

ATRIUM – Advancing Frontier Research in the Arts and Humanities

Work Package WP2
Communication, Dissemination and Impact Evaluation

Deliverable D2.1
Interim communication and dissemination report (M1-M24) and
communication and dissemination plan (M25-M48), incl. sections on
involvement of new communities and impact

Funding Instrument:	EUROPEAN RESEARCH EXECUTIVE AGENCY (REA) REA.C-Future Society.
Call:	HORIZON-INFRA-2023-SERV-01
Call Topic:	C.4 – Reforming European R&I and Research Infrastructures
Project Start:	1 Jan 2024
Project Duration:	48 months
Beneficiary in Charge:	ARIADNE
Document Identifier:	DOI 10.5281/zenodo.17780577



**Funded by
the European Union**

Deliverable Information

Action Number:	101132163
Action Acronym:	ATRIUM
Action title:	Advancing FronTier Research In the Arts and hUManities
Deliverable Number:	D2.1
Deliverable Full Title:	Interim communication and dissemination report (M1-M24) and communication and dissemination plan (M25-M48), incl. sections on involvement of new communities and impact
Beneficiary in Charge:	ARIADNE RI
Report Version:	v1.0
Report Submission Date:	16/12/2025
Dissemination Level:	PU
Nature:	Report
Lead Author(s):	Franco Niccolucci (PIN), Claudio Prandoni, Sheena Bassett, Guntram Geser (ARIADNE RI), Amelia McConville, Megan Black (DARIAH), Ginevra Niccolucci (PRISMA)
Co-author(s):	Miriam Bua, Francesco Capaccioli (PRISMA)
Reviewers:	Karina Berger (CLARIN), Carol Delmazo (OPERAS)
Status:	Final

Change Log

Date	Version	Author/Editor	Summary of Changes made
01/10/2025	v0.1	Claudio Prandoni	First version based on the content of the Communication and Dissemination report M12
13/11/2025	v0.2	Karina Berger	Typographical edits
14/11/2025	v0.3	Claudio Prandoni, Miriam Bua	Added sections on Timeline, Partners contribution to the diss activities and Exploitation Roadmap
13/11/2025	v0.4	Karina Berger	Overall review
22/11/2025	v0.5	Sheena Bassett	Updates and edits
27/11/2025	v0.6	Claudio Prandoni	Overall review
28/11/2025	v0.7	Amelia McConville, Megan Black, Sheena Bassett, Guntram Geser	Updated Sections 6, 7, 10, 12
01/12/2025	v0.8	Sheena Bassett, Guntram Geser	Updated Sections 10, 12
02/12/2025	v0.9	Claudio Prandoni, Ginevra Niccolucci, Francesco Capaccioli	Overall review
02/12/2025	v.0.10	Amelia McConville, Sheena Bassett	Updated Section 7 Added Executive summary & abbreviations page
09/12/2025	v.0.11	Carol Delmazo	Final Review
11/12/2025	v1.0	Claudio Prandoni, Ginevra Niccolucci, Sheena Bassett, Guntram Geser, Amelia McConville, Megan Black	Final version

Table of Contents

Deliverable Information.....	1
Change Log.....	2
Table of Contents.....	3
List of Abbreviations.....	5
Executive Summary.....	7
1. Introduction.....	9
1.1 Purpose and scope of the document.....	9
1.2 Structure of the document.....	11
2. Target groups.....	13
2.1 ATRIUM target groups.....	13
2.2 Stakeholder analysis.....	15
2.3 Stakeholders engagement plan.....	16
2.3.1 Internal stakeholders.....	16
2.3.2 Research institutions, international networks and individual researchers at varying career levels active in the Arts and Humanities.....	17
2.3.3 Support staff who provide and maintain services used by researchers.....	18
2.3.4 Galleries, libraries, archives and museums (GLAMs) operating in these fields.....	18
2.3.5 Educators and students in the related subject areas.....	19
2.3.6 Non-academic professionals working in related fields.....	19
2.3.7 Non-professional participants such as amateur archaeologists, detectorists and similar interested parties.....	20
2.3.8 Relevant politicians, policymakers and funding bodies.....	21
2.3.9 The media and the general public.....	21
3. Involving new communities through participatory research.....	23
3.1 Metal detectorist communities (Subtask 2.3.1).....	24
3.2 NURNET, the Nuraghe Network from Sardinia (Subtask 2.3.2).....	26
3.3 Swedish Rock Art community (Subtask 2.3.3).....	27
3.4 Improving access for citizens with special needs (Subtask 2.3.4).....	28
3.4.1 AGLAIA - ARIADNE Glossary in LIS And IS for Archaeology.....	29
3.5 Pelagios Network (Subtask 2.3.5).....	30
3.5.1 Achievements and future plans.....	31
3.6 Summary of key findings and recommendations.....	33
4. Timeline.....	35
4.1 Phase 1: establishment and early engagement (M1-M24).....	35
4.2 Phase 2: consolidation and expansion (M25-M36).....	37
4.3 Phase 3: consolidation of impact and legacy (M37-M48).....	37
4.4 Continuous activities (M1-M48).....	37
5. Visual Identity.....	38
6. Communication and dissemination channels.....	41

6.1 Project website.....	41
6.2 Social media.....	46
6.3 Newsletters and press releases.....	50
6.4 Communication materials.....	53
6.5 Publications.....	54
6.6 Videos.....	57
7. Events.....	60
7.1 ATRIUM Mid-Term Event.....	70
8. Partners' contribution to dissemination.....	71
9. Monitoring and evaluation of the dissemination and communication activities.....	73
9.1 Monitoring tools.....	73
9.2 Key Performance Indicators.....	73
9.3 Website statistics.....	75
10. Assessment of expected project outcomes and impacts.....	77
10.1 Assessment approach.....	77
10.2 Assessed project activities.....	79
10.2.1 Research infrastructures and services.....	79
10.2.2 Data management.....	83
10.2.3 Research workflows and demonstrators.....	87
10.2.4 Development of skills.....	91
10.2.5 Cross-disciplinary fertilisations.....	96
11. Preliminary exploitation plan and roadmap.....	100
11.1 Purpose and background.....	100
11.2 Methodological Foundations.....	100
11.3 Thematic KER families in ATRIUM.....	102
11.4 Main findings from the analysis of priority KERs.....	103
11.4.1 KER1: Text based workflows guidance for metadata quality of existing catalogues and repositories in the Arts and Humanities.....	103
11.4.2 KER2: Evaluation framework for non-traditional research outputs.....	104
11.5 Preliminary exploitation pathways for the broader KER families.....	105
11.6 Cross-cutting considerations.....	106
11.7 Exploitation roadmap (M24–M48).....	107
12. Conclusions.....	108
12.1 Results from Phase 1.....	108
12.2 Examples of strategy effectiveness by stakeholder group.....	109
12.3 Plan for M25–M48.....	112
References.....	114
Consortium.....	117
Research Infrastructures.....	117
Beneficiaries.....	117
Affiliated entities.....	118

List of Abbreviations

3M	Mapping Memory Manager
A&H	Arts and Humanities
ADS	Archaeology Data Service
AI	Artificial Intelligence
API	Application Programming Interface
AMCR-PAS	Amateur Collaborators and Register of Individual Finds of the Archaeological Map of the Czech Republic
AO-CAT	ARIADNE Object Catalogue
ARIADNE	Advanced Research Infrastructure for Archaeological Dataset Networking in Europe
ATRIUM	Advancing frontTier Research In the arts and hUManities
BSL	British Sign Language
CCI	Cultural and Creative Industries
CIDOC CRM	CIDOC Conceptual Reference Model
CLARIN	Common Language Resources and Technology Infrastructure
CoARA	Coalition for Advancing Research Assessment
DARIAH	Digital Research Infrastructure for the Arts and Humanities
DGS	Deutsche Gebärdensprache (German Sign Language)
DoA	Description of Action
EAA	European Association of Archaeologists
EEA	European Economic Area
EBU	European Blind Union
ENRESSH	European Network for Research Evaluation in the Social Sciences & Humanities
EOSC	European Open Science Cloud
EPT	Exploitation Pillar Training
ETOA	European Tourism Association
EU	European Union
FAIR	Findable, Accessible, Interoperable, Reusable
FECYT	Spanish Foundation for Science and Technology
G2M	Go-To-Market
GLAMs	Galleries, libraries, archives and museums
HBIM	Heritage Building Information Modeling (HBIM)
HTR	Handwritten text recognition
IIIF	International Image Interoperability Framework
IP	intellectual Property
IS	International Sign
IT	Information technology
KER	Key Exploitable Result
KPI	Key Performance Indicator
LIS	Italian sign language (English translation)
LOD	Linked Open Data

LSE	Lengua de signos española (Spanish Sign Language)
LSF	Langues des Signes Française (French Sign Language)
MLE	Mutual Learning Exercise
NLP	Natural Language Processing
NURNET	Nuraghe Network (Sardinia)
OAI-PMH	Open Archives Initiative Protocol for Metadata Harvesting
OCR	Optical Character Recognition
OPERAS	Open Scholarly Communication in the European Research Area for Social Sciences and Humanities
PAS	Portable Antiquities Scheme
PDF	Portable Document Format
RDF	Resource Description Framework
REST	Representational State Transfer
RI	Research Infrastructure
SSH	Social Sciences and Humanities
SSHOC	Social Sciences and Humanities Open Cloud
TNA	Trans National Access
UICI	Italian Union of the Blind and Partially Sighted (English translation)
US	United States
W3C	World Wide Web Consortium
WP	Work Package

Executive Summary

This deliverable reports on the first 24 months of ATRIUM's communication and dissemination activities and outlines the strategy for the remaining project period (M25-M48). During the first phase, the project successfully established a comprehensive outreach infrastructure across all core channels, including the project website, social media, newsletters, events, publications, and video resources. A consistent visual identity and communications toolkit were implemented, enabling effective partner-led dissemination across European and international networks.

Targeted engagement efforts prioritised research infrastructure partners, academic researchers, and citizen science communities, resulting in active participation in events, training activities, and the Transnational Access programme. The ATRIUM online catalogue currently promotes **52 publicly accessible [tools and services](#)** and **17 structured [research workflows](#)**, all available via the [SSH Open Marketplace](#). Dissemination efforts are supported by the publication of **four newsletters per year** and continuous social media activities, including dedicated campaigns such as the *ATRIUM Catalogue Spotlight* and *Insights from the ATRIUM Skills Assessment and Gap Analysis Report*. The ATRIUM YouTube channel hosts multiple explanatory and training videos, while the **TNA Blog published more than 12 community reports during 2025 alone**, highlighting tangible researcher uptake of project services.

The project's **participatory research strand proved particularly effective**, with active involvement from citizen science groups including metal detectorists, rock art documenters, the NURNET network, the Pelagios community, and people with special needs. These initiatives demonstrated the value of co-creation approaches in broadening both data production and public engagement, while highlighting the need for accessible workflows, strong guidance on data quality, and intuitive digital tools to support sustained participation.

Monitoring against KPIs confirms that digital outreach, partner participation, and event engagement are meeting or exceeding expected performance thresholds. The Horizon Booster exercise successfully analysed **two initial Key Exploitable Results (KERs)** – guidance for text-based workflows improving metadata quality and a framework for evaluating non-traditional research outputs – establishing preliminary exploitation roadmaps and aligning communication activities with future uptake goals.

Key lessons learned include:

- **Segmented stakeholder engagement is essential:** tailored communication approaches are required to reach academic researchers, GLAMs, technical staff, creative industries, citizen scientists, policymakers, and the general public effectively.
- **Participatory approaches maximise societal impact:** co-creation with non-professional communities increases data production, skills transfer, and public ownership of cultural heritage outcomes.

- **Accessibility must be embedded from design onwards:** dedicated content formats, multilingual tools, tactile models, and sign-language resources significantly enhance inclusion and reach.
- **Alignment of communication and exploitation strengthens uptake:** early coordination around KER promotion improves readiness for real-world adoption.
- **Active partner mobilisation remains a decisive success factor:** partner networks and on-site events contribute substantially to dissemination reach.

Looking ahead to the next period, activities will shift from awareness-building toward **consolidation, service uptake, and long-term sustainability**. Focus areas include expanding training delivery, promoting workflows and demonstrators, scaling the Transnational Access programme, strengthening collaboration with GLAM and creative industry stakeholders, intensifying policy engagement through targeted briefings, and ensuring long-term availability of ATRIUM digital assets within European research infrastructure ecosystems.

