



Dimitris Pierrakos

OpenAIRE AMKE

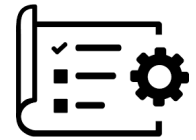
UsageCounts, the usage statistics service of OpenAIRE

Complementing traditional scholarly impact indicators with usage activity

Overview



An introduction to Usage Statistics



UsageCounts Architecture



UsageCounts Engagement



UsageCounts in Numbers

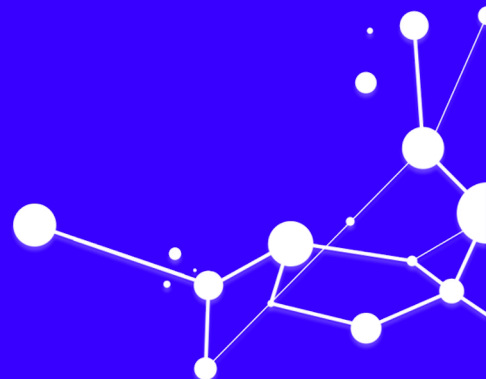


UsageCounts future developments



Demo

Usage Statistics



What are Usage Statistics

- Usage statistics are based on the processing of usage events.
- Usage events are triggered by accessing digital objects in content providers like repositories, e-journals and CRISs.
- A usage event could be:
 - A metadata **view** of the digital object
 - A full text **download**

Why Usage Statistics

- Usage Statistics are important not only to content providers but also to publishers, aggregators and funders.
- Usage Statistics could be used for reporting to funding and accreditation agencies.
- Usage statistics can play a role in driving bibliographic instruction, internal marketing and the development of the provider's website.

Why Usage Statistics (cont)

- A logical choice to supplement citation counts.
- Digital readership information can be easily and routinely collected.
- Bibliometric indicators do not show the usage of a published work by non-authors.
- Usage-based statistics for academic publications give a better understating of the usage patterns of documents and can be more recent than other bibliometric indicators.

Why Usage Statistics (cont)

- On the data-provider level, it can serve repository managers and hosting institutions as a tool to evaluate the success of the publication platform.
- On the individual item level, it can demonstrate popular publications to authors and readers. In addition to other traditional (e.g. citation counts) and alternative metrics (e.g. mentions, recommendations) it can inform funding authorities in research evaluation processes.
- Usage statistics on the item level can reflect relevance of a particular research output, of topics, of data sources over the course of time and up to the present, e.g. they are an important indicator to analyze trends.

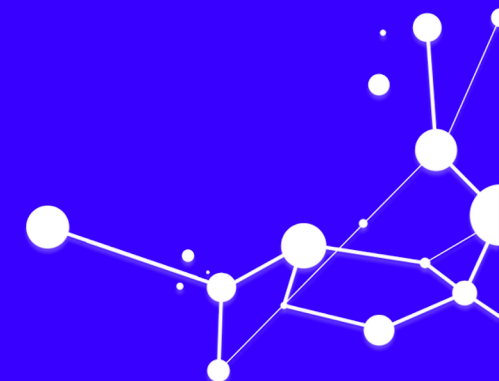
Usage Statistics Standards

- COUNTER (*Counting Online Usage of Networked Electronic Resources*).
- COUNTER is a non-profit organization supported by a global community of library, publisher and vendor members, who contribute to the development of the Code of Practice through working groups and outreach.
- COUNTER CoP is the international standard used by librarians, publishers, and other content providers for reporting usage statistics for electronic resources in a standardized way.
- COUNTER's standardized usage reports allow providers to:
 - Compare usage easily across different publisher platforms & vendors and reports/formats are standard
 - Assess user activity, in relationship to their content & improve user experience
 - Inform renewal and new purchasing decisions
 - Justify budget spend to their stakeholders
 - Inform faculty/power-users about the value & use of current library resources
 - Derive “cost-per-use” for content

