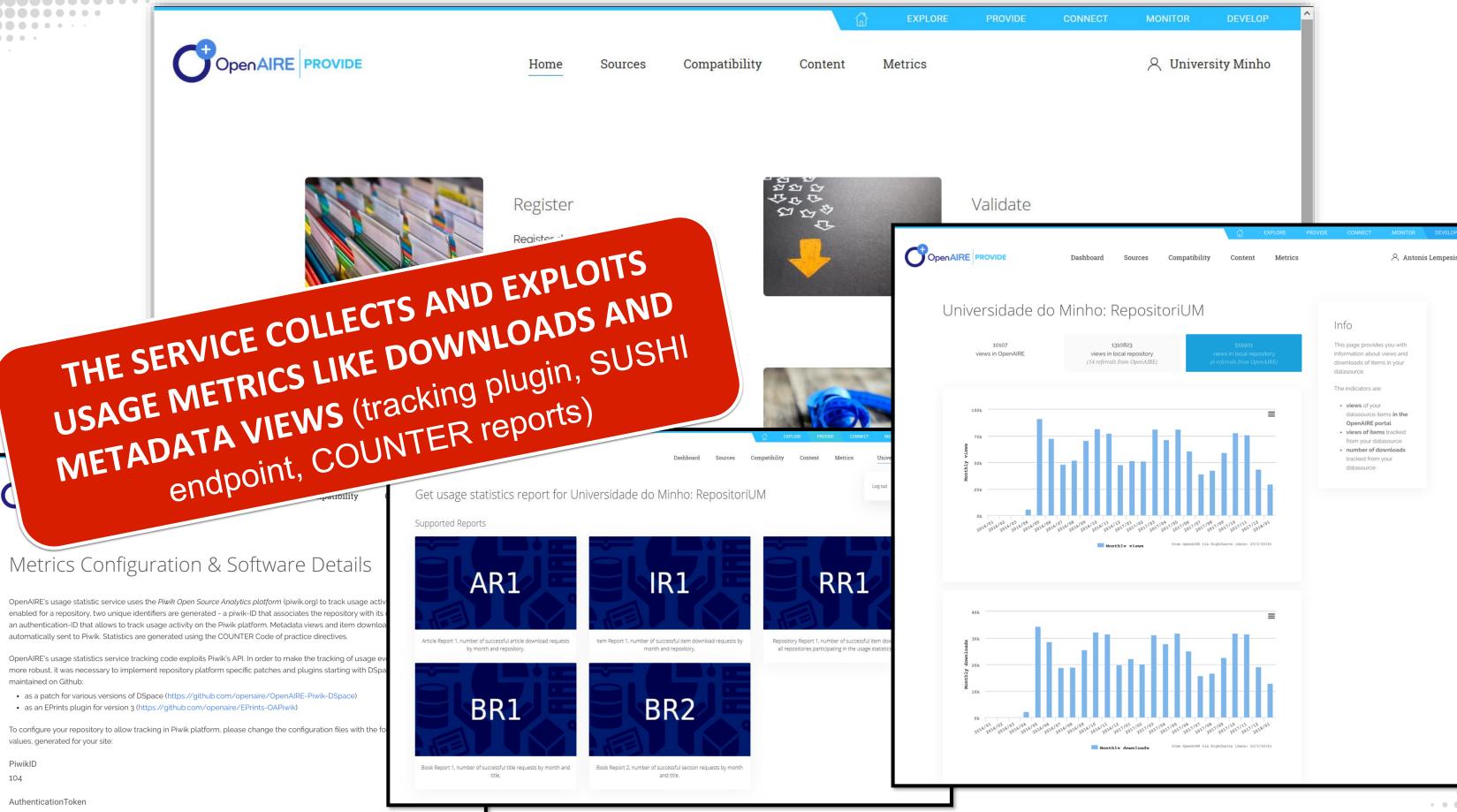


### SERVICE (monthly notifications) Enrichments for Universidade do Minho: Reposition

MORE MISSING ENRICH/MORE/OPENACCESS\_VERSION ENRICH/MISSING/PROJECT 18296 OpenAIRE discovered another Open Access version of a publication OpenAIRE discovered references to research projects that can be associated 3422 to your publications ENRICH/MORE/PID ENRICH/MISSING/PID OpenAIRE discovered another persistent identifier associated to your 5725 3132 publications ENRICH/MISSING/SUBJECT/DDC ENRICH/MORE/SUBJECT/JEL OpenAIRE discovered Dewey Decimal classification terms (DDC) that can be OpenAIRE discovered more Journal of Economic Literature (JEL) 4151 associated to your publications classification terms that can be associated to your publications

. . . . . . . . . . . . . . .