A structured **impact assessment framework**, based on defined KPIs and outcomes, has been designed and will be applied during the final project phase to quantitatively and qualitatively evaluate ATRIUM's scientific, societal, and policy impacts.

1. Introduction

1.1 Purpose and scope of the document

This document provides an assessment of the dissemination and communication activities for the first two years (M1-M24) of the ATRIUM Project and details the plan for these activities for the final two years (M25-M48). The assessment is based upon the Key Performance Indicators (KPIs) and the activities and results for each of the communication channels. The planning for the second half of the project focuses on the ATRIUM Key Target Groups, where proposed actions with a preliminary roadmap are outlined for each group. The future activities also take account of the performance of the activities from the first 24 months, adjusting these as necessary, with the focus expanding from promotion and engagement to encouraging take-up of the ATRIUM outputs as these become available during the latter part of the project.

The overarching objective of ATRIUM is to **empower Arts and Humanities scholars** in their use of digital methods by **facilitating access** to a wide range of **reusable workflows** and **interoperable, composable services** offered by leading research infrastructures in the Arts and Humanities domain, these being:

- DARIAH - Digital Arts and Humanities
- CLARIN ERIC - Linguistics and language studies
- ARIADNE RI AISBL - Archaeology (data management)
- OPERAS - Open scholarly communication in the social sciences and humanities.

The specific objectives are to:

1. Provide wider, simplified, and more efficient access to the best research infrastructures available to researchers to conduct curiosity-driven research, irrespective of location,
2. Enable breakthrough leading-edge research services to be made available to a wider user community,
3. Exploit synergies and complementarities in order to improve and harmonise RI services across the EU and Associated Countries,
4. Train a new generation of researchers to optimally exploit all the essential tools for their research,
5. Facilitate cross-disciplinary fertilisations and a wider sharing of information, knowledge and technologies across scientific fields fostered by closer interactions between researchers active in and around research infrastructures,
6. Contribute to the better management, including implementing FAIR data principles, of the continuous flow of data collected or produced by research infrastructures.

These objectives will be achieved as follows.

1. By improving the overall metadata quality of existing catalogues and repositories distributed across the participating research infrastructures. By sharing and developing common solutions for metadata quality assessment, curation and enrichment, as well as by establishing feedback loops between catalogues and data providers, the

discoverability of resources will be improved, helping facilitate better user access across Europe.

2. ATRIUM will make the consolidated service portfolio available to a wider user community in two ways:
 - a) by improving multilingual support for tools and services, and,
 - b) by specifically targeting new communities via a multi-channel, multi-stakeholder strategy to reach a wide audience across Europe and beyond, which will be based on online outreach, project events, stakeholder forums with researchers and data providers, training measures, demonstrators and the Transnational Access (TNA) grant scheme. The results of research and development conducted in transnational activities will be available under open access licences in order to reach out and impact an even larger community.
3. Central to the success of simplified and more efficient access (1) by the wider user communities (2) will be the creation and dissemination of exemplary workflows (around particular topics or data types) and demonstrators. These (potentially complex/non-linear) sequences of steps describe how to perform a task within the research data lifecycle). To make complex research workflows possible, ATRIUM will aim to improve the interoperability of the consolidated service portfolio by facilitating the composability of services offered, and aligning these technical activities with the ongoing development of EOSC, most notably the EOSC Interoperability Framework.
4. ATRIUM will contribute to knowledge sharing and training among Arts and Humanities researchers by developing a coherent curriculum to be hosted on DARIAH-Campus and running a number of capacity building activities (workshops, both in person and virtual, as well as stakeholder forums and mutual learning exercises between researchers and data providers) which will contextualise the service offerings of the participating research infrastructures within larger pedagogical narratives on digital tools and methods. ATRIUM will make training central to the provision of services and will strengthen those with TNA measures which will give users a chance to work directly with service and data providers.
5. ATRIUM will facilitate cross-disciplinary fertilisation and knowledge sharing by consolidating effort within various Arts and Humanities communities to establish a common research assessment framework that will encompass different research outputs (including data publications, training materials, software, exhibitions, interactive visualisations, etc.) as a contribution toward maximising the quality and impact of Arts and Humanities research in Europe, also in the context of initiatives such as the Coalition for Advancing Research Assessment (CoARA).
6. ATRIUM will strengthen data management practices amongst Arts and Humanities researchers by promoting the use of standards and FAIR principles. The proposed collaboration between the research infrastructures in this project will concretely improve findability, accessibility, interoperability, and reusability of data, especially through enhanced semantic interoperability, thus fostering the permeability of data across composable services.

From the expected results, it can be seen that ATRIUM has to communicate and disseminate across a wide range of actors from the Arts and Humanities, especially as many of the disciplines are inherently interdisciplinary and involve many different technologies. Consequently, whilst Arts and Humanities researchers and scholars will benefit the most from ATRIUM, there are also many other people who also have their part to play, such as the data providers and curators, the technical staff who design the metadata schemas and support interoperability of the data, run the repositories and databases and design the tools and services within the research infrastructures. On the one hand, ATRIUM wants to reach policy makers, and on the other hand, the general public, who are interested in topics such as archaeology and history. In order to have an effective communication and dissemination strategy, a broad selection of channels are used to ensure that all stakeholders are reached.

1.2 Structure of the document

This document is organised as follows:

Section 1 (Introduction) sets the stage for the document, outlining its purpose, scope, and overall structure.

Section 2 (Target Groups) identifies specific groups the project is targeting, along with strategies for engaging them.

Section 3 (Involving new communities through participatory research) describes the involvement of special interest and non-professional groups in ATRIUM.

Section 4 (Timeline) provides a chronological plan or schedule related to the project's activities.

Section 5 (Visual Identity) presents the visual elements and branding associated with the project.

Section 6 (Communication and Dissemination Channels) details how information about the project is shared with various audiences through the different channels.

Section 7 (Events) covers both past and planned events related to the project, including conferences, workshops, or seminars.

Section 8 (Partners' contributions to the dissemination) reports on how the organisations involved in the project have promoted and supported ATRIUM across the Arts and Humanities.

Section 9 (Monitoring and evaluation of the communication and dissemination activities) explains how the outreach and engagement activities are assessed using specific tools and indicators and reports the resulting figures.

Section 10 (Assessment of the expected project outcomes and impacts) describes the methodology and evaluation of the impact that ATRIUM is making to the Arts and Humanities.

Section 11 (Preliminary exploitation plan and roadmap) summarises the results of the Horizon Booster activity for two identified Key Exploitable Results, the text-based workflows guidance and the evaluation framework for non-traditional research outputs, and sets out a preliminary exploitation roadmap for the remaining KERs.

Section 12 (Conclusions) includes an evaluation of the engagement and collaboration activities carried out so far and a plan for the next period.

2. Target groups

2.1 ATRIUM target groups

In order for the dissemination and communication of ATRIUM to achieve its aims, the strategy has to be tailored to meet the needs of a range of stakeholders whose roles and requirements vary widely. The ATRIUM Stakeholders consist of the following groups:

- **Internal stakeholders**, i.e. the Research Infrastructures and their members who are part of the ATRIUM consortium;
- **Research institutions, international networks and individual researchers** at varying career levels (PhDs, postdocs/early career researchers, senior researchers) **active in the Arts and Humanities**;
- **Galleries, libraries, archives and museums** (GLAMs) operating in these fields;
- **Support staff** who provide and maintain services used by researchers, e.g. IT staff, data curators, repository managers, etc.;
- **Educators and students** in the related subject areas;
- **Non-academic professionals working in fields related to the Arts and Humanities** such as tourism, the cultural and creative industries, etc.;
- **Non-professional participants** such as amateur archaeologists, detectorists and similar interested parties;
- Relevant **politicians, policy makers and funding bodies**;
- The **media** and the **general public**.

The first two groups, consortium members and researchers can be mainly categorised as academics whose main interest is research with the aim of disseminating their work through diverse channels, namely journals and papers presented at conferences. Many are engaged with social media such as X (Twitter) and Facebook and will follow feeds relevant to their areas of interest.

The GLAMs and support staff are a far more diverse group with a common interest but different requirements according to their roles. For example, IT staff are more likely to read technology-oriented publications and attend events relating to their IT expertise, whilst librarians and museums both have their own networks and membership organisations which support the protocols and requirements of their specific roles.

Education provision is also a distinct field – the primary providers are universities and similar academic institutions in the first instance with the Research Infrastructures and professional membership organisations, along with some private providers running courses and workshops etc. to enable practitioners to learn new skills. The key to effectively reaching these stakeholders is through their membership organisations and possibly some key international conferences and journals.

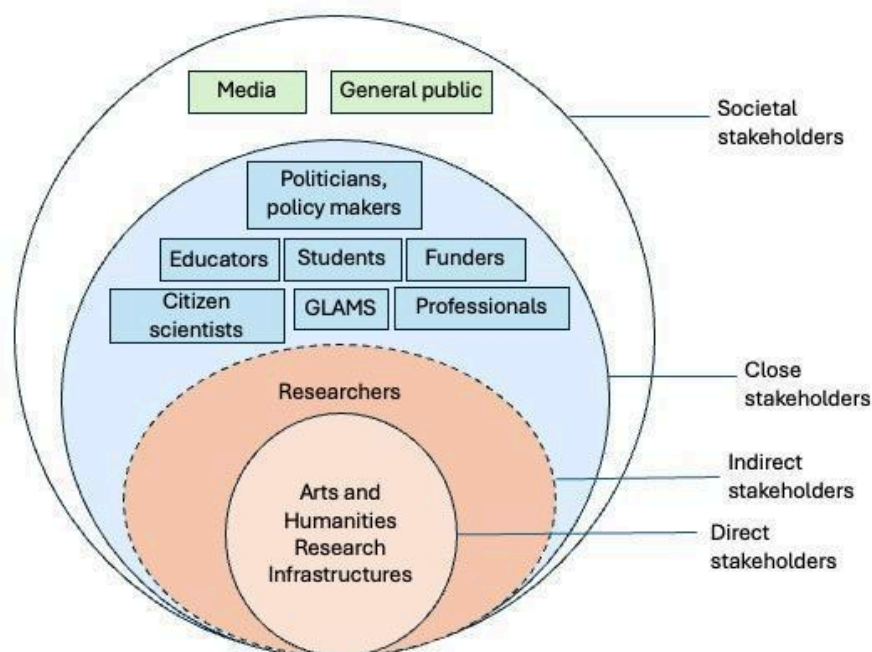
Non-academic professionals work in fields related to the Arts and Humanities, where the outputs of the academic research may be packaged for use by citizens. Tourism is one such example, which can involve people who create exhibitions and technical applications, such as mobile apps and audio-visual guides. Another example is private companies who provide archaeological services that are required by national law for building and infrastructure projects, whose outputs are often reused by academics. These stakeholders may have industry associations of their own (e.g. the European Tourism Association - ETOA) or also belong to organisations such as the European Association of Archaeologists (EAA) since this covers their area of interest as practitioners rather than researchers.

Non-professional participants such as amateur archaeologists, detectorists and similar interested parties may be less easy to reach, but several use social media and have Facebook groups as well as their own national associations (e.g. National Council for Metal Detecting in the UK, the Scandinavian Society for Prehistoric Art).

Politicians, policy makers and funding bodies need to be aware of the progress and outcomes of the project and its impact and benefits for the Arts and Humanities. More formal means of communication, such as press releases and media coverage as well as direct contacts are the most suitable forms of disseminating this information.

The media and the general public also need to be kept informed, and a proactive approach toward the press, radio, and television is effective, especially since these channels reach a wide audience. The website is another important source of information, so it is essential to use language and terminology that are easily understood by everyone.

The following diagram illustrates the relationships between all the stakeholders:



Researchers whose organisations are not members of the ATRIUM Research Infrastructures are categorised as 'Indirect stakeholders', i.e. beneficiaries of the project results.

2.2 Stakeholder analysis

The stakeholder analysis summarises the information needs of each target group and the best delivery methods for engaging and involving them.