Usage Statistics Services



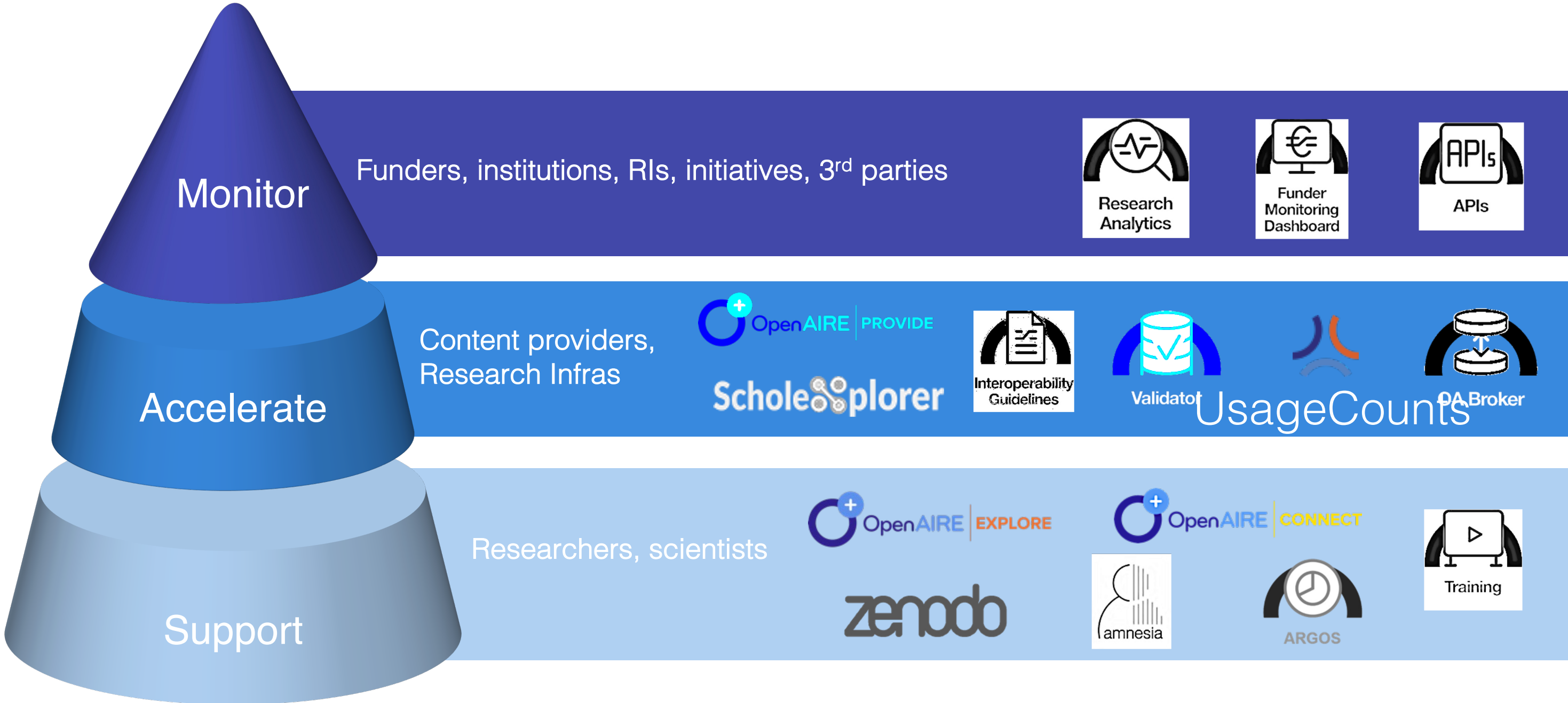
The service





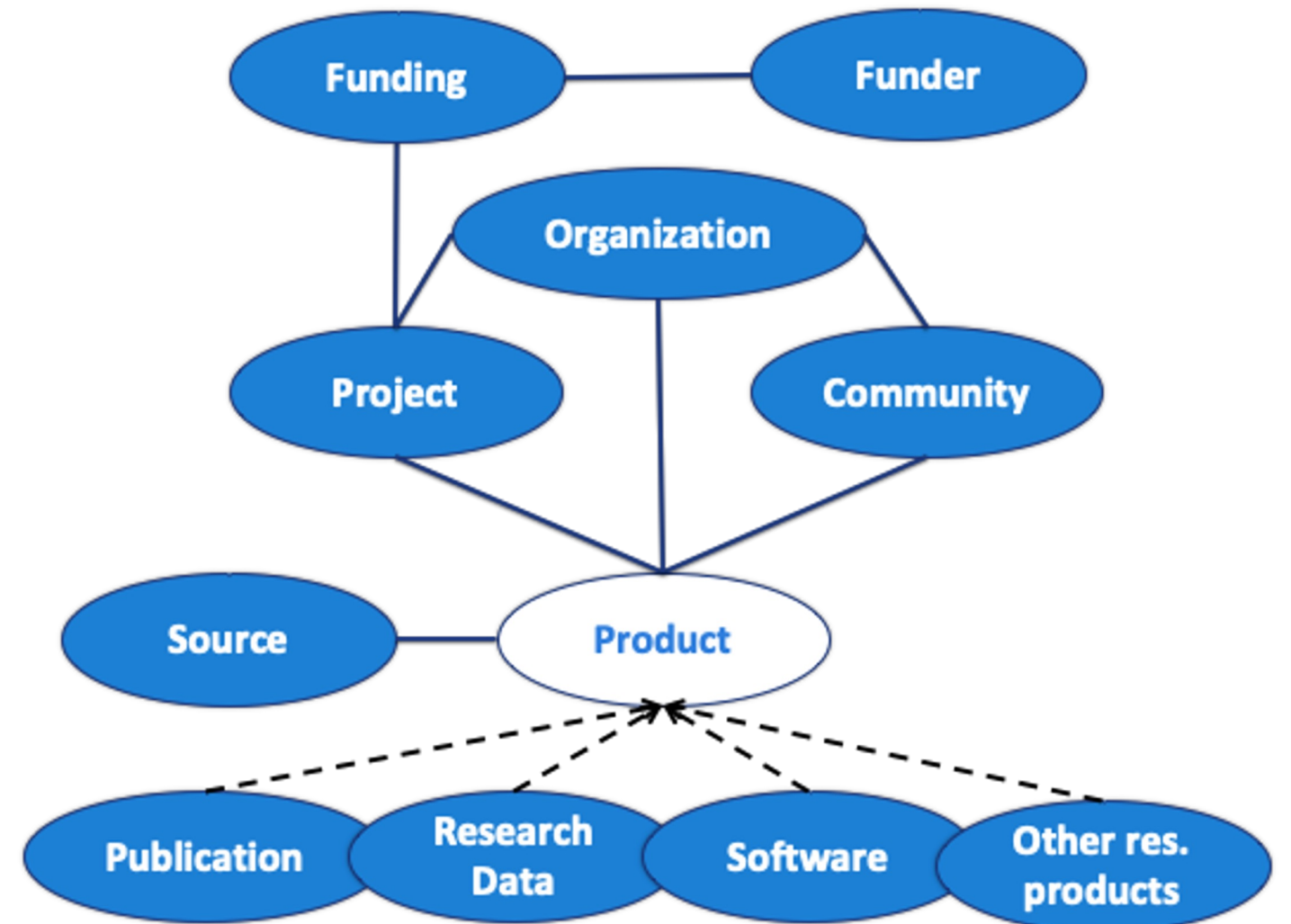
*The Usage Statistics service for
OpenAIRE Research Graph*

OpenAIRE: Services for all stakeholders

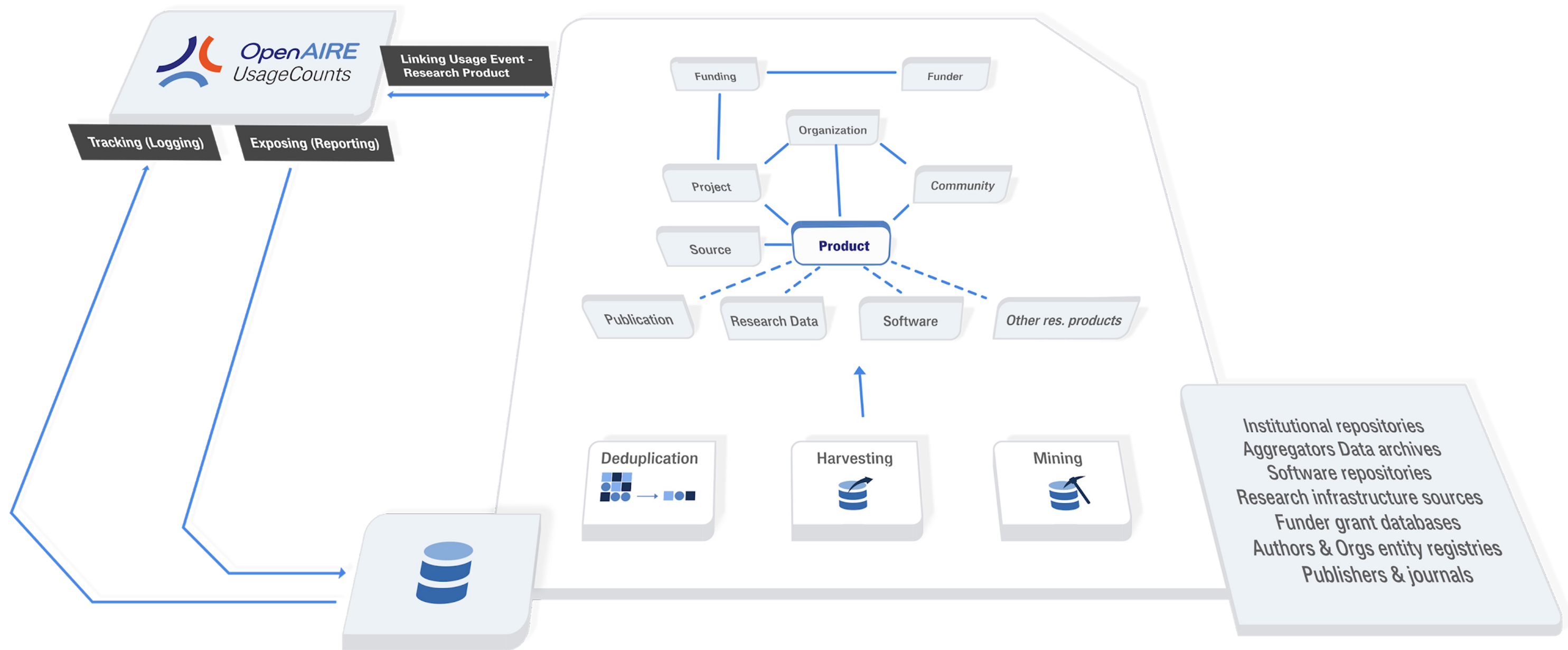




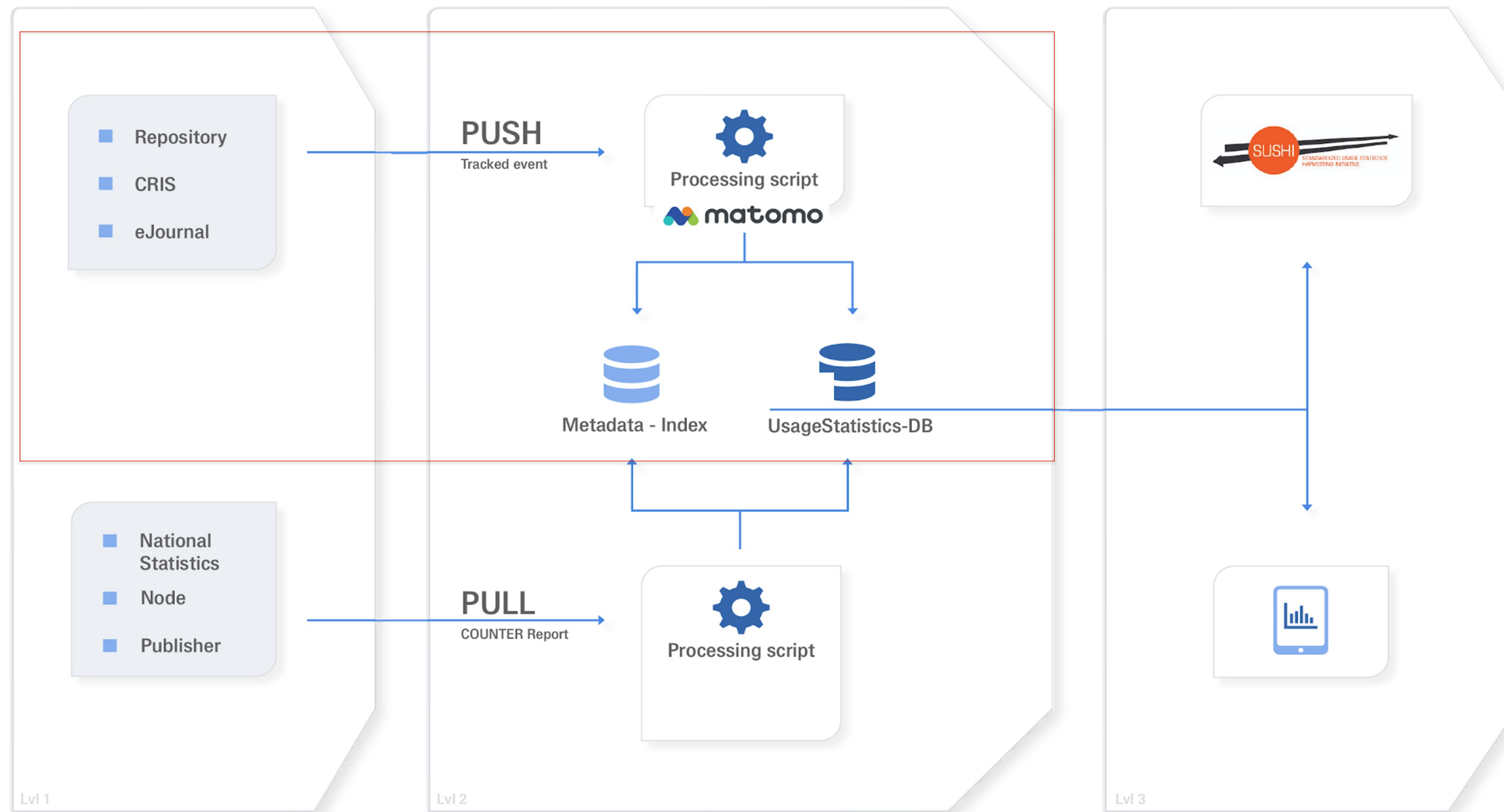
An open metadata research graph of interlinked scientific products, with access rights information, linked to funding information and research communities