### **Content provider?**

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

OpenAIRE.PROVIDE

In production since October!

### **Content Provider Dashboard: testing phase**

### **Portugal**

1 Webinar, 59 Attendees

21 Repositories represented

### Spain

1 Webinar, 49 Attendees

28 Repositories represented

#### Real users of the **Dashboard**

 Repository Managers from Portugal & Spain

#### 2 Webinars (Demo)

• Main OpenAIRE services for content providers (Dashboard and Broker), RCAAP and RECOLECTA.

#### **Test drive**

• Grant the access to the Dashboard

Guidance on the

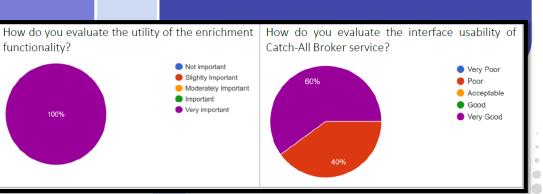
#### **Collect feedback**

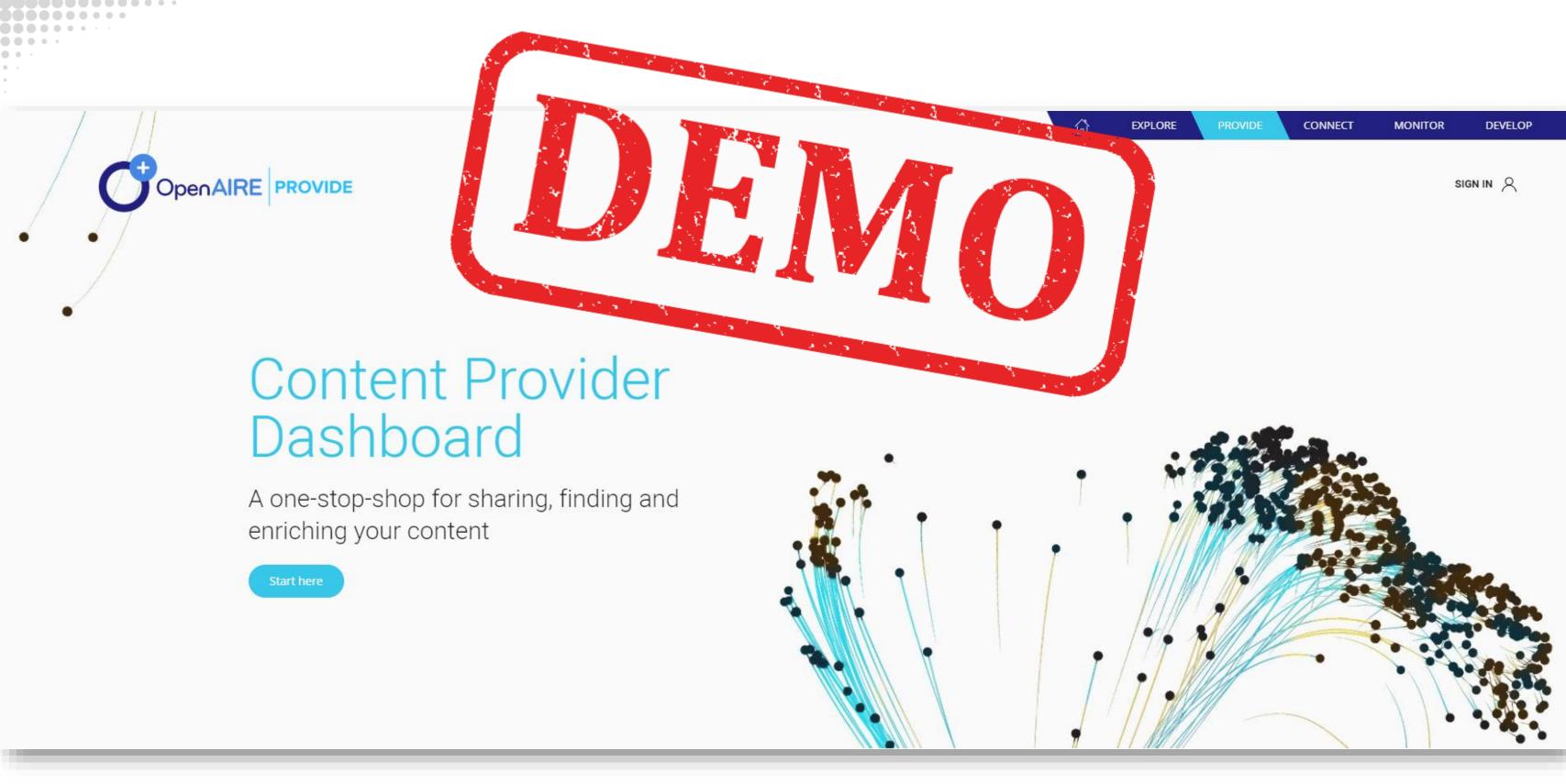
• Questionnaire & Helpdesk





functionalities usage





### Breakout groups – demo





### Login: repositorium

4

Pass: openaire1!

### Login: comum

Pass: Rcaapsdum2008





### **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 Content Provider Dashboard what comes next





### New broker events

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

EVENTS THAT MAY ENRICH UNIVERSIDADE DO MINHO: REPOSITORIUM CONTENT	# OF EVENTS	EVENTS THAT MAY ENRICH UNIVERSIDADE DO MINHO: REPOSITORIUM CONTENT	# OF EVENT
ENRICH/MORE/OPENACCESS_VERSION OpenAIRE discovered another Open Access version of a publication	20029	ENRICH/MISSING/PROJECT  OpenAIRE discovered references to research projects that can be associated to your publications	8735