Stakeholder group	Description and examples	ATRIUM-related Interests	Importance	Channels for outreach
Research Infrastructure members	RI Managers, decisions makers and researchers	<ul style="list-style-type: none"> - Development of the shared infrastructure - Details about innovations, new tools and methods - Best practice, guidelines and training opportunities - Conferences and other events. 	Very high - partners need to be fully engaged in order to get their full support for the project, and to spread news about ATRIUM via their own networks.	<ul style="list-style-type: none"> - Website/social media - Internal meetings - ATRIUM conferences/ events - Publicity material (flyers, short videos, etc.) - Newsletters (internal/ external) - Publications
Researchers	The communities of researchers, networks and institutions active in the Arts and Humanities	<ul style="list-style-type: none"> - Details about how ATRIUM will innovate research - Access to data and resources - Recent developments in relevant RIs - Forthcoming events, workshops and training opportunities - Details about innovations and access to new tools and methods 	Very high - the ATRIUM communities need to understand how the project will enhance their research activities.	<ul style="list-style-type: none"> - Website/social media - Newsletter (external) - Publications - Conference presentations - Publicity material (flyers, short videos, etc.) - Direct networking and via partners' dissemination channels
GLAMs and professionals, support staff	GLAMs active in the Arts and Humanities; non-academic professional working in fields such as data/information management or the cultural industries	<ul style="list-style-type: none"> - Overview about the ATRIUM mission and its progress - Relevant training and workshops - Details about innovations and access to new tools and methods - Best practice guidelines 	Medium to high - outreach beyond academia is highly desirable; GLAMs are important providers of data and expertise to RIs.	<ul style="list-style-type: none"> - Website/social media - Newsletter (external) - Publications - Press releases - Publicity material (flyers, short videos, etc.)
Educators and students	Educators and students at varying levels in the Arts and Humanities	<ul style="list-style-type: none"> - Overview about the ATRIUM mission and its progress - Information about skills requirements (WP 7) - Details about innovations and access to new tools and methods 	Medium to high - Humanities educators need to be aware of evolving skills requirements and contribute to the education of the next generation of	<ul style="list-style-type: none"> - Website/social media - Newsletter (external) - Publications - Press releases - Publicity material (flyers, short videos, etc.)

		- Best practice guidelines	researchers	
Citizen scientists	Specific communities identified for involvement in ATRIUM: - Swedish Rock Art Research Archives - Metal detectorists - NURNET, the Nuraghe network from Sardinia - Pelagios Network - Citizens with special needs	- Overview about the ATRIUM mission and its progress - Details about innovations and access to new tools and methods - Best practice guidelines	High: Citizen scientists make a valuable contribution to the research and involvement of non-professionals in the Arts and Humanities which leads to a better understanding and appreciation by society as a whole.	- Website/social media - Newsletter (external) - Publications - Press releases - Publicity material (flyers, short videos, etc.) - Direct networking with ATRIUM
Politicians, policy makers and funders	All the institutional or individual actors that frame the wider context of (European) humanities research/RI development	- Overview about the ATRIUM mission and its progress - Innovation potential and benefits ATRIUM offers to stakeholders and end-users - Socio-economic impact	High: their support is needed to ensure the long term future of the Arts & Humanities RIs	- Direct networking - Policy briefing - Press releases
Media/general public	Media outlets and individuals with an interest in research in the Arts & humanities	- Overview about ATRIUM mission and its progress - Benefits, including socioeconomic impact - involvement of non-professional communities	Medium to high: outreach is very important to demonstrate benefits of public investment into research.	- Press releases/media coverage - Website/social networks

2.3 Stakeholders engagement plan

The following plan consists of tailored strategies to engage with the different stakeholder groups, focusing on communication, capacity building, and collaboration. Recognising that each group operates within its unique context, the approach emphasises inclusivity, accessibility, and adaptability to meet their diverse expectations and needs. The proposed actions include the development of training resources, tools and services, participatory events, feedback mechanisms, and innovative technologies that align with the interests of each stakeholder group.

2.3.1 Internal stakeholders

The internal stakeholders (Research Infrastructures and their members) are mostly academics and researchers. Other roles cover technical development, project management, etc. within the participating organisations. These internal stakeholders are key to supporting the dissemination and communication strategy through their own networks and contacts and by collaborating in the events organised by the project.

Proposed Actions

- Ask the Internal Stakeholders to promote ATRIUM activities through their own communication networks on a regular basis,
- Encourage their members and contacts to use the services and tools provided in the SSH Marketplace,
- Obtain feedback about their needs, e.g., survey on skills and training,
- Encourage participation in the Transnational Access programme,
- Promote interdisciplinary and international collaboration.

Preliminary Roadmap

- Raise the profile of ATRIUM presence at events, presentations and publications,
- Encourage partners to present papers and posters and participate in round tables and panels at conferences and workshops,
- Organise round tables and workshops, focusing on major conferences, to engage stakeholders,
- Promote the Transnational Access programme as widely as possible through their own networks
- Organise training events and webinars to explain how to use ATRIUM outputs according to the domain of research interest (e.g. archaeology, linguistic studies, history, etc.).

2.3.2 Research institutions, international networks and individual researchers at varying career levels active in the Arts and Humanities

Researchers may come from academic institutions and independent organisations. They provide the scientific foundation and innovative methodologies needed for the development of the ATRIUM outputs and may also be the end users. Engaging this group effectively will ensure that ATRIUM becomes a precious resource for interdisciplinary research and collaboration with other stakeholders. Researchers have their own networks and social media groups based on their specialisms.

In this context, the ATRIUM objectives are to:

- Inform the target groups about ATRIUM and encourage them to use the services and tools provided in the SSH Marketplace,
- Obtain feedback about their needs, e.g., survey on skills and training,
- Encourage participation in the Transnational Access programme,
- Promote interdisciplinary and international collaboration.

Researchers can be reached through a wide range of channels including the website, social media, scientific publications and conferences, events, and outputs such as good practice guides and success stories.

Proposed Actions

- Raise the profile of ATRIUM through social media and the website, presence at events, presentations and publications,

- Organise round tables and workshops, focusing on major conferences, to engage stakeholders,
- Promote the Transnational Access programme as widely as possible, e.g. through the DARIAH-Campus Digital Humanities Course registry,
- Organise training events and webinars to explain how to use ATRIUM outputs according to the domain of research interest (e.g. archaeology, linguistic studies, history, etc.).

Preliminary Roadmap

- Develop a programme of ATRIUM events and co-hosted events,
- Collaborate with WP8 on the Transnational Access programme to maximise the effectiveness of the dissemination to encourage organisations to apply,
- Work with WP7 to engage feedback followed by take-up of training courses.

2.3.3 Support staff who provide and maintain services used by researchers

This group contributes to the infrastructure used by researchers and cultural heritage organisations such as the GLAMs. Many will be involved in the development of tools and services and the maintenance of data and research archives.

Proposed Actions

- Organise technical workshops to bring together developers, professionals, researchers, and end-users to test the ATRIUM workflows and services and co-create solutions (e.g., Researcher Forums, Mutual Learning Exercises),
- Provide channels for project updates, direct communication and integration with development tools,
- Facilitate knowledge sharing,
- Foster collaboration in the development of ATRIUM services and applications.

Preliminary Roadmap

- Identify relevant networks and publications,
- Contribute articles on the opportunities offered by involvement in ATRIUM,
- Organise workshops aimed at support staff to engage them and obtain input.

2.3.4 Galleries, libraries, archives and museums (GLAMs) operating in these fields

The GLAMs are both the public-facing custodians of cultural heritage and sources of research and knowledge. Each type of institution has its own networks and membership organisations which support the protocols and requirements of their specific roles and are valuable channels for disseminating information.

Proposed Actions

- Raise the profile of ATRIUM through social media and the website, presence at events, presentations and publications,
- Organise round tables and workshops, focussing on major conferences, to engage stakeholders,
- Promote the Transnational Access programme as widely as possible,
- Organise training events and webinars to explain how to use ATRIUM outputs relevant to these types of organisations.

Preliminary Roadmap

- Develop a programme of ATRIUM events and co-hosted events,
- Collaborate with WP8 on the Transnational Access programme to maximise the effectiveness of the dissemination to encourage organisations to apply,
- Work with WP7 to engage feedback followed by take-up of training courses.

2.3.5 Educators and students in the related subject areas

Educators represent primary providers, such as universities and similar academic institutions, along with research infrastructures and professional membership organisations and some private providers, who run courses and workshops etc. to enable practitioners to learn new skills and competences. Educators serve as multipliers, integrating digital heritage tools and resources into learning environments, while students represent the next generation of cultural heritage professionals, researchers, and advocates. Engaging this group effectively will raise awareness, skill levels, and stimulate innovation in the field of digital cultural heritage. The key to effectively reaching these stakeholders is through their membership organisations and possibly some key international conferences and journals, as well as social media and ATRIUM events.

Proposed Actions

- Collaborate with WP7 in the development of the ATRIUM Curriculum,
- Encourage integration and use of resources into higher education courses.

Preliminary Roadmap

- Develop training materials and courses aimed at introducing the Cloud's educational potential and demonstrating how to use ATRIUM's services and workflows,
- Organise workshops or webinars for educators on using the Cloud's resources in physical or virtual learning environments (e.g. DARIAH-Campus).

2.3.6 Non-academic professionals working in related fields

Members from the Cultural and Creative Industries (CCIs) sector work in fields related to cultural heritage, where the outputs of the academic research may be packaged for use by the general public. Their engagement can stimulate economic growth while fostering new ways to experience and interpret cultural assets. However, their needs differ significantly from

research-focused stakeholders, requiring a more practical and business-oriented approach (e.g. access to resources, copyright clearance, tools etc.).

This group may be reached via social media, the press and media and their industry associations. The objective with this sector is to demonstrate the added value of the Arts and Humanities and the role that research plays, to promote future services and to ensure the long-term sustainability of cultural heritage.

Proposed Actions

- Partner with associations and networks to engage with and to disseminate information,
- Leverage trade fairs (such as CLiC-it, international book fairs, and other design/tourism events), to reach a broader audience,
- Facilitate access to resources for creative innovation.

Preliminary Roadmap

- Identify and categorise CCIs in partner regions by sector (e.g., tourism, media, AR/VR development), and their key associations and events,
- Organise a programme in collaboration with partners to do short presentations and disseminate information at industry events,
- Create materials to highlight ATRIUM services and resources of interest to the CCIs.

2.3.7 Non-professional participants such as amateur archaeologists, detectorists and similar interested parties

Non-professional participants, including citizen scientists, cultural heritage enthusiasts, and the general public, may not be directly involved in the project but contribute to the Arts and Humanities in the wider socio-economic context. Their involvement may range from actively helping preserve and record cultural heritage, to participating as volunteers on archaeological excavations. Highlighting research activities such as ATRIUM can encourage active participation in heritage-related initiatives.

This group of stakeholders will be focussed on their particular interest across a range of channels. As well as the more traditional TV, radio and press, social media plays an important role (e.g. Facebook groups, X/Twitter feeds), so dissemination needs to be across a broad range of channels whilst also targeting interest groups.

Proposed Actions

- Partner with local communities to organise participative events and community engagement campaigns,
- Survey the non-professional communities identified in Task 2.3 to understand their needs and requirements,
- Leverage input from the non-professional communities identified in T2.3 to refine the ATRIUM workflows and demonstrators.

Preliminary Roadmap

- Organise community events and demonstrations to promote ATRIUM with Task 2.3.,
- Develop an effective multi-channel communication campaign to raise awareness about ATRIUM,
- Develop an editorial plan of success stories involving ATRIUM outputs that are likely to engage a non-professional audience.

Further information of the involvement with non-professional communities is included in Section 3.

2.3.8 Relevant politicians, policymakers and funding bodies

Decision-makers, including policymakers, funding bodies, and governmental organisations, play a visible role in shaping the landscape of the Arts and Humanities (e.g. by providing funding and regulatory frameworks). Their support is highly relevant for ensuring the long-term sustainability of all organisations involved, including the Research Infrastructures as well as the other stakeholders. However, engaging this group effectively requires translating technical and research outcomes into actionable insights and demonstrating socio-economic impacts that are aligned with broader policy priorities. This is not an easy task in general. The usual channels of social media and the website, project events and more formal means of communication, such as press releases and media coverage, as well as direct contacts, are the most suitable forms of disseminating information to this group of stakeholders.

Proposed Actions

- Create concise, visually engaging policy briefs summarising ATRIUM's objectives, progress, and societal impact (i.e. simplify the project complexity in bite-sized information),
- Tailor content to align with EU-level priorities, such as the European Green Deal, digital transformation, and cultural sustainability,
- Organise roundtable discussions or panels involving policymakers and cultural heritage leaders to emphasise ATRIUM's alignment with European cultural policies.