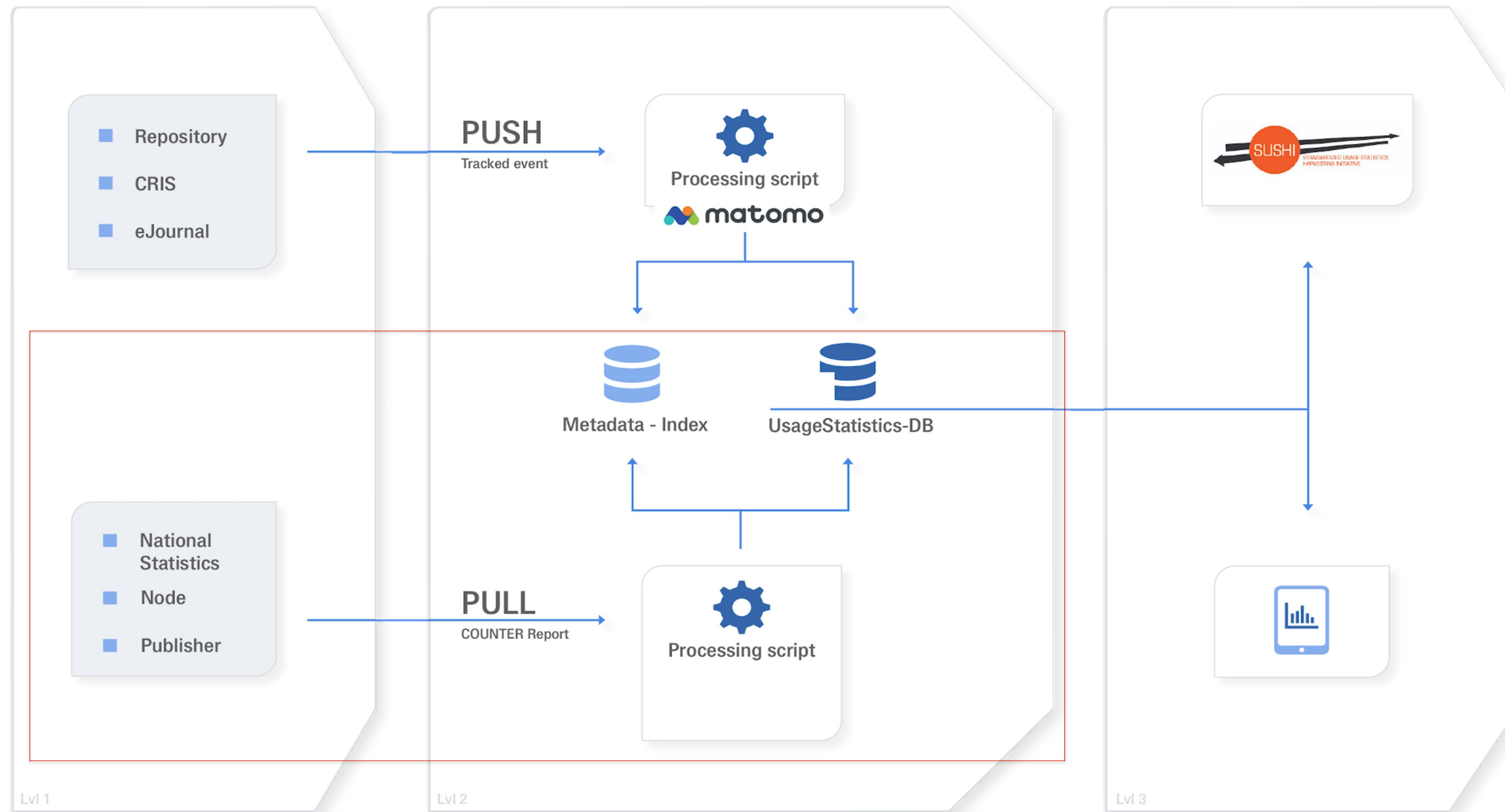
UsageCounts in OpenAIRE's e-infrastructure



Architecture and Workflows for UsageCounts



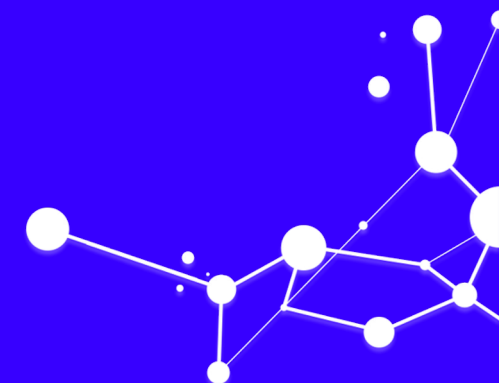
Architecture and Workflows for UsageCounts



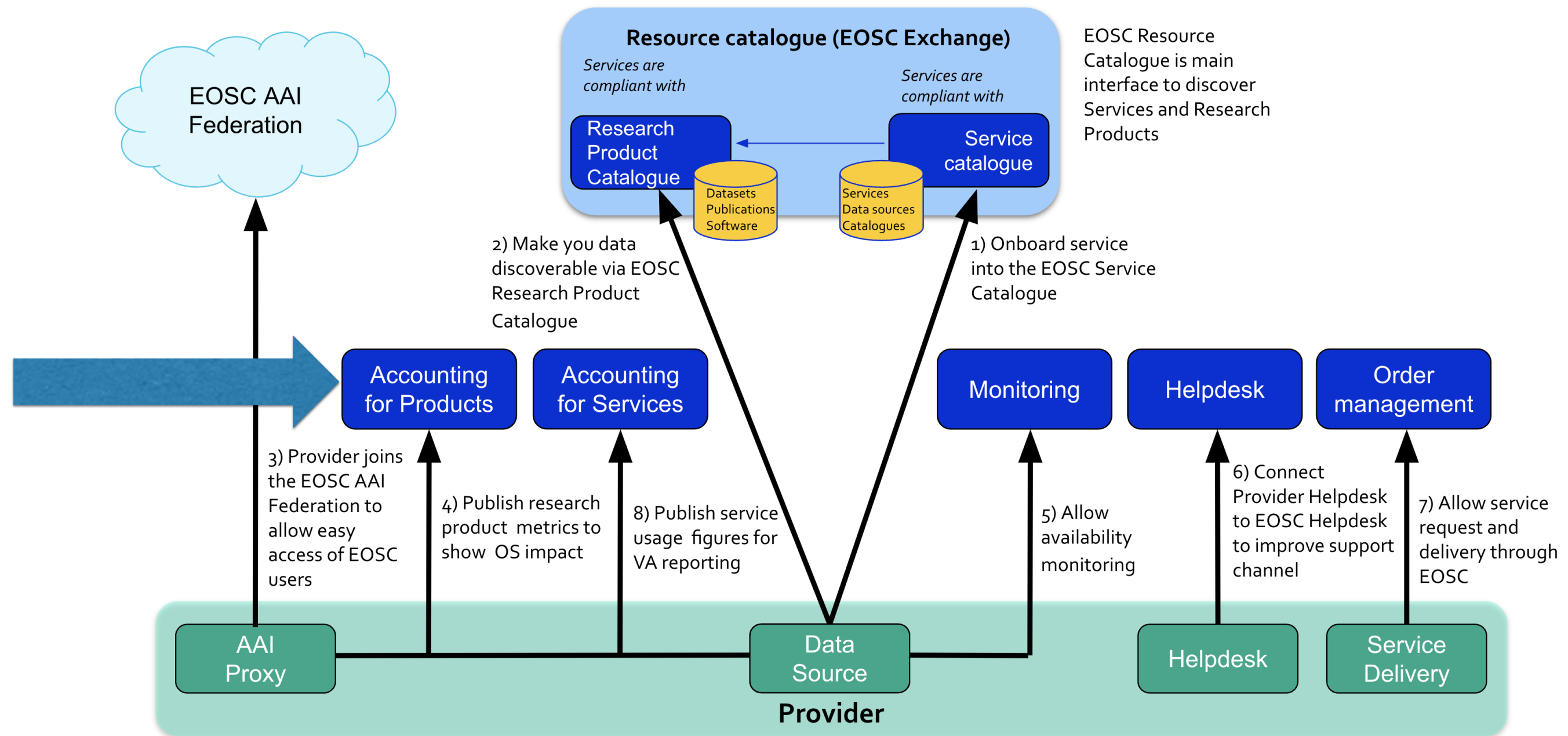
UsageCounts Service Features

- Tracking of usage (PUSH)/ collecting COUNTER reports (Pull).
- Anonymization of IPs.
- Metadata de-duplication enables accumulation of usage for same research outputs.
- COUNTER Code of Practice compatibility to provide standard based usage statistics.
- Indicators that complements other (traditional and alternative) bibliometric indicators to provide a comprehensive and recent view of the impact of academic resources.