ENRICH/MORE/PID  OpenAIRE discovered another persistent identifier associated to your publications	3288	ENRICH/MISSING/OPENACCESS_VERSION OpenAIRE discovered Open Access versions of your publications	1754
ENRICH/MORE/SUBJECT/ARXIV  OpenAIRE discovered more ARXIV classification terms that can be associated to your publications	1579	ENRICH/MISSING/PID  OpenAIRE discovered missing persistent identifiers associated to your publications	726
ENRICH/MORE/SUBJECT/JEL  OpenAIRE discovered more Journal of Economic Literature (JEL) classification terms that can be associated to your publications	1257	ENRICH/MISSING/ABSTRACT  OpenAIRE discovered missing abstracts among your publications	146
ENRICH/MORE/SUBJECT/DDC  OpenAIRE discovered more Dewey Decimal classification terms (DDC) that can be associated to your publications	978	ENRICH/MISSING/SUBJECT/MESHEUROPMC  OpenAIRE discovered classification terms from the Medical Subject Headings (MeSH) that can be associated to your publications	87
ENRICH/MORE/SUBJECT/MESHEUROPMC  OpenAIRE discovered more classification terms from the Medical Subject Headings (MeSH) that can be associated to your publications	757	ENRICH/MISSING/SUBJECT/JEL  OpenAIRE discovered Journal of Economic Literature (JEL) classification terms that can be associated to your publications	44
ENRICH/MORE/SUBJECT/ACM  OpenAIRE discovered more ACM classification terms that can be associated to your publications	146	ENRICH/MISSING/SUBJECT/DDC  OpenAIRE discovered Dewey Decimal classification terms (DDC) that can be associated to your publications	23
Total	28034	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