Preliminary Roadmap

- Develop an initial policy brief outlining ATRIUM's contributions to European cultural priorities,
- Organise targeted events for policymakers.

2.3.9 The media and the general public

The general public and the media may not be directly involved in the project, but contribute to the Arts and Humanities in the wider socio-economic context. Citizens are the key audience for the GLAMs and CCIs, whilst the media are an important interface between the two, the latter providing information to the public about cultural events and exhibitions, archaeological discoveries, etc. Highlighting research activities such as ATRIUM can increase societal

engagement and foster better public awareness, build trust, and encourage active participation in heritage-related initiatives.

Since citizens vary widely in their interests and educational levels, dissemination requires a broad approach. Generally, older people may rely more on the press, radio and TV for their information, whilst younger audiences prefer to use social media. The channels selected by ATRIUM are the most widely used and accessible to this group, as well as to a wider audience. The website is another source of information, so it is important to use language and terminology that can be understood by everyone across all the channels. In addition to direct approaches to the media by researchers, journalists will often use these channels to source their information, supplemented with interviews and information sent by projects for the publication of articles in mainstream publications (digital and paper-based).

Proposed Actions

- Organise booths and have short presentations at cultural events attended by the general public, e.g. TourismA in Italy,
- Use partners' networks to implement these initiatives at a regional level,
- Publish success stories which relate to ATRIUM tools and resources.

Preliminary Roadmap

- Develop an effective multi-channel communication campaign to raise awareness about ATRIUM,
- Identify public events and organise an ATRIUM presence at these with partners,
- Develop an editorial plan of success stories involving ATRIUM outputs that are likely to engage a non-professional audience.

3. Involving new communities through participatory research

The ATRIUM project aims to foster collaboration between professional researchers and non-professional communities across Europe to preserve cultural heritage through various participatory research initiatives. The emphasis on non-professional involvement helps democratise access to heritage conservation and ensures a broad spectrum of perspectives and expertise are included in the project's initiatives.

To this aim, a research strand is dedicated to the analysis of the ways of engaging a selected number of non-professional communities. The dual purpose is to foster the interest of non-professional communities in curiosity-driven activities and to gather feedback on the implementation of ATRIUM workflows, service and demonstrators. The analysis focuses on five non-professional communities involved in the ATRIUM project under Work Package 2 (WP2), Task 2.3. Each of these communities contributes to different subtasks and plays a crucial role in participatory research, preservation, and dissemination of knowledge on Europe's cultural heritage.

To gather information on the state of the art, needs, and requirements of the non-professional communities involved in ATRIUM, the project organised individual online meetings with all non-professional communities involved in Task 2.3, held between March and April 2024. Then a structured survey was developed: its purpose was to collect detailed information on the current practices, needs, and expectations of each community, supporting the ex-ante evaluation feeding into WP4 and WP5.

The questionnaire was completed by representatives of each community with an in-depth understanding of their group's activities between June and November 2024. Respondents were first asked to provide basic information (name, surname, affiliation) and to indicate the subtask to which they belonged:

- Metal detector field surveys
- NURNET – the Nuraghe network of Sardinia
- The Swedish Rock Art community
- Improving access to art and heritage for citizens with special needs
- Partnering with the Pelagios Network

The survey consisted of open-ended questions designed to capture operational details, methodological workflows, and data-related practices:

1. General description of the community's activity.
2. Characteristics of the non-professional participants, including their profiles, modes of engagement in participatory research, community size, and the estimated number of members who could realistically participate in ATRIUM activities.

3. Description of the methodology, including the step-by-step workflow when applicable (e.g., authorisation requests, equipment rental, data reporting).
4. Data collection practices, specifying: whether new data are produced, the types of data collected (images, texts, videos), the purpose of data collection, realistic estimates of the number of data items that could be contributed to ATRIUM.
5. Existing online resources used or produced by the community (e.g., portals, apps, blogs), with links.
6. Legislative or regulatory requirements that non-professionals must follow.
7. Expected outcomes of the collaboration, such as data contribution, use of ATRIUM services/workflows, or feedback for their improvement.
8. Interest in ATRIUM services and demonstrators, ranging across five domains: Text-based services, Image-based services, 3D-based services, Sound-based services, Geospatial services.

For each domain, respondents could select relevant tools, indicate potential uses, or suggest additional functionality. A final optional field allowed respondents to provide additional comments or recommendations. Before completing the survey, participants were provided with a Consent Form, ensuring informed participation and compliance with project and ethical requirements.

The collected information facilitates the creation of standardised workflows that enhance data and service interoperability across Research Infrastructures, supported by demonstrators addressing real-world, research-driven questions in the Arts and Humanities.

The main results of the analysis of the responses to the questionnaire are outlined below along with a summary of the key findings and recommendations; for some communities, the current progress status is also presented.

3.1 Metal detectorist communities (Subtask 2.3.1)

The metal detectorist community includes individuals active predominantly in several European countries, notably the UK, Netherlands, Denmark, and the Czech Republic. The survey reveals distinct differences in practices and legal frameworks across these countries. In England and Wales, metal detecting is a legally accepted activity provided landowner permissions are obtained, while in the Czech Republic, amateurs are required to collaborate with licensed institutions to conduct fieldwork.

Metal detecting has seen a rise in popularity in recent decades, particularly as an accessible and engaging hobby for individuals interested in local history and archaeology. This community, composed of thousands of enthusiasts, plays a significant role in uncovering and preserving historical artifacts that might otherwise remain hidden or be destroyed by modern agricultural practices, for example. The participation of non-professionals in such activities adds a layer of public engagement and shared responsibility in cultural preservation.

In England and Wales, approximately 20,000 to 40,000 metal detectorists are involved in detecting activities. They largely focus on non-ferrous metal objects in open spaces, with their main motivation being historical curiosity rather than monetary gain. Most detectorists report their finds to the Portable Antiquities Scheme (PAS), a national recording scheme established in 1997, which contributes significantly to the national archaeological database (over 1.8 million finds made by members of the public have now been recorded). Community engagement is often through small-scale social groups or clubs, while a small minority participates in organised rallies. In the Czech Republic, metal detecting has gained popularity over the past 20-30 years, but legal conditions are restrictive. In 2020, the [Portal of Amateur Collaborators and Register of Individual Finds of the Archaeological Map of the Czech Republic \(AMCR-PAS\)](#) was launched, providing an official digital scheme for recording activities and finds, with around 500 individuals already actively collaborating under institutional guidance.

The metal detectorist community operates on various levels: some prefer individual endeavors, while others gather in larger group events, fostering a sense of camaraderie and collective contribution. Many of these groups organise rallies, educational workshops, and share experiences via online forums. These activities have proven essential in raising awareness about local history and the importance of heritage, especially among younger generations.

Community activities and challenges

UK: The community primarily comprises hobbyists, focused on identifying metal artifacts in non-restricted areas, with finds contributing significantly to national archaeological databases like the Portable Antiquities Scheme (PAS). Challenges include delays in reporting and identifying finds.

Czech Republic: Metal detecting is strictly regulated and may only take place in cooperation with authorised institutions. The AMCR-PAS digital platform establishes a formal framework for cooperation between amateurs and professional archaeologists, with participation defined by legal requirements and institutional capacity.

Potential contributions from ATRIUM

Metadata extraction tools: For structured documentation of finds, supporting identification and integration into databases.

Automatic image recognition: To classify artifacts efficiently, aiding both professionals and amateurs.

Geospatial visualisation tools: Integration of metal-detected finds made by members of the public with information about archaeological sites recorded by professional archaeologists to allow contextualisation of finds, interpretation, and understanding.

Educational resources: Adapting AMCR tools and raising awareness to expand amateur collaboration.

3.2 NURNET, the Nuraghe Network from Sardinia (Subtask 2.3.2)

NURNET is a foundation established to highlight the unique archaeological heritage of Sardinia, particularly the pre-Nuragic and Nuragic periods. The NURNET community involves the general Sardinian population, who participate actively in disseminating information about archaeological landscapes through social media and the [NURNET geoportal](https://www.nurnet.net/).

The goal of NURNET is not only to preserve archaeological heritage but also to create a deeper connection between the people of Sardinia and their cultural identity. The community-driven approach has enabled NURNET to thrive despite limited funding, relying on local passion and knowledge to fuel its activities. The participatory nature of the NURNET initiative has helped in cultivating a sense of shared responsibility towards cultural heritage among Sardinians.

NURNET has created a database of information about the nuraghes accessible via the website (<https://www.nurnet.net/>). It consists of a geoportal and a media library including a large number of images concerning the Nuragic civilization, such as nuraghes, hypogea, sacred wells, bronze statuettes and other remains. Such images were produced by amateurs and assessed by archaeologists. Sometimes they are the only visual documentation of these bronze age artefacts. Each image is accompanied by a short description of the subject and by a link, where possible, to the geo-portal described below. The library is openly accessible at <https://www.nurnet.net/mediateca/>.

The NURNET geoportal (<https://nurnet.crs4.it/nurnetgeo/>) is a GIS system locating the archaeological remains of the Nuragic civilization on the island. The locations are shown as a map to facilitate geographic searches, or may be searched by several criteria (name, location, type, period, and more) to obtain a descriptive record of the artefact including an image, a short description and the reference to the location. All the texts are in Italian. The media library and the geoportal are connected to each other, so a user may swap between the two. The NURNET dataset includes images, a short description, the location and any other available information on the heritage asset. It is also suitable for access of the public at large, to promote visits and cultural tourism which would add to the well-known seaside attractions of the island, extending the tourism season and decongesting the coastal resources.

Both the media library and the geoportal are curated by citizens who provide the raw material for the dataset, and by a team of (voluntary) archaeologists who provide the necessary scientific support and validation. The technical background to set up and maintain the library and the GIS system is provided by CRS4, a research body of the regional government.

Community activities and challenges

This network aims to highlight Sardinia's prehistoric and protohistoric heritage, relying on public participation for data collection and geoportal updates. Activities are largely informal, emphasising public engagement through social media and blogs.

Challenges include a lack of institutional collaboration and structured methodologies.

Potential contributions from ATRIUM

Interactive visualisation tools: To enhance the geoportal with dynamic and engaging content.

Collaborative tools: To facilitate structured data collection and feedback loops between institutions and enthusiasts.

Metadata extraction tools: To streamline data input for geoportal updates.

3.3 Swedish Rock Art community (Subtask 2.3.3)

The Swedish Rock Art community includes non-academics who contribute to the documentation of rock art. Here we frame non-academics as individuals and institutions who are not associated with a university or research institution. These parties range in experience from those with archaeological education/experience and are responsible for documentation work (e.g., museums and foundations), to school-aged students and individuals who engage via social media. The community is integrated into a larger framework that includes professional and academic bodies, with the Swedish Rock Art Research Archives serving as a central repository for the collected data.

Rock art is a vital part of Sweden's cultural history, and non-academic contributions are crucial in documenting these often remote and difficult-to-access sites. Individuals in the Swedish Rock Art community dedicate their time and effort to identifying and photographing carvings or paintings, which helps to preserve this fragile aspect of cultural heritage for future generations.

The involvement of non-academics in rock art documentation is facilitated through museum and university courses, which offer hands-on fieldwork and lab work experiences. The survey reveals that the online community has about 1,700 members, and the process can include taking photos or traditional documentation, guided annotation, and providing data for inclusion in the Swedish Rock Art Research Archives.

By working alongside professionals, non-academics gain insights into best practices in documentation and heritage preservation. The collaborative atmosphere also allows for knowledge transfer between archaeologists and non-archaeologists, ensuring the sustainability of rock art preservation efforts.

Community activities and challenges

Community members participate in rock art documentation through licensed activities and online annotations. Outputs include data for deep learning models and contributions to the Swedish Rock Art Research Archives (SHFA) database.

Challenges include ensuring data accuracy and managing contributions from diverse participants.

Potential contributions from ATRIUM

International Image Interoperability Framework (IIIF) annotation tools: To refine annotation workflows and improve data quality.

Automatic image recognition: To identify and classify artifacts within images of rock art.

3D visualisation tools: To create immersive educational resources for rock art analysis.

3.4 Improving access for citizens with special needs (Subtask 2.3.4)

ATRIUM is working to enhance cultural heritage accessibility for citizens with special needs, focusing on the deaf and visually impaired communities in Italy. The project aims to provide specialised content and experiences tailored to individuals who use Italian Sign Language (LIS) or require tactile experiences.