EOSC



UsageCounts a part of EOSC



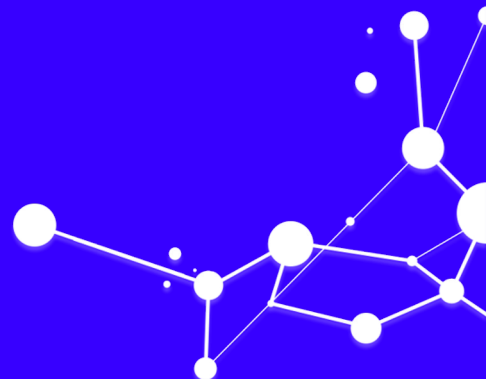
UsageCounts a part of EOSC

- Research Products accounting service is able to aggregate (push and pull) **usage indicators** for different types of EOSC **research products**, like datasets, articles, books, etc.
- Research Products accounting is provided by OpenAIRE UsageCounts Service.

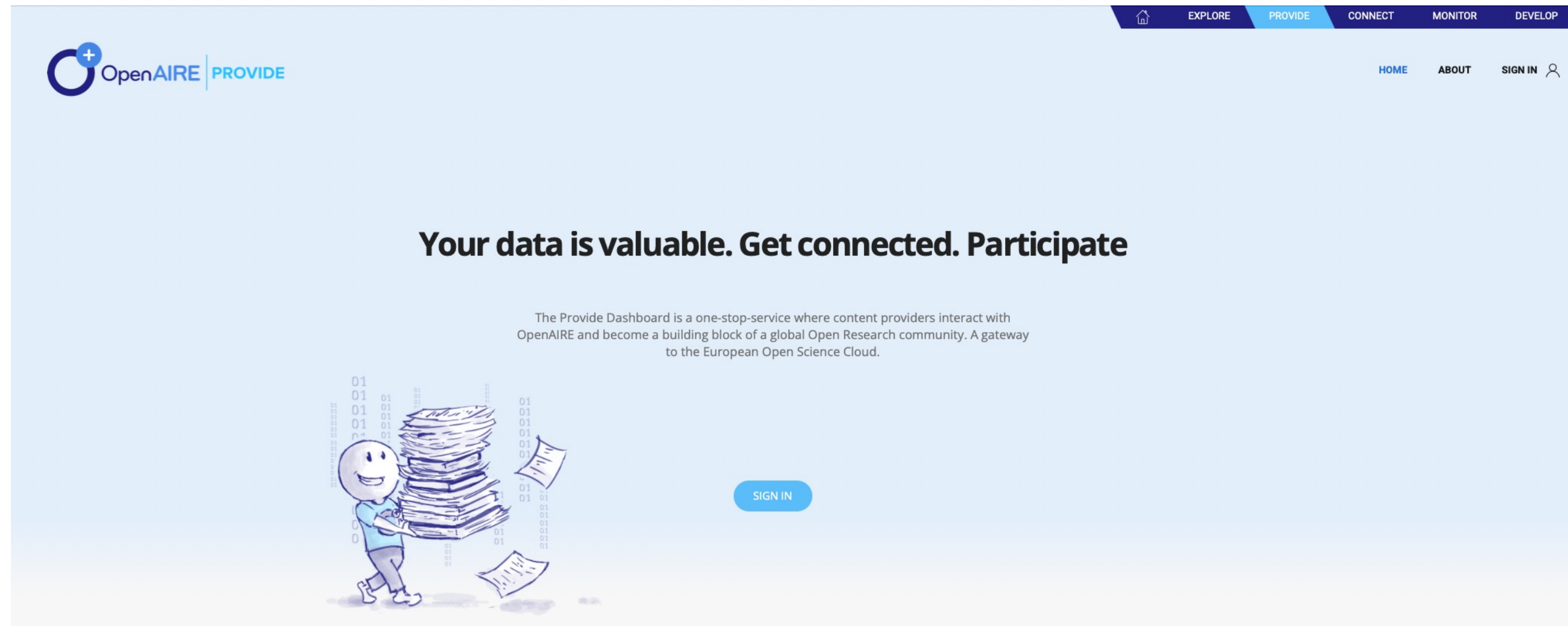
UsageCounts a part of EOSC

- Usage statistics (views, downloads) will be collected and made available.
- Research Product Usage Statistics are integrated with EOSC Resource Product Catalogue.
- Enrichment of EOSC Resource Catalogue with usage statistics indicators visible to end-users and offered in the dump of the catalogue when published in Zenodo.
- Part of the Virtual Access (VA) Metrics Accounting System.

Engagement




Content Provider Dashboard - Start Page




The screenshot shows the 'OpenAIRE PROVIDE' dashboard. At the top right, there is a navigation bar with links: EXPLORE, PROVIDE (highlighted), CONNECT, MONITOR, and DEVELOP. Below this, on the left, is the OpenAIRE PROVIDE logo. On the right, there are links for HOME, ABOUT, and SIGN IN with a user icon. The main content area features a large heading: 'Your data is valuable. Get connected. Participate'. Below the heading is a paragraph: 'The Provide Dashboard is a one-stop-service where content providers interact with OpenAIRE and become a building block of a global Open Research community. A gateway to the European Open Science Cloud.' To the left of this text is an illustration of a smiling cartoon character carrying a large stack of papers, with binary code (0s and 1s) floating around. To the right of the illustration is a blue 'SIGN IN' button.

Content Provider Dashboard - Start Page


Register your datasource




Literature repository



Data repository





Journal




Aggregator

Coming soon







Enable Metrics for selected Datasource

RUBY **AHEAD**

DASHBOARD UPDATE AGREGGATION HISTORY ENRICHMENTS USAGE STATISTICS

Metrics for AHEAD

You don't have metrics enabled for this repository yet. Would you like to enable them?