# OpenAIRE USER FEEDBACK FORM: bit.ly/brokerevaluation

https://forms.gle/uQZQ8954q47az7Vn8









OpenAIRE usage statistics service

Overview, demo and collection workflows

# OpenAIRE Usage Statistics Service



Jochen Schirrwagen Dimitris Pierrakos Andreas Czerniak

## Why Usage Statistics

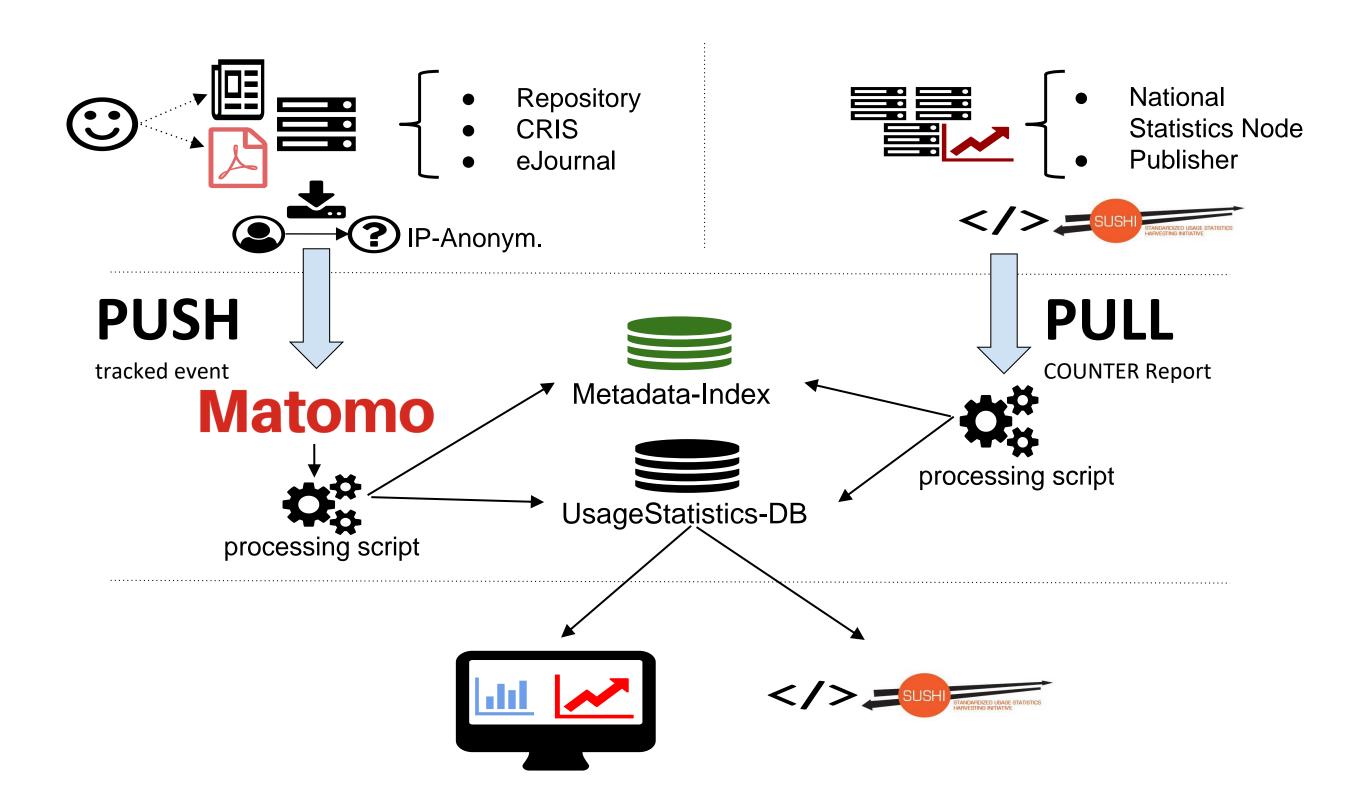
- Authors / readers: to assess impact and to compare with scholarly works of peers
- Repository managers: how often / how well is the *repository* service used
- Research funders / administrators: usage metrics as part of a variety of metrics to assess impact of *research* funded or supported

Open research impact empowers Open Science

#### How it works

- (1) Tracking of usage events or (2) retrieving COUNTER reports on scholarly work items in repositories
- Applying rules based on COUNTER CoP
- Aggregating metrics on usage for scholarly works
- Repository plugins to track usage events