The deaf community using Italian Sign Language (LIS) comprises approximately 40,000 people, with an estimated 100,000 signers when including hearing individuals. Across the EU, there are an estimated 750,000 deaf individuals using various sign languages. The Italian Union of the Blind and Partially Sighted (UICI), founded in 1920, advocates for equal rights and accessibility. Italy has over 122,000 blind and 1.5 million partially sighted individuals. The European Blind Union (EBU) represents 42 countries, highlighting the broader European context with an estimated 30 million people.

Inclusion is a core value of the ATRIUM project, and ensuring that everyone has the opportunity to engage with cultural heritage is a critical objective. This initiative seeks to address the barriers that have traditionally excluded people with special needs from fully enjoying cultural sites and information.

Activities are centered on simplifying cultural heritage texts for the deaf and providing tactile 3D models for the visually impaired. Collaboration with associations, such as the Italian Union of the Blind and Partially Sighted (UICI), aims to ensure that content is designed to meet the

community's needs. These initiatives are underpinned by guidelines for accessibility that involve writing descriptive texts, tactile paths (setup of real and reproduced objects designed for tactile exploration) and training museum staff.

The development of tactile models allows visually impaired individuals to experience cultural artifacts in a more meaningful way. Meanwhile, creating multimedia content with sign language and simplified descriptions ensures that all visitors can access the same information. These approaches are developed in close cooperation with special needs experts to ensure that the solutions are effective and respectful of users' preferences.

Community activities and challenges
Deaf community: Efforts focus on creating multimedia content in sign language to make cultural heritage accessible.
Blind community: Emphasis is on spatial descriptions, tactile models, and audio content.
Challenges include limited resources and tools tailored to accessibility needs. Deaf and blind people are often excluded from enjoying cultural heritage due to a lack of dedicated content.
Potential contributions from ATRIUM
Video glossaries: For commonly used archaeological terms in sign languages (starting with Italian Sign Language).
Metadata and automatic image recognition tools: To aid in creating alternative texts and enriching multimedia content.
3D visualisation tools: For tactile models and enriched audio descriptions.

3.4.1 AGLAIA - ARIADNE Glossary in LIS And IS for Archaeology

As part of its accessibility initiatives, ARIADNE, one of the key research infrastructure involved in ATRIUM, has launched the development of a glossary of commonly used archaeological terms, presented in International Sign (IS). This initiative, called AGLAIA - ARIADNE Glossary in LIS And IS for Archaeology (which is the name of one of the Three Graces depicted in Botticelli's *Primavera*) aims to establish a shared terminology for use in guided tours of museums and archaeological sites, and to enhance accessibility for deaf communities in cultural heritage contexts. The glossary will be freely available online and as a downloadable PDF. ARIADNE will also provide technical support to partners interested in creating similar glossaries in other national sign languages (e.g., BSL, LSF, DGS, LSE).

The impact of these initiatives goes beyond individual experiences; they foster a more inclusive environment in cultural institutions, encouraging others to adopt similar practices. ATRIUM's

work serves as a model for other projects seeking to make cultural heritage accessible to all, ensuring that every visitor, regardless of ability, can engage meaningfully with Europe's shared past.

The international community of archaeologists connected to ARIADNE, which brings together almost 40 archaeological institutions worldwide, has selected an initial corpus of 200 specialised terms related to the field of archaeology. These terms cover the main conceptual categories used in the sector: methodological, artifacts and material, cultural and social, analytical and interpretive, chronological context.

To test the potential of the International Sign (IS) glossary, a scientific committee identified a refined list of 50 commonly used terms in the context of guided tours in museums and archaeological sites. These terms, considered essential for the understanding and enjoyment of cultural heritage content by the international deaf audience, were then evaluated by a specialised technical committee coordinated by a deaf translator with expertise in International Sign.

This phase of work aims to verify the communicative effectiveness of the selected signs, their terminological consistency, and the relevance of the definitions to museum and archaeological site contexts. The expected result is the creation of a validated and accessible IS glossary, designed to improve the visitor experience and promote more inclusive participation in heritage enhancement activities.

3.5 Pelagios Network (Subtask 2.3.5)

The Pelagios Network (<https://pelagios.org/>) is a collaborative community of researchers and cultural heritage professionals focused on exploring cultural heritage data using Linked Open Data (LOD). The network consists of partners from academia, data science, and software development, as well as from galleries, libraries, archives, and museums, contributing to digital annotation, mapping, and visualisation of cultural heritage sites.

As a free and open association run by and for its partners, the network coordinates working groups on the digital representation of core entities (people, place, time), and the method and tools for annotating, registering and visualising them. In addition to sharing knowledge and providing consultancy, Pelagios Partners are developing: (1) LOD standards for describing attestations of places (<https://github.com/LinkedPasts/linked-places-format>) and linking resources describing historical phenomena with the places relevant to them, using the W3C Web Annotation Model (<https://github.com/LinkedPasts/linked-traces-format>); and (2) standards-based tools for collaborative annotation (<https://recogitostudio.org/>), organising scholarly definitions of historical periods (<https://perio.do/en/>), building a gazetteer ecosystem (<https://whgazetteer.org/>), and visualising place-based Linked Open Data (LOD) resources (<https://github.com/britishlibrary/peripleo>). These resources are also available to non-professional communities engaging in cultural heritage mapping projects.

Pelagios stands out for its innovative approach to connecting cultural heritage through data. The use of LOD allows disparate datasets to be linked in a meaningful way, offering new insights into historical places, artifacts, and relationships. This approach not only aids in research but also makes cultural heritage more accessible to the public.

Community activities and challenges

Pelagios supports Linked Open Data (LOD) methods for cultural heritage studies, emphasising semantic annotations and data sharing.

Challenges include aligning tools and methods with diverse partner needs and fostering widespread adoption.

Potential contributions from ATRIUM

Ontology-driven tools: To integrate structured workflows and enhance LOD capabilities.

Geotagging and collaborative mapping tools: For linking place names and historical datasets.

Visualisation tools: To explore linked data and facilitate educational outreach.

3.5.1 Achievements and future plans

During the period January 2024 to December 2025, in addition to its ongoing coordination of working groups comprising academics, software developers, and cultural heritage professionals, the Pelagios Network has undertaken a number of targeted public engagement and capacity-building activities. These initiatives have focused on strengthening the digital competences of the Galleries, Libraries, Archives, and Museums (GLAM) community, advancing the use of Linked Open Data (LOD) and artificial intelligence in cultural heritage workflows, and supporting participatory heritage documentation in local communities.

A series of workshops has been delivered introducing practitioners from the cultural heritage and GLAM sectors to lightweight digital mapping methods, practical applications of Large Language Model-based enrichment linked to structured data standards, and approaches for integrating heterogeneous data sources in institutional settings. These workshops included sessions at Historic England (June 2024), the Lorentz Center in Leiden (September 2025), and the National Museums Scotland in Edinburgh (September 2025). Their primary emphasis has been on increasing technical confidence among heritage practitioners and demonstrating realistic pathways for adopting open, standards-based digital practices.

This period also saw the publication of significant community resources. These include a peer-reviewed journal article outlining the RecogitoStudio annotation environment and its

innovative lightweight data model aligned with Linked Art and CIDOC Conceptual Reference Model (CRM), and the release of the Cultural Heritage AI Cookbook, a practical resource designed to support cultural heritage staff in leveraging LLMs and Linked Open Data for enrichment tasks. The cookbook has already been tested by colleagues at leading institutions such as the British Library and Europeana, and continues to be refined through further user testing events, including the British Library's "Hack and Yack" series and the Linked PastS symposium.

In early 2025 Pelagios also launched a community co-creation initiative supported by the Open University's Open Societal Challenges programme. This project, based on the Campsbourne Estate in North London, aims to empower local residents to document their cultural heritage through digital mapping, oral history capture, and the collation of historic materials such as diaries and photographs. Working with approximately 20 community participants with no prior digital experience, the Pelagios team is facilitating the development of an interactive Memory Map using the [Memory Mapper](#) web application. This initiative demonstrates a practical model for enabling citizen participation in cultural heritage documentation, strengthening community ownership and fostering digitally mediated heritage literacy.

The outcomes achieved so far will be further consolidated and expanded during the next phase of the project. Planned deliverables include:

- Publication of the Campsbourne Memory Map, which will be used both by the resident collective and in local schools as an educational and community heritage resource, supporting wider engagement with local history and civic identity.
- Integration of Memory Mapper into the Pelagios tool suite, including back-end enhancement to ensure alignment with FAIR principles and interoperability standards promoted across ATRIUM.
- Publication of best-practice guidance to support community groups across different contexts in adopting digital tools to document and manage their own cultural heritage assets, contributing to wider skills transfer and social inclusion in digital heritage practices.
- Continued refinement and dissemination of the Cultural Heritage AI Cookbook, including structured user feedback cycles and additional testing with institutional partners.
- Sustained engagement with the GLAM sector through further workshops, hack sessions, and collaboration with established professional networks, ensuring that capacity-building benefits are scaled and embedded.

Through this combination of technical innovation, capacity building, and participatory practice, Pelagios will continue to contribute substantially to ATRIUM's objectives of widening accessibility, supporting community-driven heritage research, and demonstrating the societal impact of open, interoperable digital infrastructures in the Arts and Humanities.

3.6 Summary of key findings and recommendations

Key findings
Community diversity: The initiatives highlight the participation of a range of non-professional groups, from hobbyists to accessibility advocates.
Data collection: Significant volumes of new data, including photographs, annotations, and multimedia, are being generated.
Legislative considerations: Different countries enforce varying levels of legal oversight, impacting collaboration and participation.
Technology needs: <ul style="list-style-type: none"> Tools for automatic recognition, tagging, and visualisation. Platforms for accessible cultural dissemination.
Recommendations
Engagement strategies: <ul style="list-style-type: none"> Focus on user-friendly tools that simplify collaboration between professionals and non-professionals. Tailor services to the needs of specific communities (e.g., LIS videos for the deaf, 3D models for visually impaired).
Technology implementation: <ul style="list-style-type: none"> Prioritise interactive visualisation, metadata extraction, and geospatial data tools to align with community expectations. Pilot image recognition tools for artifact classification and annotation.
Awareness and education: <ul style="list-style-type: none"> Expand outreach via social media, workshops, and educational content to engage non-professionals. Collaborate with legislative bodies to standardise guidelines and encourage ethical practices.

ATRIUM's work demonstrates how community participation and digital tools can strengthen cultural heritage documentation and dissemination. The project reveals growing involvement of diverse non-professional groups, increased data generation, and varying national legal frameworks affecting collaboration. The findings from the initial consultation activities carried out during the first two years underscore the need for accessible technologies, targeted engagement strategies, and coordinated educational and policy efforts to support inclusive participation and effective heritage management.

ATRIUM will take forward these recommendations by implementing a set of concrete actions designed to strengthen collaboration between project partners and non-professional communities and ensure their meaningful participation in cultural-heritage research.

Among the actions that are planned or underway, the project will develop tailored training and dissemination materials (printed materials and video tutorials) to demonstrate how to use ATRIUM workflows, annotation tools, visualisation services, and image-recognition functionalities in ways that meet the needs of each community. It will also organise workshops and hands-on sessions, both online and in person, to familiarise participants with these tools and to support dialogue between professionals and non-professionals.

To improve accessibility for deaf users, ATRIUM, via ARIADNE, will produce the AGLAIA glossary of archaeological terms in Italian Sign Language (LIS) and International Sign, making it freely available and laying the groundwork for similar glossaries in other sign languages. 50 terms have already been selected by the scientific committee and shared with expert deaf interpreters and translators specialised in the field of cultural heritage. The first glossary videos have already been recorded in Italian Sign Language (LIS) and in International Sign.

In parallel, the project will support metadata mapping and integration of community datasets (such as NURNET materials) into the ARIADNE portal, and will deliver community-focused tools for annotation, tagging and geospatial exploration, including enhancements to platforms like Recogito.

Through these targeted actions, ATRIUM will ensure that its workflows, services, and research outputs are accessible, usable, and genuinely co-produced with the communities it seeks to empower.

4. Timeline

This section outlines the evolution of ATRIUM's communication, dissemination, and exploitation activities across the full duration of the project (M1-M48). The timeline is divided into three phases: the foundational and awareness-building period (M1-M24), the consolidation and expansion stage (M25-M36), and the final maturity and legacy phase (M37-M48). Alongside key milestones, this section highlights recurring activities and planned initiatives that support continuous engagement with ATRIUM's diverse stakeholder communities.