Usage stats enable workflow

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

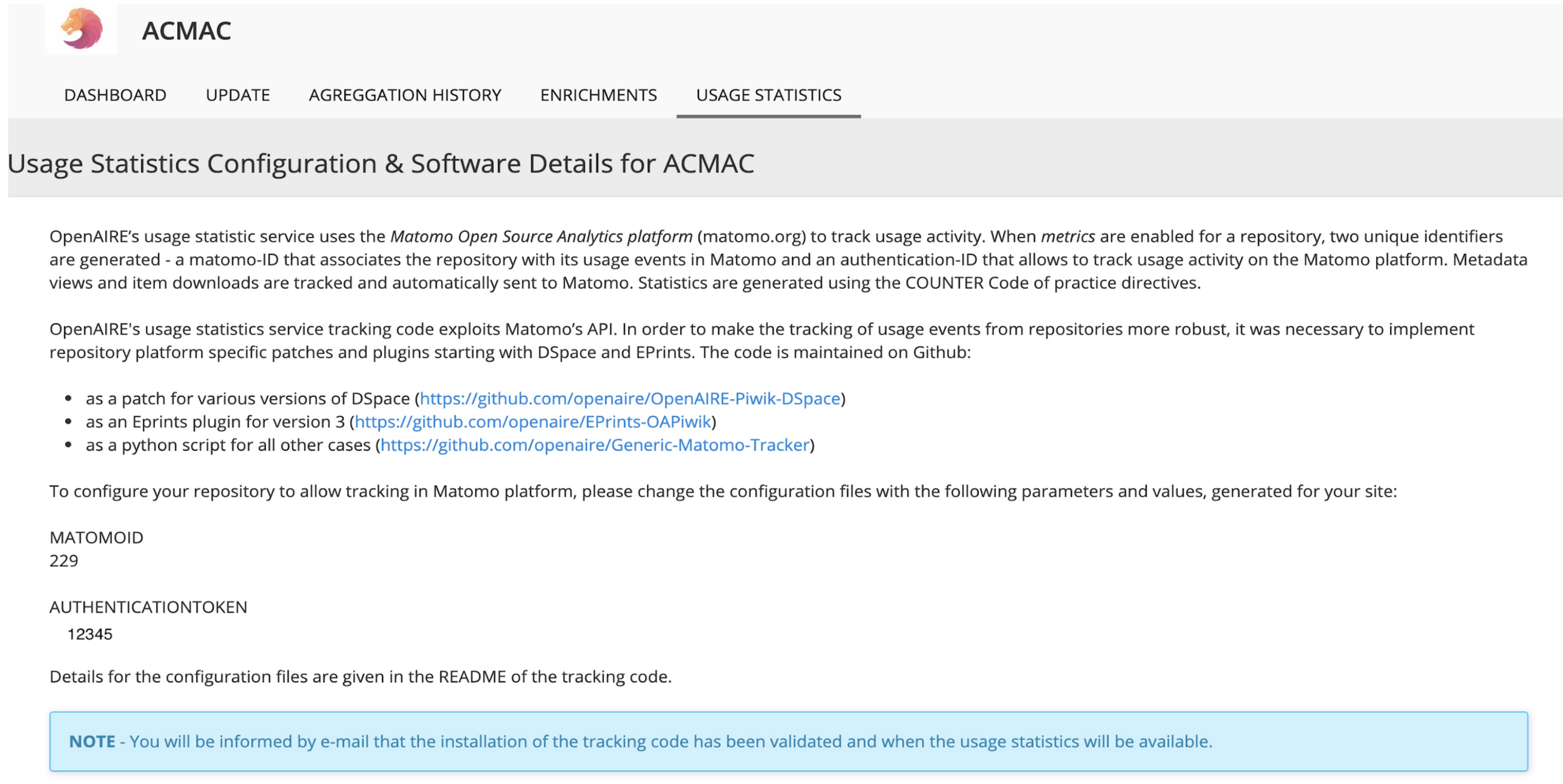
On the OpenAIRE's side

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



The screenshot shows a web interface for the ACMAC datasource. At the top, there is a navigation menu with options: DASHBOARD, UPDATE, AGREGGATION HISTORY, ENRICHMENTS, and USAGE STATISTICS. The 'USAGE STATISTICS' option is selected and underlined. Below the navigation, the page title is 'Usage Statistics Configuration & Software Details for ACMAC'. The main content area contains several paragraphs of text and a list of bullet points. The first paragraph explains that OpenAIRE's usage statistic service uses the Matomo Open Source Analytics platform (matomo.org) to track usage activity. The second paragraph states that OpenAIRE's usage statistics service tracking code exploits Matomo's API and that repository platform specific patches and plugins starting with DSpace and EPrints were implemented. The third paragraph lists three bullet points: as a patch for various versions of DSpace, as an Eprints plugin for version 3, and as a python script for all other cases. The fourth paragraph instructs users to change configuration files with specific parameters and values. The fifth paragraph lists the MATOMOID (229) and AUTHENTICATIONTOKEN (12345). The sixth paragraph states that details for the configuration files are given in the README of the tracking code. A light blue box at the bottom contains a note: 'NOTE - You will be informed by e-mail that the installation of the tracking code has been validated and when the usage statistics will be available.'

ACMAC

DASHBOARD UPDATE AGREGGATION HISTORY ENRICHMENTS USAGE STATISTICS

Usage Statistics Configuration & Software Details for ACMAC

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

OpenAIRE's usage statistics service tracking code exploits Matomo'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>)
- as a python script for all other cases (<https://github.com/openaire/Generic-Matomo-Tracker>)

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

MATOMOID
229

AUTHENTICATIONTOKEN
12345

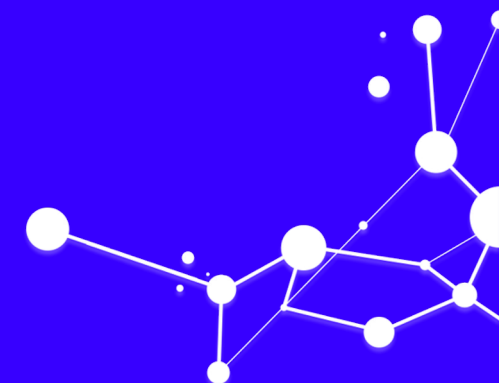
Details for the configuration files are given in the README of the tracking code.

NOTE - You will be informed by e-mail that the installation of the tracking code has been validated and when the usage statistics will be available.

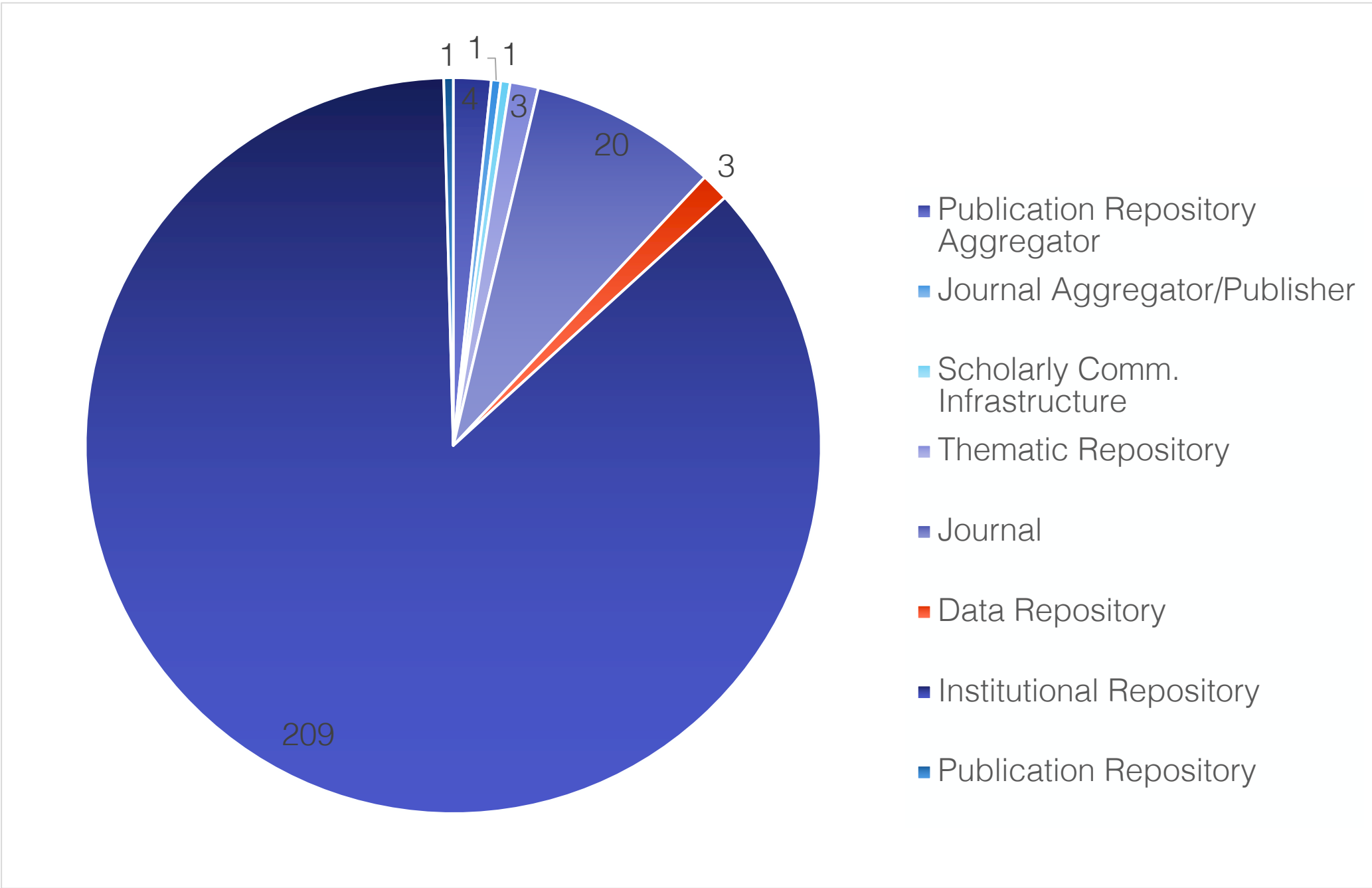
Collecting (Raw) Usage Events

UMINHO PILOT	2022-07-12	ALL VISITS	NEW UPDATE: MATOMO 4.10.1
Visits Log			
Tuesday, July 12, 2022 - 18:20:00 IP: 186.195.100.9 Jaraguá do Sul Google Scholar Provider: Gigabytetelecom		5 Actions - 23 min 42s 2 Universidade do Minho: A prevalência da Diabetes Mellitus e obesidade na população adulta da Guiné-Bissau: um estudo piloto repositorium.sdum.uminho.pt/handle/1822/58035 repositorium.sdum.uminho.pt/bitstream/1822/58035/1/Carvalho AC. A prevalência da Diabetes Mellitus.pdf 2 Universidade do Minho: A prevalência da Diabetes Mellitus e obesidade na população adulta da Guiné-Bissau: um estudo piloto repositorium.sdum.uminho.pt/handle/1822/58035	View visitor profile
Tuesday, July 12, 2022 - 18:43:33 IP: 207.188.170.2 Lleida Website: dialnet.unirioja.es Provider: Unknown		3 Actions - 6s 2 Universidade do Minho: Livro de atas do III Congresso Internacional sobre Culturas: Interfaces da Lusofonia repositorium.sdum.uminho.pt/handle/1822/60677 /bitstream/1822/60677/4/2019_Martins_Macedo_LivroDeAtas-InterfacesDaLusofonia.pdf	View visitor profile
Tuesday, July 12, 2022 - 18:16:27 IP: 85.139.126.104 Lisbon Direct Entry Provider: Netcabo		6 Actions - 27 min 5s 4 Universidade do Minho: As ciências físicas e as actividades laboratoriais na educação pré-escolar : diagnóstico e avaliação do impacto de um pro... /handle/1822/6268 2 Universidade do Minho: Pensar a educação de Infância e os seus contextos repositorium.sdum.uminho.pt/handle/1822/39778	View visitor profile
Tuesday, July 12, 2022 - 18:43:29 IP: 62.28.111.104 Lisbon Google Provider: Unknown		2 Actions - 2s 2 Universidade do Minho: Insuficiência patrimonial, insolvência e obrigações tributárias /handle/1822/44466	View visitor profile