#### **TIERS** Collection Workflows for Usage Statistics



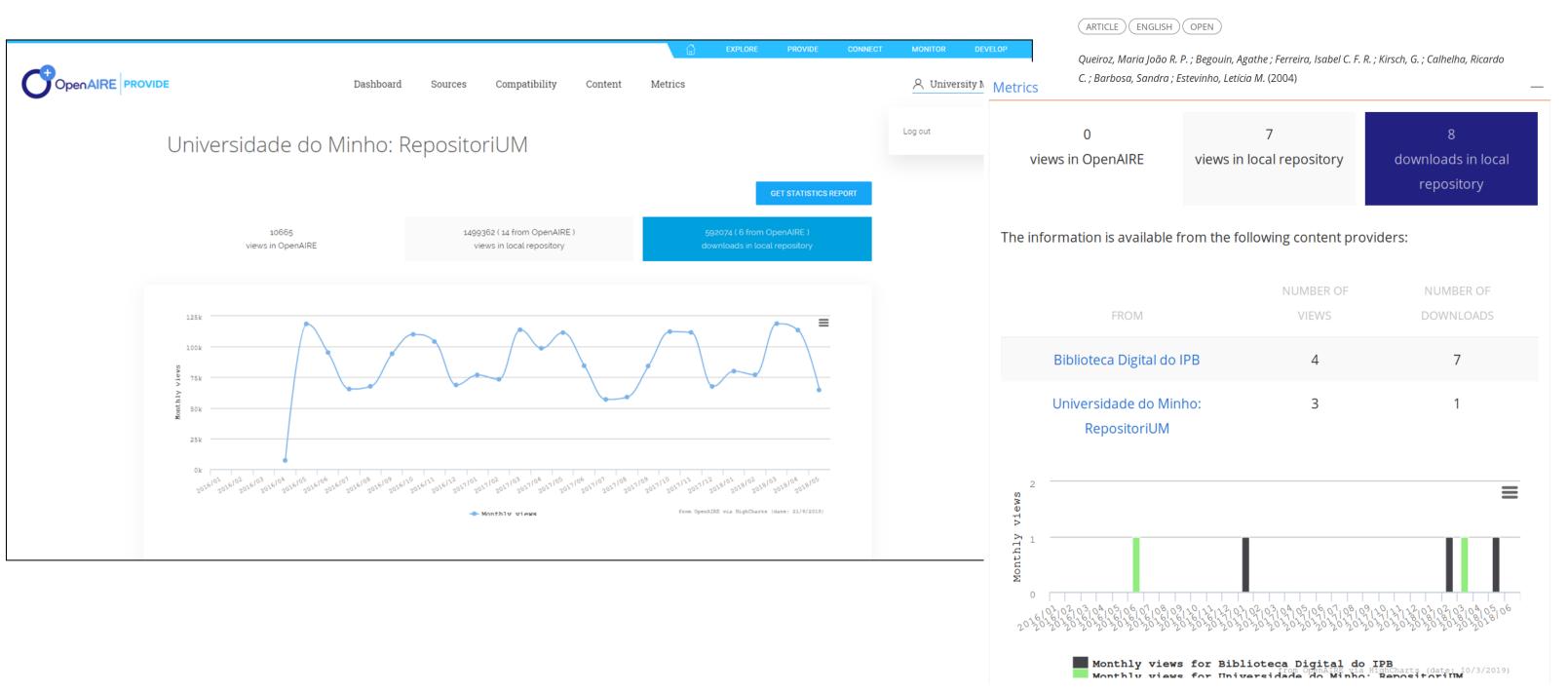
**Matomo Tracking Parameters** 

Parameter	Description — 7-7
idSite	the ID of the repository
idVisit	a visitor/session ID (an 8 byte binary string)
visitIP (optionally anonymized)	the IP address of the visitor
action	the action performed (view, download, outlink, etc)
url	the url of the requested item
timestamp	the date & time of the request
OAI-PMH Identifier	the Open Access Initiative identifier of the item being viewed/downloaded
agent	the Web Browser and the operating system of the visitor
referrer	The url linked to the item requested

## Usage Statistics on Datasource and

Item Level

Palladium-catalysed amination of electrondeficient or relatively-rich benzo[b]thienylbromides : preliminary studies of antimicrobial activity and SARs



## OpenAIRE Exposes Usage Statistics



http://services.openaire.eu/usagestats/sushilite/

#### **COUNTER** compliant usage statistics reports for Repositories



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.