Phase	Focus	Illustrative activities
M1-M24	Establishment and awareness	Launch of channels, events, TNA start, first videos, baseline impact studies
M25-M36	Engagement and expansion	Training rollout, demonstrators and workflows promotion, Horizon Booster deployments
M37-M48	Legacy and sustainability	Final dissemination toolkit, policy engagement, long-term resource integration

4.1 Phase 1: establishment and early engagement (M1-M24)

The first two years of the project focused on building ATRIUM's identity, establishing core dissemination channels, and initiating engagement with academic, institutional, and non-professional communities. Activities during this period were designed to introduce ATRIUM's objectives, create visibility across the Arts and Humanities research landscape, and begin involving critical stakeholder groups such as researchers, data providers, and cultural heritage communities.

Key achievements include the launch of the project website and social media channels, development of the visual identity and communications kit, initiation of the Transnational Access (TNA) scheme, first publications and media outreach, and the execution of major events such as the first Researcher Forum and Mutual Learning Exercise. An ex-ante impact analysis and a detailed report on the involvement of non-professional communities were also completed, laying the groundwork for targeted engagement and impact monitoring in subsequent years.

The Horizon Booster process was also important, as it enabled the development of a preliminary strategy for the exploitation of two Key Exploitable Results selected as examples. The methodology used can now be applied to the remaining KERs.

Period	Action	Output
M1-M3	Establishment of project identity and communications infrastructure	Website, logo, communications kit, social channels
M3	Opening of first TNA call	Start of mobility and training programme
M6	First structured communication reporting	Quarterly newsletter and communication summary
M9-M12	Initial dissemination at major events	Conference presentations and workshops
M12	First ATRIUM Researcher Forum	Structured feedback from research community
M18	Launch of ATRIUM Catalogue Spotlight campaign	Weekly promotion of tools and services
M18	Release of institutional video materials	Project overview video and RI-focused clips
M21	First Mutual Learning Exercise	Engagement with data providers and technical users
M22	Horizon Booster service finished	Final report summarising the process and the main achievements
M24	Ex-ante impact evaluation and non-professional communities report	Baseline impact assessment and community insights

Throughout this period, ATRIUM published four newsletters per year, maintained regular communication across social media channels, and implemented analytics monitoring to evaluate online reach and engagement. Partners actively contributed to dissemination activities by leveraging institutional networks and participating in international events, ensuring broad visibility of the project across Europe and beyond.

4.2 Phase 2: consolidation and expansion (M25–M36)

The period from M25 to M36 marks a transition from awareness-raising to consolidation and community uptake. During this phase, ATRIUM will focus on showcasing concrete outputs, strengthening user engagement, and expanding the reach of the TNA scheme, demonstrators, training materials, and workflow catalogues.

Practical training resources, including online modules and video tutorials, will be developed and released, while stakeholder-specific workshops will reinforce adoption among researchers, cultural heritage institutions, and citizen science groups. Case studies from TNA participants will be highlighted to demonstrate the applicability of ATRIUM services in real research environments.

4.3 Phase 3: consolidation of impact and legacy (M37–M48)

The final project phase will focus on institutionalisation, long-term sustainability, and the documentation of ATRIUM's legacy. Activities will include the publication of final guidance materials, policy briefs, and toolkits; the delivery of the final set of training initiatives; and increased engagement with policy makers to position ATRIUM's resources within the wider European research infrastructure ecosystem.

Digital assets, workflows, demonstrators and training content will be curated and made openly available to ensure continued value beyond the end of the funded period. Final impact indicators will be collected and reported, and the project will conclude with a coordinated communication and dissemination campaign highlighting long-term benefits for the Arts and Humanities community.

4.4 Continuous activities (M1–M48)

Certain activities are designed to run throughout the duration of the project to ensure sustained dissemination, systematic reporting, and continuity in engagement.

Frequency	Activity
Monthly	Work Package 2 coordination meetings and analytics review
Quarterly	ATRIUM newsletter
Continuous	Website updates, social media campaigns, partner-driven dissemination
Annual	Researcher Forum and/or Mutual Learning Exercise
Ongoing	Repository of materials, publications, and training content

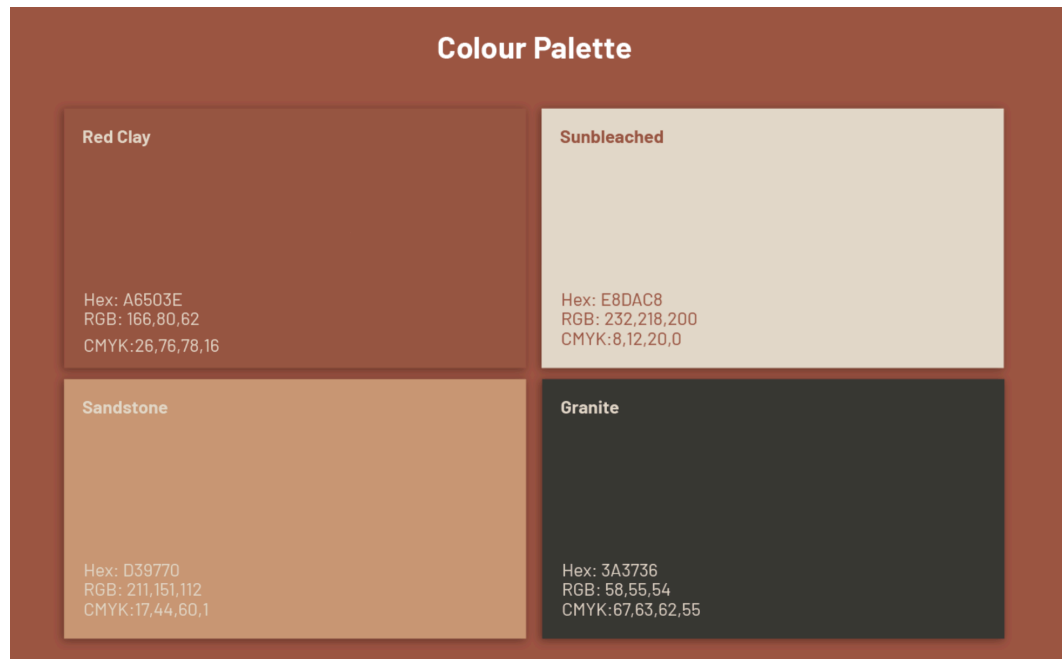
5. Visual Identity

A specific logo has been created by commissioning a professional graphic designer who worked with us extensively to create a “brand” for ATRIUM aligned with the project’s objectives, goals, and values.



ATRIUM full logo with custom typography

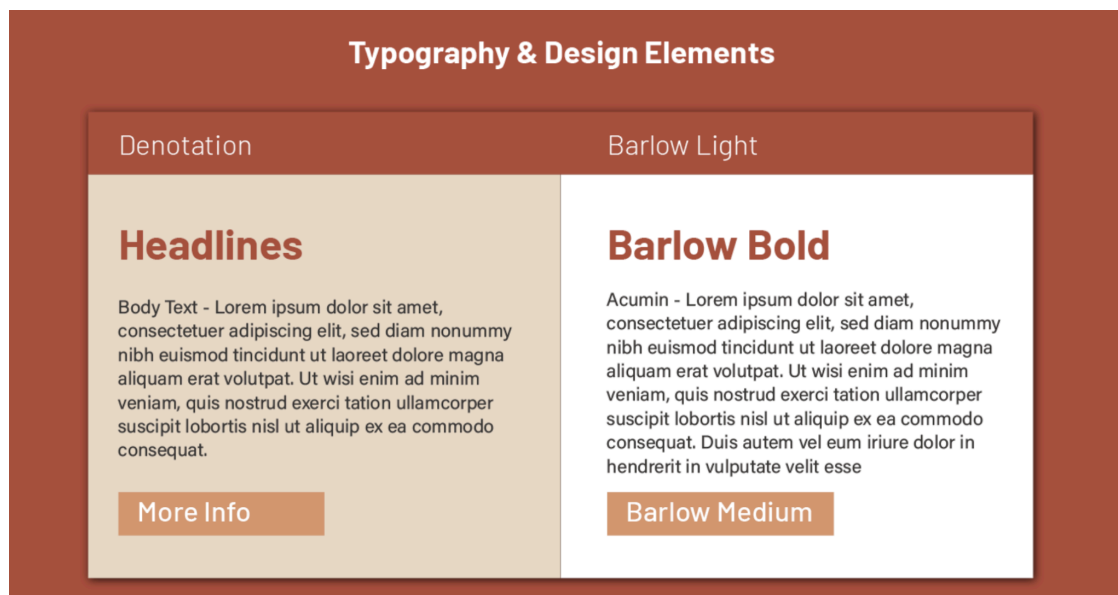
The colours selected for the visual identity of ATRIUM are consistent with the thematic focus developed with the graphic designer, as we worked on the visual identity through a series of consultation sessions. The colour scheme was developed with several themes in mind, including archaeological, connectivity, bridging old and new, and coalescence of the four leading research infrastructures.



Colour palette for ATRIUM.



Textures, photos, website headers with thematic focus.



Typography chosen to reflect the project's direction.

Brandmarks were developed in a series of consultation sessions with our graphic designer.



The ATRIUM "Brandmark" in different colours according to colour scheme.

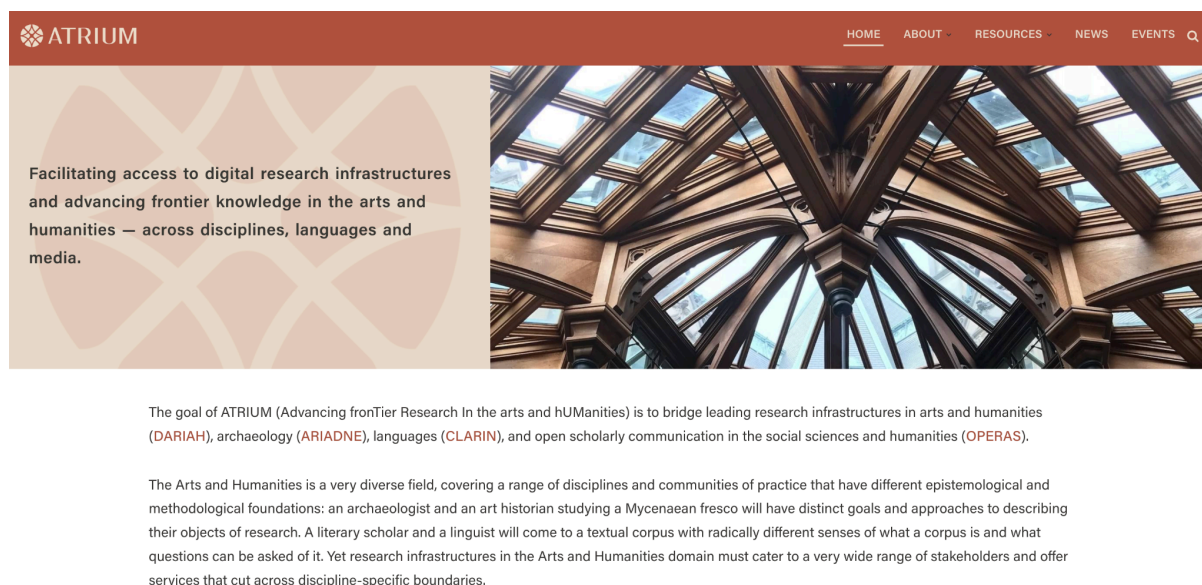
The visual identity of the ATRIUM project is consistently applied across all communication channels, both online and offline, such as the project website, social media, printed communication materials, and promotional products. As such, a dedicated "Communications Kit" section of the website ensures that the visual identity of the project is accessible and downloadable, and is available at <https://atrium-research.eu/communications-kit/>.

Every printed piece of material has thus far and will continue to acknowledge the EU support and relay the following text, as specified in the grant agreement. The website footer also displays the text:

"Funded by the European Union under Grant Agreement n. 101132163. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them."

6. Communication and dissemination channels

6.1 Project website



ATRIUM website homepage design.

The website has been designed to serve as the first port of call for those seeking information on the project, as well as a repository of relevant information for stakeholders such as project partners and collaborators. The domain atrium-research.eu was purchased in early 2024, with relevant content segmented into Menu sections.