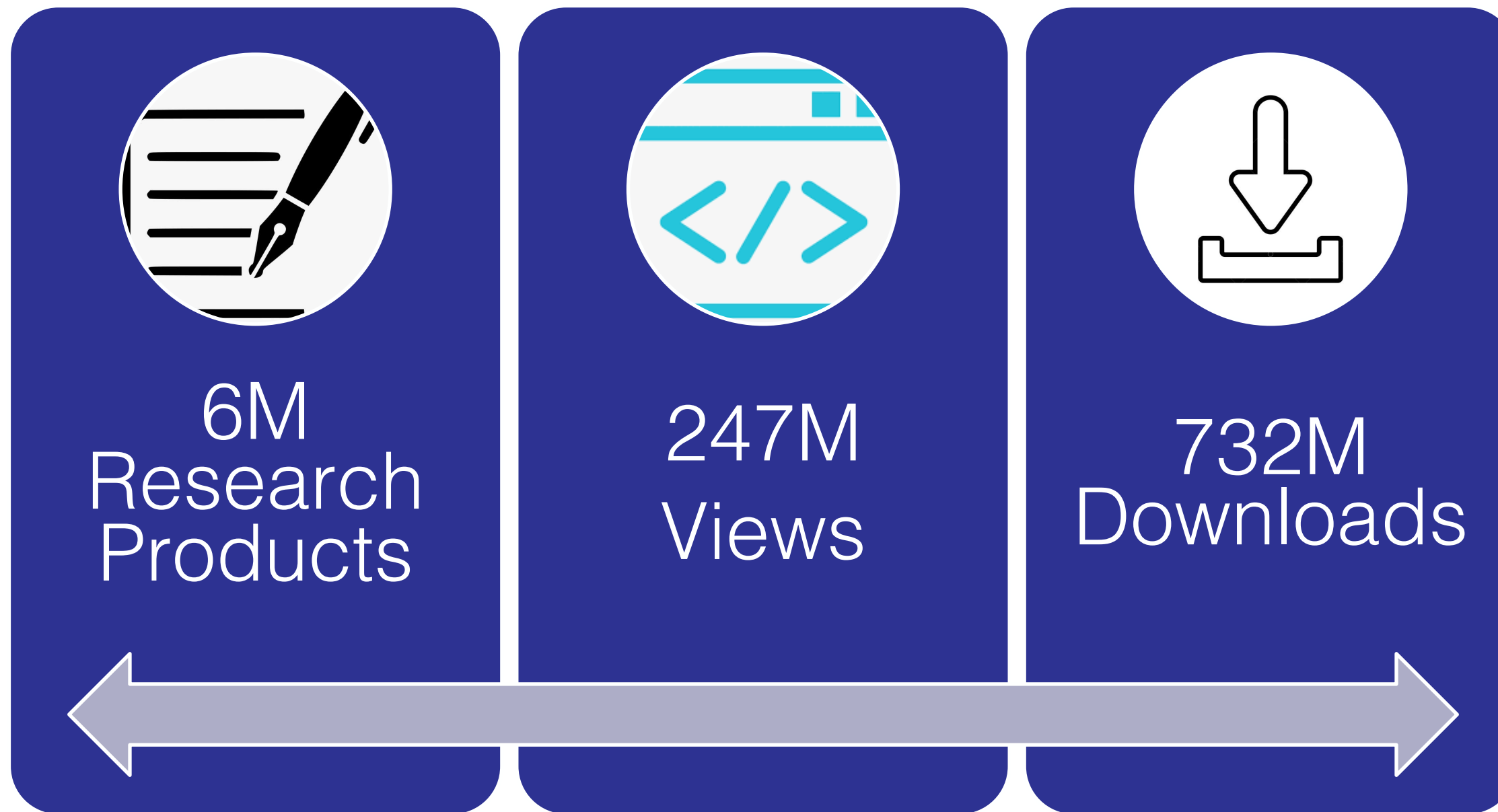
Usage



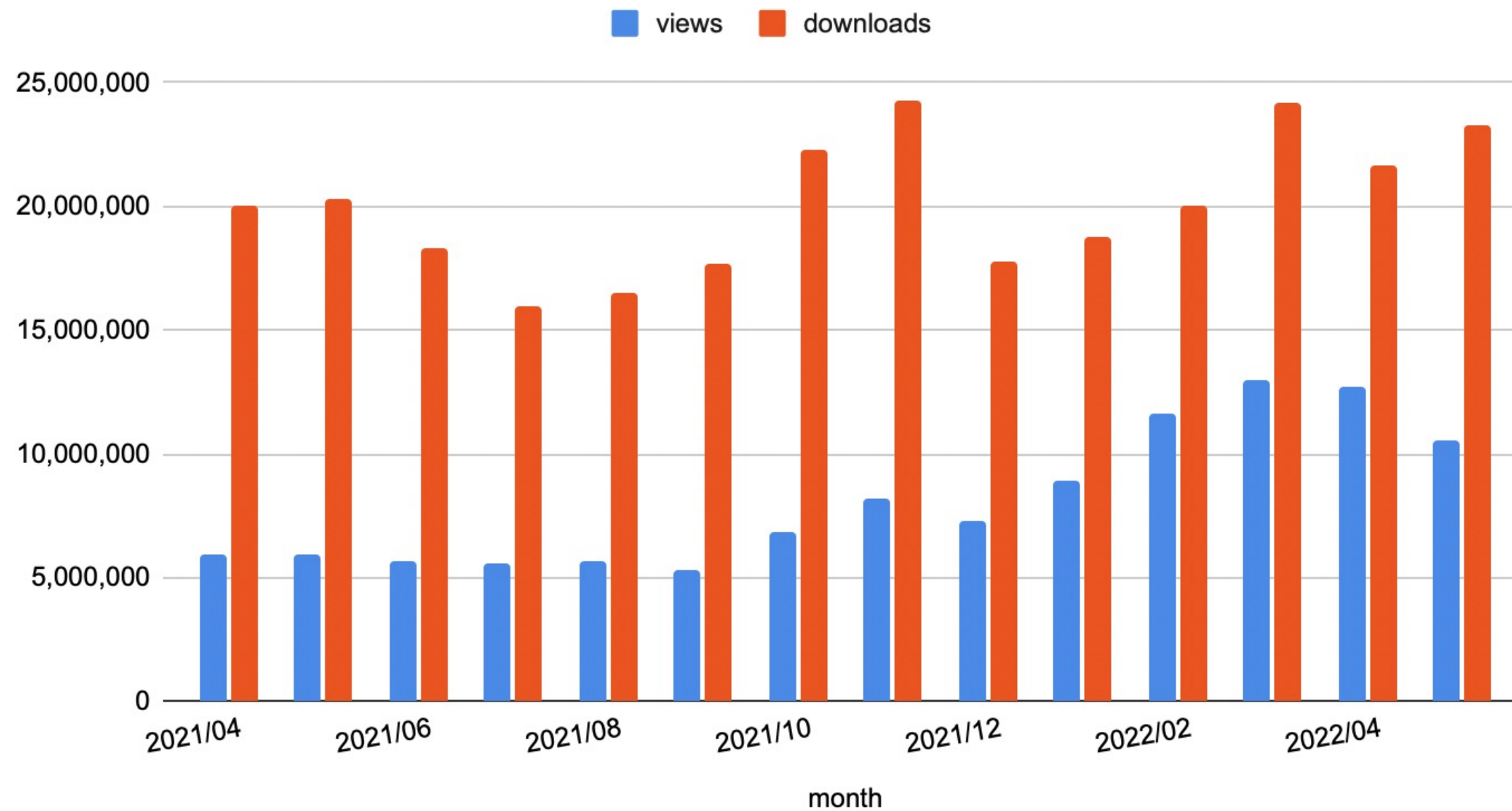
UsageCounts in Numbers (May 2022)



UsageCounts in Numbers (May 2022)



UsageCounts in Numbers (May 2022)



UsageCounts COUNTER CoP R4

Supported Reports

AR1

Article Report 1, number of successful article download requests by month and repository.

IR1

Item Report 1, number of successful item download requests by month and repository.

RR1

Repository Report 1, number of successful item downloads for all repositories participating in the usage statistics service.