## SUSHI response example (JSON)

#### **Repository Report**

```
- ItemIdentifier: [
        Type: "OpenAIRE",
        Value: "opendoar
                            ::8e98d81f8217304975ccb23337bb5761"
        Type: "OpenDOAR",
        Value: "307"
        Type: "URL",
        Value: "https://repositorium.sdum.uminho.pt/"
 ItemPlatform: "Universidade do Minho: RepositoriUM",
 ItemDataType: "Platform",
- ItemPerformance: [
       - Period: -
            Begin: "2017-01-01",
            End: "2017-01-31"
       - Instance: [
                MetricType: "ft total",
                Count: "22087"
                MetricType: "abstract",
                Count: "51685"
        Category: "Requests"
```

#### **Item Report**

```
@Created: "2017-09-06 08:00:21+0000"
  @Version: "4",
  @Name: "IR1:4",
- Vendor: {
         Contact: "OpenAIRE Helpdesk",
         E-mail: "helpdesk@openaire.eu"
     Name: "OpenAIRE"
- Customer: {
     ID: "anonymous".
    - ReportItems: [
           - ItemIdentifier: |
                   Value: "dedup wf 001::0233282d03f7f027b5c08890501849ef"
                   Value: "http://hdl.handle.net/1822/7975 ;http://hdl.handle.net/1822/7463 ;http://europepmc.org/articles/PMC2268319 ;
                   Value: "oai:europepmc.org:1834183"
             ItemPublisher: "American Society for Microbiology",
             ItemPlatform: "Universidade do Minho: RepositoriUM",
            ItemDataType: "Article",
            ItemName: "Adaptive evolution of a lactose-consuming Saccharomyces cerevisiae recombinant",
           - ItemPerformance: [
                 - Period: {
                       Begin: "2017-01-01",
                       End: "2017-01-31"
                 - Instance: [
                           MetricType: "ft total",
                           Count: "1"
                           MetricType: "abstract",
                           Count: "4"
                   Category: "Requests"
```

#### **Main Challenges and Limitations**

- Comparability of Usage Statistics across platforms
  - Must be collected and processed by agreed common standards, e.g. COUNTER CoP
  - Must be openly accessible by default (e.g. CC-0 license)
- Comparability of Usage Statistics of different versions of an item
  - e.g. Usage Statistics of Open Access vs. non-Open Access item versions
  - Usage Statistics must be enriched by item identifiers
  - Items must have comprehensive metadata descriptions
- Contextualized Usage Statistics
  - COUNTER Reports are a basic first step but limited on statistics per platform (items)
  - Aggregated usage statistics of deduplicated items
  - Linked research results and their Usage Statistics in the context of (e.g. a project or topic)



The larger the network the better the usage statistics





## **Next Steps**

- Promote the service to content provider managers
- Update to COUNTER CoP R5
- Support of COUNTER CoP for Research Data (work with MakeDataCount)
- Improve visualizations of Usage Statistics in portal and dashboard
- Aligning tracking protocols and generic tracking solutions
- Support national usage statistics initiatives to become a node in OpenAIRE Usage Statistics