Accessibility constraints and directives have been considered and factored into the website's user interface. In particular, ATRIUM is committed to ensuring digital accessibility for people of all abilities and has been designed to align with the Web Content Accessibility Guidelines (WCAG) 2.2 at Level AA. Development efforts focused on ensuring high readability through sufficient colour contrast between text and backgrounds, providing full functionality via keyboard navigation for users who rely on assistive technologies, and including descriptive alternative text for all informative images. The project remains dedicated to maintaining an inclusive digital environment and continually improving the user experience for everyone.

Under the "Resources" section of the menu tab, throughout 2024 the submenu tabs were updated to categorise the relevant information for "Transnational Access", "Communications Kit", "Deliverables", "Services & Software Catalogue", "Workflows Catalogue" and "Publications".

The figures below show the current 2025 iteration. Moving forward into 2026, provisions will also be made for the site to host information about the stakeholder forums held under Task 7.2

(The ATRIUM Bridge), along with dedicated sections for the ATRIUM Curriculum and Peer Review Framework, when they are ready for publication and dissemination.

The goal of ATRIUM (Advancing frontTier Research In the arts and hUManities) is to bridge leading research infrastructures in arts and humanities ([DARIAH](#)), archaeology ([ARIADNE](#)), languages ([CLARIN](#)), and open scholarly communication in the social sciences and humanities ([OPERAS](#)).

The Arts and Humanities is a very diverse field, covering a range of disciplines and communities of practice that have different epistemological and methodological foundations: an archaeologist and an art historian studying a Mycenaean fresco will have distinct goals and approaches to describing their objects of research. A literary scholar and a linguist will come to a textual corpus with radically different senses of what a corpus is and what questions can be asked of it. Yet research infrastructures in the Arts and Humanities domain must cater to a very wide range of stakeholders and offer services that cut across discipline-specific boundaries.



ATRIUM website homepage with informational video.

Transnational Access – Travel Grants

ATRIUM will offer researchers and research teams the chance to visit 16 research infrastructures and organisations in the Arts and Humanities abroad.

[More info](#)



Transnational Access (TNA) Scheme section on the ATRIUM homepage.



Transnational Access Scheme Grants

The Fourth Call for TNA Applications is now open!

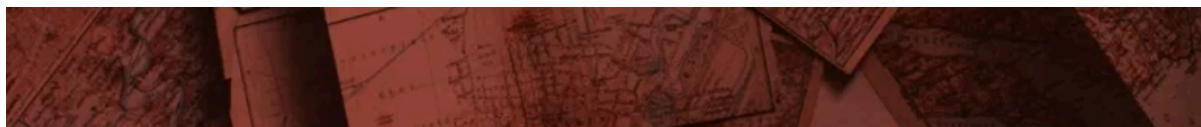
We're pleased to announce that the next call for applications is now live. While Summer Schools are not available in this round, we are accepting applications for Individual Access placements.

Application deadline: 31 December 2025

The ATRIUM project is now accepting applications for its Transnational Access (TNA) scheme, offering fully funded placements across Europe for researchers. This initiative is designed to support Arts and Humanities researchers by providing access to expert knowledge, mentorship, and tools from leading Data Management organisations.

Dedicated TNA page on the ATRIUM site available at atrium-research.eu/travel-grants.

Under the “Resources” section, users can find the “Services and Software” page. This section introduces the ATRIUM Catalogue hosted on the SSH Open Marketplace, where users can explore the tools and services developed or used within the ATRIUM project. Each entry links to detailed information, training materials, datasets, publications, and practical workflows. The catalogue includes only resources that are publicly accessible, described with adequate metadata, and available on the SSH Open Marketplace, with support provided to partners to meet these criteria if necessary. A total of 52 tools and services are currently included, all searchable under the keyword “ATRIUM catalogue” in the search box on the homepage.



Service & Software Catalogue

The ATRIUM project promotes a comprehensive set of services & tools designed to support all the stages in the digitally enabled data-driven research in the Arts and Humanities. This curated catalogue features state-of-the-art resources for creating, processing, analyzing, preserving, and reusing digital data across various disciplines, from archaeology to linguistics.

Explore the services and tools – whether you're managing textual corpora, analyzing geospatial data, transcribing spoken field notes, or engaging in other research activities.

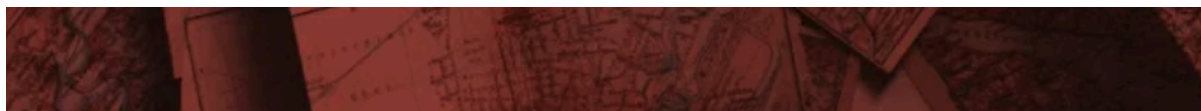
Discover the ATRIUM Catalogue on SSH Open Marketplace

Our list of tools and services is hosted on the SSH Open Marketplace, a comprehensive discovery portal that collects and contextualizes resources for Arts and Humanities research communities. By clicking on the titles of the tools and services, you will be taken directly to their entries on the SSH Open Marketplace where you can further explore detailed information, training materials, datasets, publications, and workflows associated with each tool. The platform not only helps you find what you need but also connects you with related publications and case studies, providing valuable context and experimenting practical applications to improve your research.

You can also explore the full list of tools and services of the ATRIUM catalogue on the SSH Open Marketplace, by simply entering the keyword "ATRIUM catalogue" into the search box on the homepage. This search will direct you to the complete list of tools and services, as well as workflows created using them.

Services & Software Catalogue.

The "Workflows Catalogue" section presents the collection of ATRIUM workflows, which offer structured, step-by-step guidance for conducting research in the arts and humanities. Although often overlooked, workflows are essential resources that help researchers integrate different digital tools and methods across the entire research data lifecycle. ATRIUM develops and shares workflows that support the adoption of digital practices, all hosted and created using templates from the SSH Open Marketplace. At the time of writing, a total of 17 workflows are currently available and can be browsed directly through the ATRIUM Workflow Catalogue.



Workflows

Workflows are often overlooked in the arts and humanities but are essential for research. Workflows describe specific research scenarios to provide researchers with a clear step-by-step guide to help them integrate different tools and methods to achieve their goals.

ATRIUM develops and shares workflows that help researchers integrate digital methods into their work. These guides outline how to navigate the research data lifecycle from start to finish.

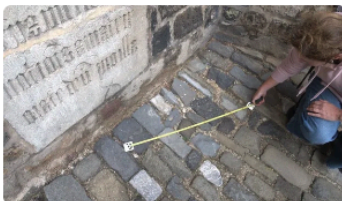
ATRIUM workflows are hosted and built using templates from the [SSH Open Marketplace](#). Browse the ATRIUM Workflow catalogue below:

17 workflows

- [3D Digital Representations of Heritage Assets](#) >
- [3D-HBIM workflow](#) >
- [Acquiring Images for Automatic Text Recognition](#) >
- [Automatic Image Annotation Workflow](#) >
- [Automatic Text Recognition Roadmap](#) >
- [Automatic Text Recognition using Object Detection with eScriptorium](#) >

Workflows

The “News” section of the website hosts details of relevant updates from the project, project partners, and other important news relevant to the wider ATRIUM community. There is also a “TNA Blog” section, which features updates from the recipients of the Transnational Access Scheme (TNA) travel grants detailing via reports how this scheme has benefitted and supported their research in line with the goals and objectives of the project in Y1 and Y2. This section is maintained and has been regularly updated with posts by recipients of the TNA Travel Grants, and used to promote the experience of the scheme both during the rolling application periods and throughout 2025. Recipients of the TNA scheme have been generous in sharing their report experiences in blog post form, which has been one of ATRIUM’s most popular and regular communication outlets: over 12 blog posts were published throughout 2025.



Report from ATRIUM 3D Summer School
by Barbara Ritterová

During the week of September 15 – 19, I had the opportunity to attend the ATRIUM 3D Summer School, hosted by the Institute of Archaeology of the Czech Academy of Sciences in Brno...



ATRIUM Summer School: 3D Models in archaeology
by Maria Sotomayor

From the 15 to 19 September 2025, I had the opportunity of joining the ATRIUM summer school on 3D models in archaeology at the Institute of Archaeology of the Czech Academy of Science, Brno. For one week I could learn how to create 3D models of archaeological artefacts and historic monuments through photogrammetry and laser scanning, as well as how to process and manage them.



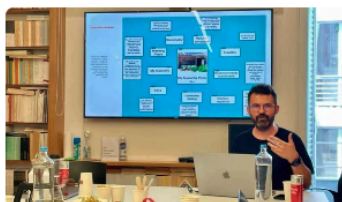
My ATRIUM 3D Summer School Brno
by Marco Brunello

In September 2025, I had the opportunity to attend the ATRIUM 3D Summer School at the Institute of Archaeology of the Czech Academy of Sciences in Brno, Czechia.



ATRIUM 3D Summer School Brno
by Katarína Hladíková

During the second week of September (15th–19th), I had the privilege to attend the ATRIUM 3D Summer School in Brno, hosted by the Institute of Archaeology of the Czech Academy of Sciences.



Exploring Heritage Building Information Modelling for Conservation
by George Artopoulos

From July 6 to 18, 2025, I had the opportunity and the pleasure to spend two weeks as an ATRIUM TNA Individual Access fellow at the Athens University of Economics and Business, Greece.



Advancing Annotation of Historical Maps: ATRIUM TNA Fellowship at ACDH-CH
by Maria Ilvanidou

From May 25 to June 8, 2025, I had the opportunity and the pleasure to spend two weeks as an ATRIUM TNA Individual Access fellow at the Austrian Centre for Digital Humanities and Cultural Heritage (ACDH-CH) of the Austrian Academy of Sciences. My project focused on exploring the use of controlled vocabularies as a systematic approach for annotating

The ATRIUM TNA blog posts from Summer 2025.

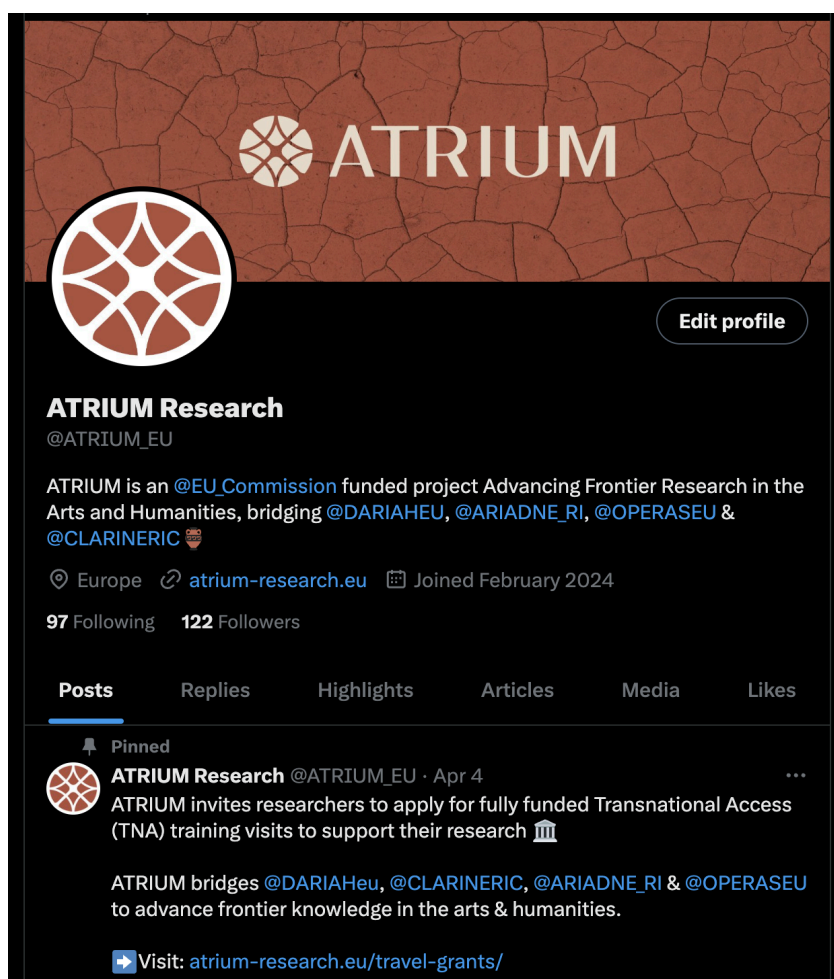
6.2 Social media

ATRIUM has dedicated project pages on LinkedIn, BlueSky and X (formerly Twitter). Since the first systematic social media campaign, in which connections from the various research infrastructures and partners of the project were invited to follow the page and engage with the content, the following has grown steadily across all platforms, and KPIs are progressing as predicted (see KPI table in Section 9 for a full social media statistics breakdown).