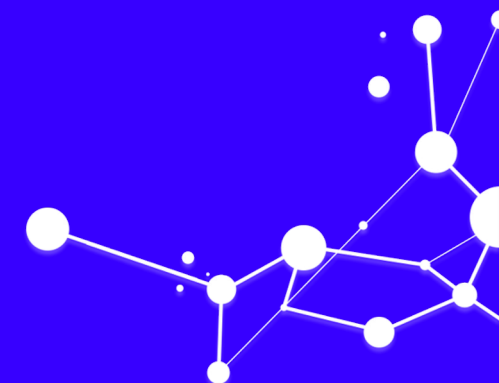
BR1

Book Report 1, number of successful title requests by month and title.

BR2

Book Report 2, number of successful section requests by month and title.

The Future



UsageCounts: Upcoming Updates

From COUNTER Code of Practice R4 to R5

- Metric Types
- Other Concepts
- Reports

COUNTER CoP R5 Metric_Types



- An **investigation** is tracked when a user performs any action in relation to a content item or title
- A **request** is specifically related to viewing or downloading the full content item
- COUNTER R4: ~~Views/Downloads~~

COUNTER CoP R5 Updates: Metric Types

- **Unique_Item_Investigations:** Counts unique article investigations and requests in a user-session.
- **Total_Item_Investigations:** Counts total number of times information related to an article viewed (including all article full-content views).
 - **Unique_Item_Requests:** Counts unique article full-content views in a given session regardless of format. If a user views an article PDF and HTML in the same session this would only count as 1.
 - **Total_Item_Requests:** Counts all article full-content views across all formats like HTML and PDF. This is **equivalent** to the Release 4 downloads count.

COUNTER CoP R5: Example Scenario

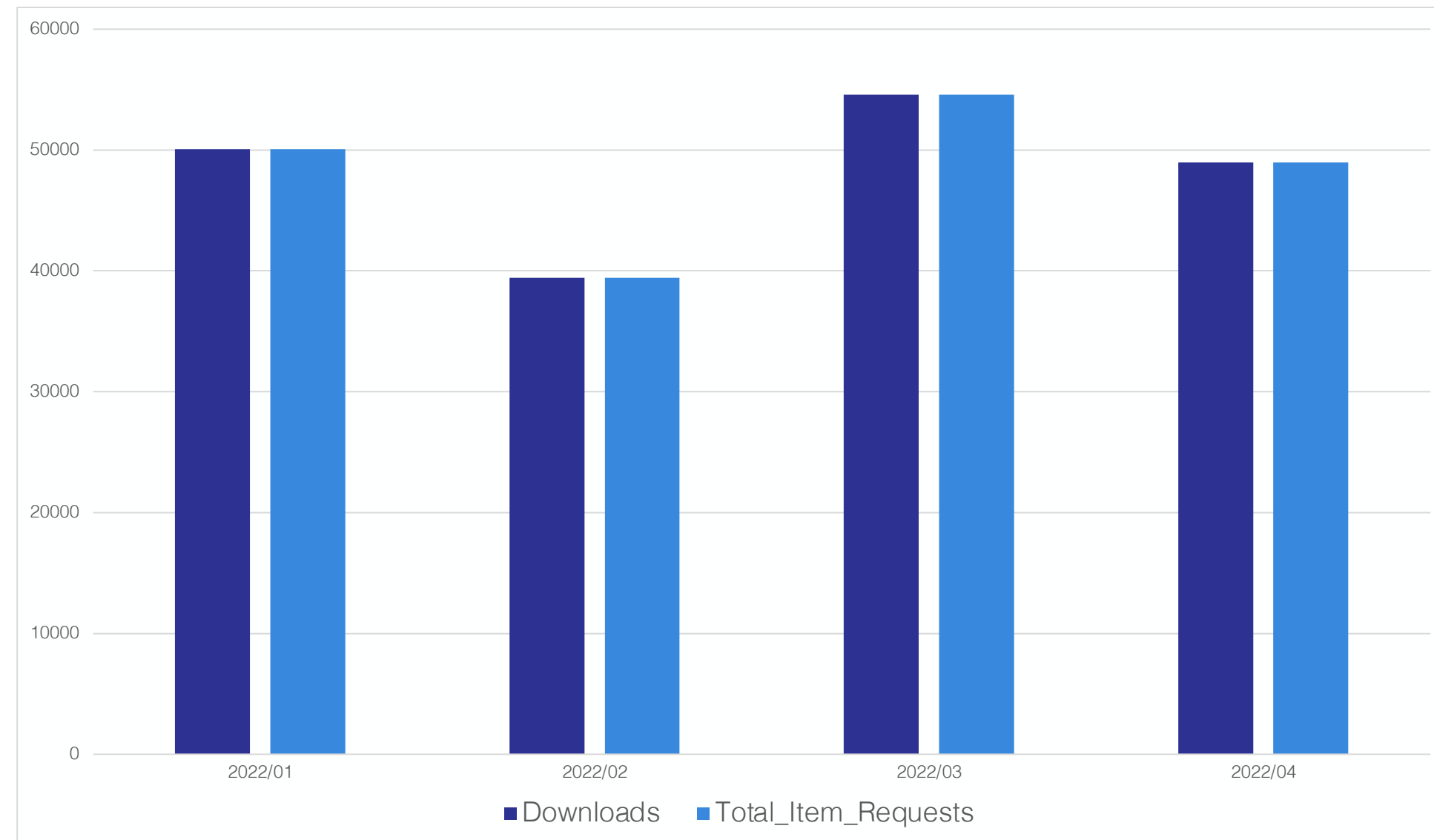
Susan is researching the history of Porto in UMINHO repository. From a list of search results, she opens three article abstracts. The counts are:

- total_item_investigations: 3
- unique_item_investigations: 3

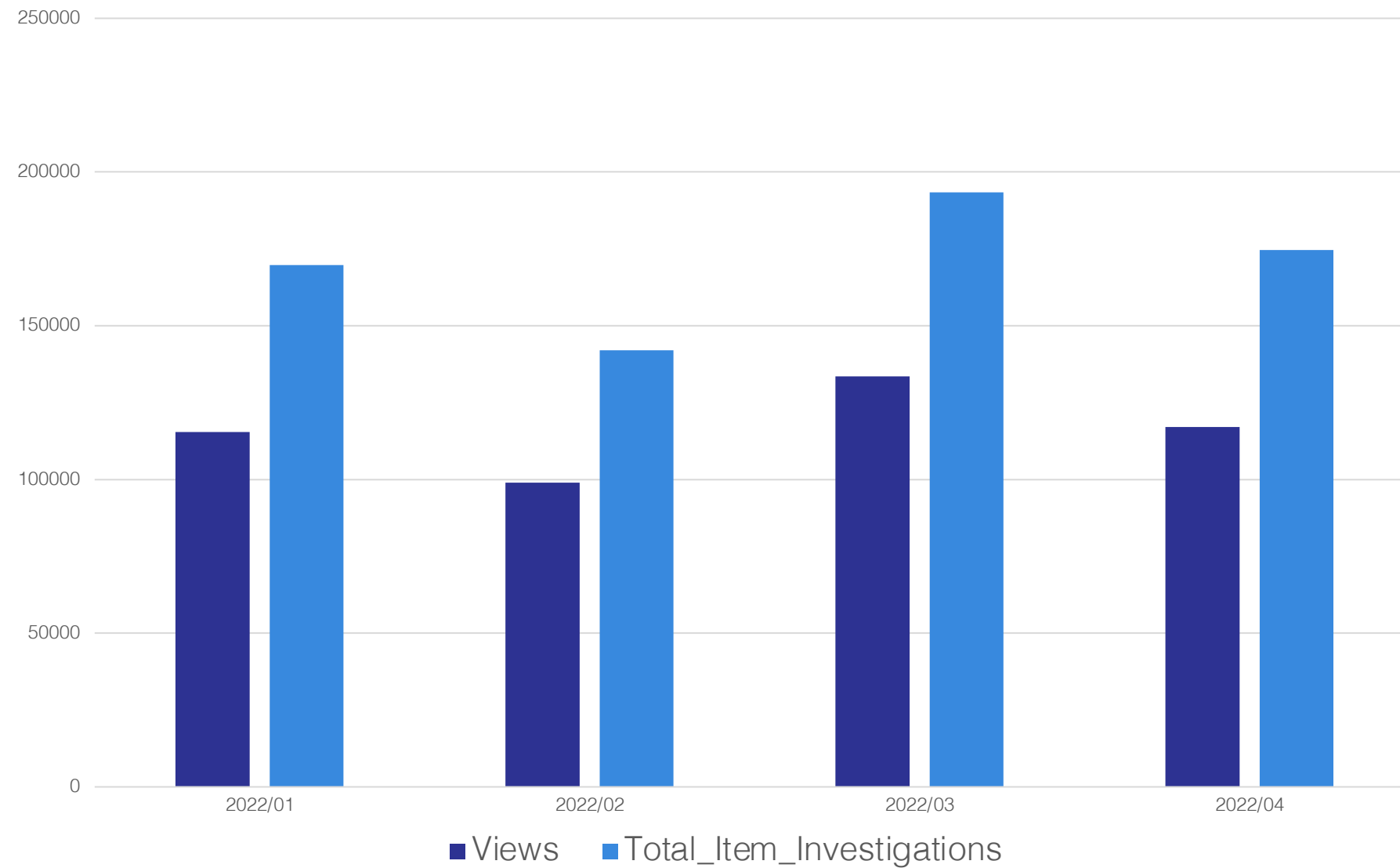
After reading the abstracts, Susan downloads the PDFs for two of the articles. The counts change to:

- total_item_investigations: 5 (3 as "views" + 2 as "downloads")
- unique_item_investigations: 3 (3 unique "views")
- total_item_requests: 2
- unique_item_requests: 2

R4 Downloads vs R5 Total_Item_Requests



R4 Views vs R5 Total_Item_Investigations



CoP R5 Metric Types Features

- **Total Item Requests**
 - Important for providers that have full-text content.
 - Reports the number of full-text downloads or views.
- **Total Item Investigations**
 - Provides a big picture perspective of the total number of investigations.
- **Unique Investigations and Requests**
 - Powerful metrics for identifying activities with unique items and titles.
 - Most accurate for cost per use analysis.

R5 Data_Types (R4 Items)

Data_Type identifies the general type of content being accessed or for which usage is being reported.

Data_Type

- Article
- Book
- Book Segment
- Collection
- Database
- Dataset
- Journal
- Multimedia
- Platform
- Repository Item

CoP R5 Access_Type

Access_Type describes the nature of access control that was in place when the content item was accessed.

This attribute appears in Journal Title Report 1 and allows usage of open access content to be separated from content that requires a license.

Data_Type

- Controlled
 - OA_Delayed
 - OA_Gold_APC
 - OA_Gold_Non_APC
 - Other_Free_to_Read
-

CoP R5 Access_Method

Access_Method is an attribute indicating whether the usage related to investigations and requests was generated by a human user browsing and searching a website (“regular”) or by Text and Data Mining processes (TDM).

This attribute appears as an optional parameter in the Expanded Title Report.

TDM usage is excluded from the standard Journal and Book reports.

Access_Method

- Regular
 - TDM
-

CoP R5 Year of Publication

YOP is the year of publication for the content item accessed. If content is available in print and online format and the publication dates of these two formats differ, the year of publication of the print will be used.

This attribute appears as an attribute in Journal Title Report 2 as well as both Book Reports and as an optional parameter in the Expanded Title Report.

Access_Method

- *yyyy*
 - *0001 (unknown)*
 - *9999 (articles in press)*
-

COUNTER CoP R5 Reports

- Reduced number of reports (4 Master, 16 Total vs 24).
- Many of the special-purpose reports that are seldom used are replaced with a small number of flexible generic reports.
- All COUNTER R4 reports have either been renamed or eliminated in favour of other COUNTER R5 report options.
- Filter to show selected:
 - Dates
 - Content/Data types
 - Metric types
 - Year of Publication
 - License types
 - and more in various combinations

COUNTER CoP R5 Reports

Report_ID	Report_Name
PR	Platform Master Report
PR_P1	Platform Usage
DR	Database Master Report
DR_D1	Database Search and Item Usage
DR_D2	Database Access Denied
TR	Title Master Report
TR_B1	Book Requests (Excluding OA_Gold)
TR_B2	Book Access Denied
TR_B3	Book Usage by Access Type
TR_J1	Journal Requests (Excluding OA_Gold)
TR_J2	Journal Access Denied
TR_J3	Journal Usage by Access Type
TR_J4	Journal Request by YOP (Excluding OA_Gold)
IR	Item Master Report
IR_A1	Journal Article Requests
IR_M1	Multimedia Item Requests

COUNTER CoP R5 Reports

Report Name	Short Description	Description
PR	Platform Master Report	A report summarizing usage activity for the repository by month, metric type and item type
PR_1	Platform Usage Report	A report summarizing usage activity for the repository by month, broken down by metric type
IR	Platform Master Item Report	A report for items requests by month metric_type, item type and repository
DSR	Datasets Report	A report for datasets requests by month metric_type and repository

COUNTER CoP R5 Reports: PR Master

1. Set Report Filters

Date Range *

From: Until next:

Item Identifier *

(Valid namespace: "openaire, doi or oid")

2. Metric Type

- Total_Item_Requests
- Total_Item_Investigations
- Unique_Item_Requests
- Unique_Item_Investigations

Report Request

Report Name: PR
Release: 5
Requestor: repositorium@sdum.uminho.pt

Report Filters

Date Range: 2022/03 - 2022/05
Repository Identifier: openoar:307
Item Identifier: openaire:od_:fb90de6f20d79...

Metric Type

Total_Item_Requests, Total_Item_Investigations,
Unique_Item_Requests, Unique_Item_Investigations

GET REPORT →

COUNTER CoP R5: PR Report

Platform	Data_Type	Access_Method	Metric_Type	Reporting_Period_Total
Universidade do Minho: RepositoriUM	Article	Regular	Total_Item_Investigations	10
Universidade do Minho: RepositoriUM	Article	Regular	Unique_Item_Investigations	6
Universidade do Minho: RepositoriUM	Book	Regular	Unique_Item_Requests	3
Universidade do Minho: RepositoriUM	Book	Regular	Total_Item_Requests	2
Universidade do Minho: RepositoriUM	Book	Regular	Total_Item_Investigations	5
Universidade do Minho: RepositoriUM	Book	Regular	Unique_Item_Investigations	3

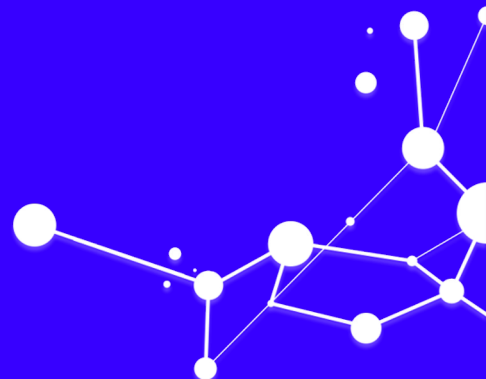
COUNTER CoP R5 Reports Attributes

PR

IR

Platform	Data_Type	Access_Method	Metric_Type	Reporting_Period_Total														
Item	Publisher	Publisher_ID	Platform	Authors	Publication_Date	Article_Version	DOI	Proprietary_ID	ISBN	Print_ISSN	Online_ISSN	URI	Parent_Title	Parent_Data_Type	Parent_DOI	Parent_Proprietary_ID	Parent_ISBN	Parent_Print_ISSN
Parent_Online_ISSN	Parent_URI	Component_Title	Component_Title	Component_Data_Type	Component_DOI	Component_Proprietary_ID	Component_ISBN	Component_Print_ISSN	Component_Online_ISSN	Component_URI	Data_Type	Section_Type	YOP	Access_Type	Access_Method	Metric_Type	Reporting_Period_Total	Monthly_Usage_Details

UsageCounts Recap



OpenAIRE UsageCounts Service

- An easily configurable, robust service.
- Follows COUNTER CoP standards (R4 and R5)
- For **providers**: an “umbrella system”, similar to EOSC, provides information on the impact of your repository.
- For **research products**: operates on OpenAIRE Research Graph allowing aggregated usage statistics of the research products from repositories all over the world.

OpenAIRE UsageCounts Feedback

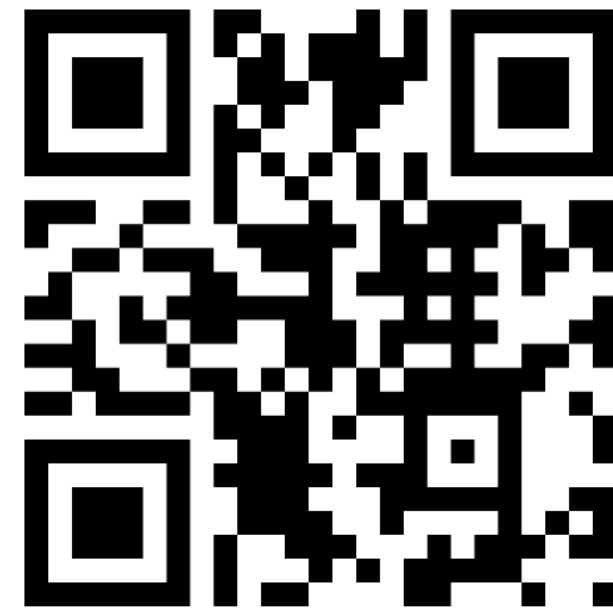
Go to www.menti.com and use the code 9481 2110

Join the discussion



Go to
www.menti.com

Enter the code
9481 2110



Or use QR code





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#OpenAIRE-Nexus

THANK YOU

OpenAIRE-NEXUS team

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