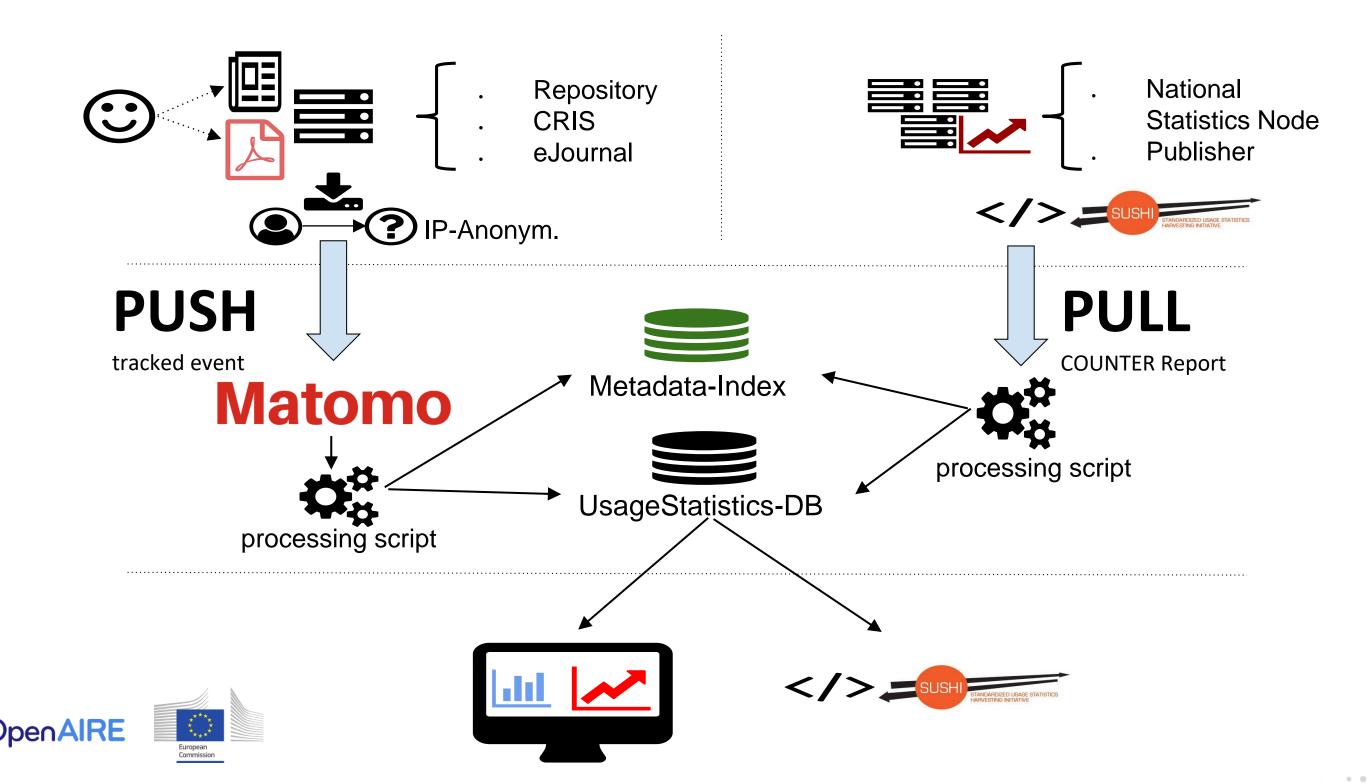
#### **More Information**

- Item in the EOSC Service catalogue:
  - https://catalogue.eosc-
  - portal.eu/service/openaire.openaire\_usage\_statistics
- OpenAIRE Usage Statistics Guidelines:
  - https://openaire.github.io/usage-statistics-guidelines/
- OpenAIRE2020 Usage Statistics Services D8.5:
  - https://doi.org/10.5281/zenodo.1034164



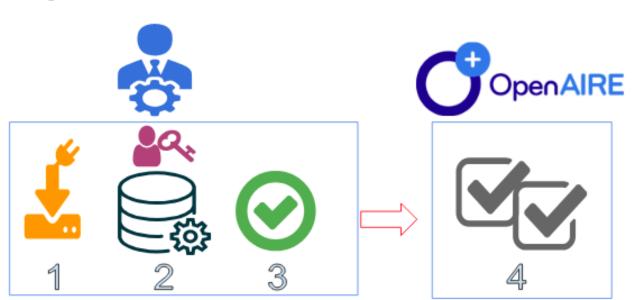


#### **Architecture and Workflows for Usage Statistics**



#### Metrics in the OpenAIRE Dashboard for content providers

- . Four steps to join OpenAIRE Usage Statistics
  - Download.
  - 2. Configure.
  - Deploy.
  - Validate (by OpenAIRE).



Or enter SUSHI endpoint to let OpenAIRE collect
 COUNTER reports

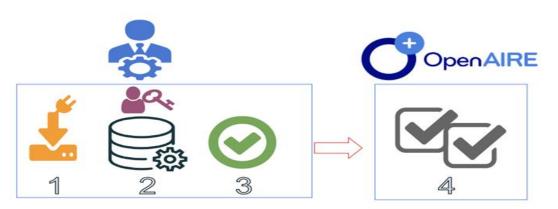




#### **Enable Metrics for selected Datasource**

#### Metrics

YOU DON'T HAVE METRICS ENABLED FOR THIS REPOSITORY YET. WOULD YOU LIKE TO ENABLE THEM?



Once you select to enable metrics for your repository, the following steps need to be performed:

#### On your side

- 1. Download the tracking code for your repository platform
- 2. Configure the tracking code according to the instructions
- 3. Deploy the tracking code in your repository platform

#### On the OpenAIRE's side

4. Validate the installation of the tracking code and inform the repository manager accordingly

For more details about the workflows and tools please consult the "Guidelines for Collecting Usage Events and Provision of Usage Statistics".

**ENABLE METRICS** 





### **Configure Metrics for selected Datasource**



Home

Sources

Compatibility

Content

Metrics

Admin

Dimitris Pierrakos

| LOGO

#### Metrics Configuration & Software Details

OpenAIRE's usage statistic service uses the *Piwik Open Source Analytics platform* (piwik.org) to track usage activity. When *metrics* are enabled for a repository, two unique identifiers are generated - a piwik-ID that associates the repository with its usage events in Piwik and an authentication-ID that allows to track usage activity on the Piwik platform. Metadata views and item downloads are tracked and automatically sent to Piwik. Statistics are generated using the COUNTER Code of practice directives.

OpenAIRE's usage statistics service tracking code exploits Piwik's API. In order to make the tracking of usage events from repositories more robust, it was necessary to implement repository platform specific patches and plugins starting with DSpace and EPrints. The code is maintained on Github:

- as a patch for various versions of DSpace (https://github.com/openaire/OpenAIRE-Piwik-DSpace)
- as an EPrints plugin for version 3 (https://github.com/openaire/EPrints-OAPiwik)

To configure your repository to allow tracking in Piwik platform, please change the configuration files with the following parameters and values, generated for your site:

PiwikID 000

AuthenticationToken 01233456

Details for the configuration files are given in the README of the tracking code.





Info / Tracking setup

## Matomo Live tracking (Pull)

Demo Site:

http://demo.librecat.org/

Real time tracking:

https://analytics.openaire.eu/index.php?module=CoreHome&action=index&idSite=1&period=day&date=yesterday&updated=1# ?idSite=1&period=day&date=yesterday&category=Dashboard\_Dashboard&subcategory=1&popover=





# Matomo offline collection of COUNTER Reports (Push)

• Irus-UK (aggregator) endpoint via SUSHI-Lite:

https://irus.jisc.ac.uk/api/sushilite/v1\_7/Client/IR1/

Aberdeen University Research Archive (irusuk:28)

https://irus.jisc.ac.uk/api/sushilite/v1\_7/GetReport/?Report=IR1&Release=4&RequestorID=Jisc&BeginDate=2019-01&EndDate=2019-

03&RepositoryIdentifier=irusuk%3A28&ItemIdentifier=&ItemDataType=&hasDOI=&Granularity=Monthly&Callback=&Pretty=Pretty





#### **Usage Statistics Reports**

 Repository Statistics from the Content Providers Dashboard

provide.openaire.eu

COUNTER reports using the SushiLite API

http://services.openaire.eu/usagestats/sushilite/

http://services.openaire.eu/usagestats/sushilite/GetReport/?Report=IR1&Release=4&RequestorID=anonymous&BeginDate=20 19-01&EndDate=2019-

02&RepositoryIdentifier=opendoar%3A1714&ItemIdentifier=&ItemDataType=&Granularity=Monthly&Pretty=Pretty





#### Questions

- How important the Metrics service is for your repository?
- Do you consider Usage statistics as a "trustworthy" evaluator for scholarly impact?







# www.menti.com

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Pedro Príncipe, University of Minho, pedroprincipe@sdum.uminho.pt;

Alessia Bardi, CNR-ISTI, alessia.bardi@isti.cnr.it

André Vieira, University of Minho, andrevieira@sdum.uminho.pt;

Jochen Schirrwagen, Bielefeld University, jochen.schirrwagen@unibielefeld.deinfo@openaire.eu

info@openaire.eu