Social media icons feature on the project website homepage to incite website visitors to connect with the profiles, and relevant news, updates, and opportunities are posted several times a week, actively on each page.

As overall use of the platform X has declined globally and due to the recent evolution of the platform, internal discussions were held about the future of the project's presence on X, especially given the context of the leading research infrastructures (including DARIAH, CLARIN, and OPERAS) left the platform in 2025. WP2 and the ATRIUM Executive Board discussed and

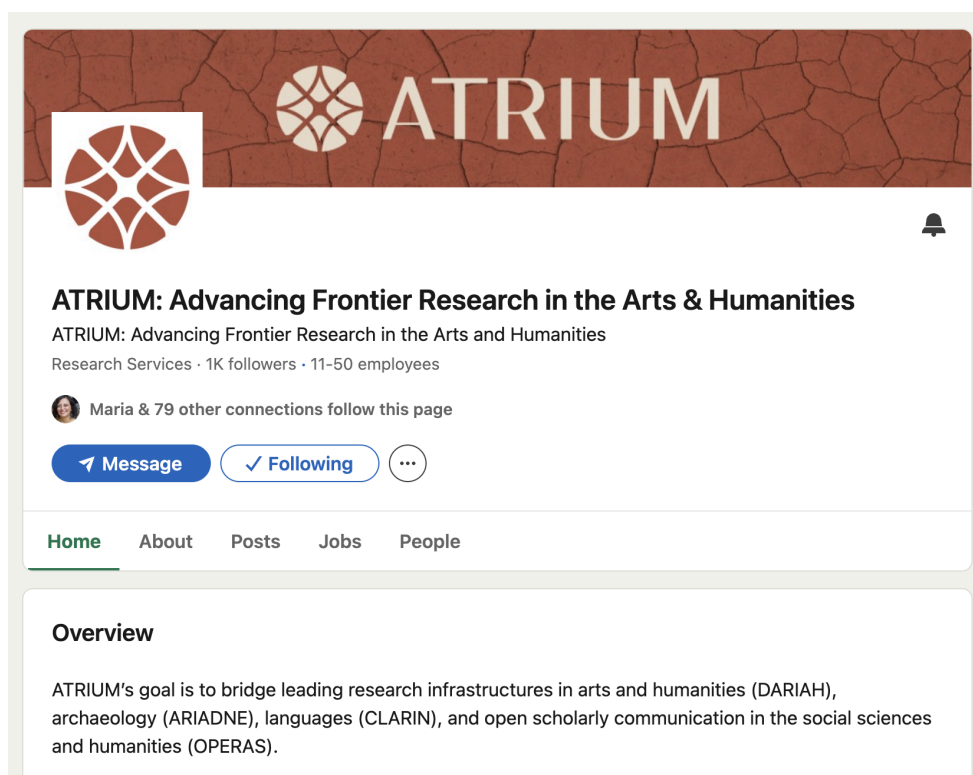
then decided to reduce the presence on X. While the project will remain on X for the foreseeable future, more attention and engagement strategies will be utilized on other platforms in order to increase both followers and engagement. The ATRIUM X profile, including engagement statistics and overall relevance will be reviewed at the end of year three, and steps will be taken from then on, if needed, to amend or remove its presence from the project. Instead, the project decided to shift the ATRIUM social media presence to the ATRIUM project pages on LinkedIn and BlueSky, which have seen strong followings that are increasing steadily, particularly with LinkedIn. The main focus will be dedicated to building this reach and engagement on these platforms over the remainder of the project.



ATRIUM X (formerly Twitter) profile.



ATRIUM Bluesky profile



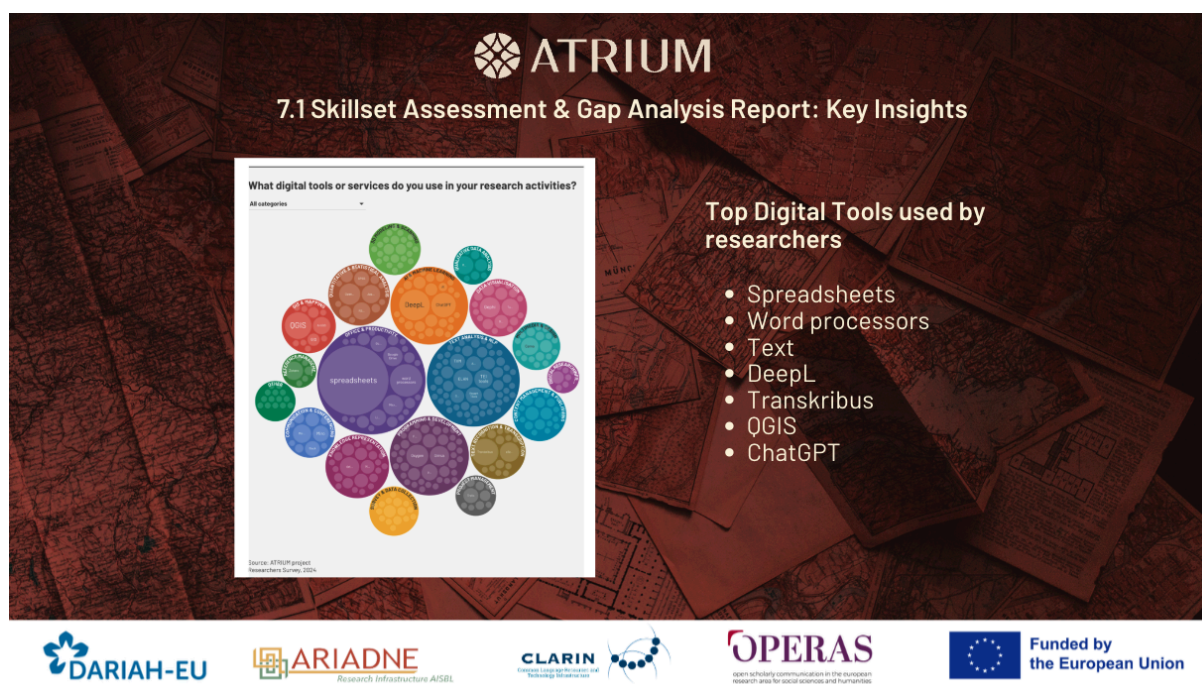
ATRIUM LinkedIn page

Throughout 2024 and 2025, a number of social media campaigns were launched to support key initiatives and outcomes of the project. The first campaign, accompanied by the hashtag #ATRIUMCatalogueSpotlight, consisted of a weekly post across all ATRIUM social media accounts promoting a different resource from the ATRIUM Catalogue. It ran throughout 2024

and was used to highlight these resources and their connections with the SSH Open Marketplace. In 2025, the focus shifted to a campaign aimed at promoting the results of the ATRIUM Skills Gap Analysis Report. The campaign introduced followers to the key findings of the report and will culminate in a blog post to be published in Month 24.

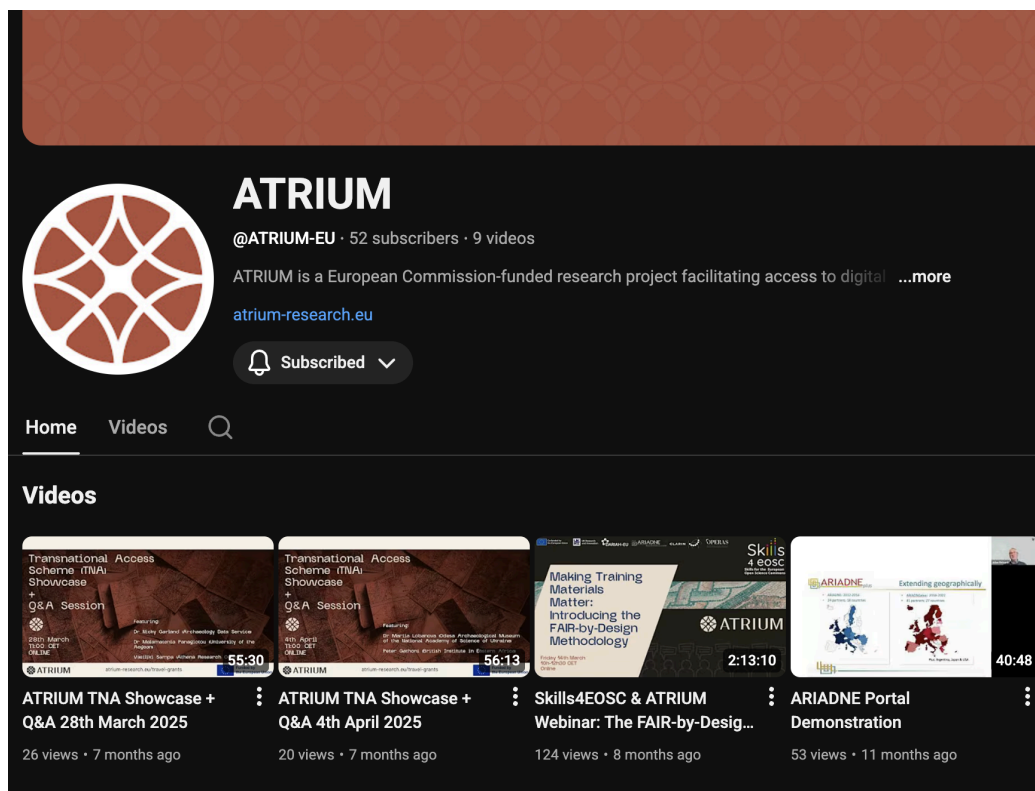


Poster promoting the ATRIUM Catalogue.



ATRIUM Skills Gap Analysis Report Social Media Post

There is also a dedicated ATRIUM YouTube channel which is used to publish informational videos about ATRIUM that have been produced throughout the duration of the project (see Section 6.6). Current videos include: Introductory videos to ATRIUM, shorter explanatory videos demonstrating how each research infrastructure connects with the project, recordings of specialized webinars and demonstration lectures that have been produced by the project.



The ATRIUM YouTube channel.

Throughout Y3 and Y4, and until the end of the project, additional social media campaigns and outreach activities will be conducted via these platforms and dedicated to engaging these followers.

6.3 Newsletters and press releases

A quarterly ATRIUM newsletter is distributed to the ATRIUM mailing list. There are designated sections for “Project news”, “Conference Participation”, and updates from participants of the Transnational Access Scheme (TNA) such as interviews, blog posts, and accounts of their placements, whether through Individual Access or Summer School participation.

Visitors to the ATRIUM website are invited to sign up to a mailing list to receive these updates, with details how on how to sign up at the footer of the ATRIUM website homepage and also

available at this link which can be shared as a URL:
<https://atrium-research.eu/ninja-forms/1kqsp/>.

Previous versions of all newsletters are archived on the ATRIUM website, at the designated "Newsletters" tab of the "News" item on the main menu:
<https://atrium-research.eu/newsletters/>.

Three newsletters have been sent in Y1, four in Y2, with additional four planned to correspond to each quarter for the remainder of the project.



The first ATRIUM newsletter which was sent in June 2024.

Subscribe to our mailing list and newsletter

Email address *

First name *

Last name *

Institution

☐ If you subscribe to ATRIUM's mailing list and newsletter, you agree to share with us the following personal information: your name (first and last name), your email address and, optionally, your institution/affiliation (i.e. the research institute or university you are working in).

We use these data to send you messages (at the email address you gave us) about ATRIUM's activities (i.e. events, call for projects, etc.) or activities carried out by our partners (i.e. events, job offers, etc.). All messages sent to this mailing list have to be approved by the ATRIUM Project Officer, so that you only receive moderated information we believe to be of interest to you.

For this, we use the services of MailChimp. Your data will be stored as long as you use the service. You can change or delete your personal information at any time by contacting us.

Submit

Subscription option on the homepage of the ATRIUM website

The following privacy policy for the newsletter has been included on the project website:

If you subscribe to ATRIUM's mailing list and newsletter, you agree to share with us the following personal information: your name (first and last name), your email address and, optionally, your institution/affiliation (i.e. the research institute or university you are working in).

We use these data to send you messages (at the email address you gave us) about ATRIUM's activities (i.e. events, call for projects, etc.) or activities carried out by our partners (i.e. events, job offers, etc.). All messages sent to this mailing list have to be approved by the ATRIUM Project Officer, so that you only receive moderated information we believe to be of interest to you.

For this, we use the services of MailChimp. Your data will be stored as long as you use the service. You can change or delete your personal information at any time by contacting us.

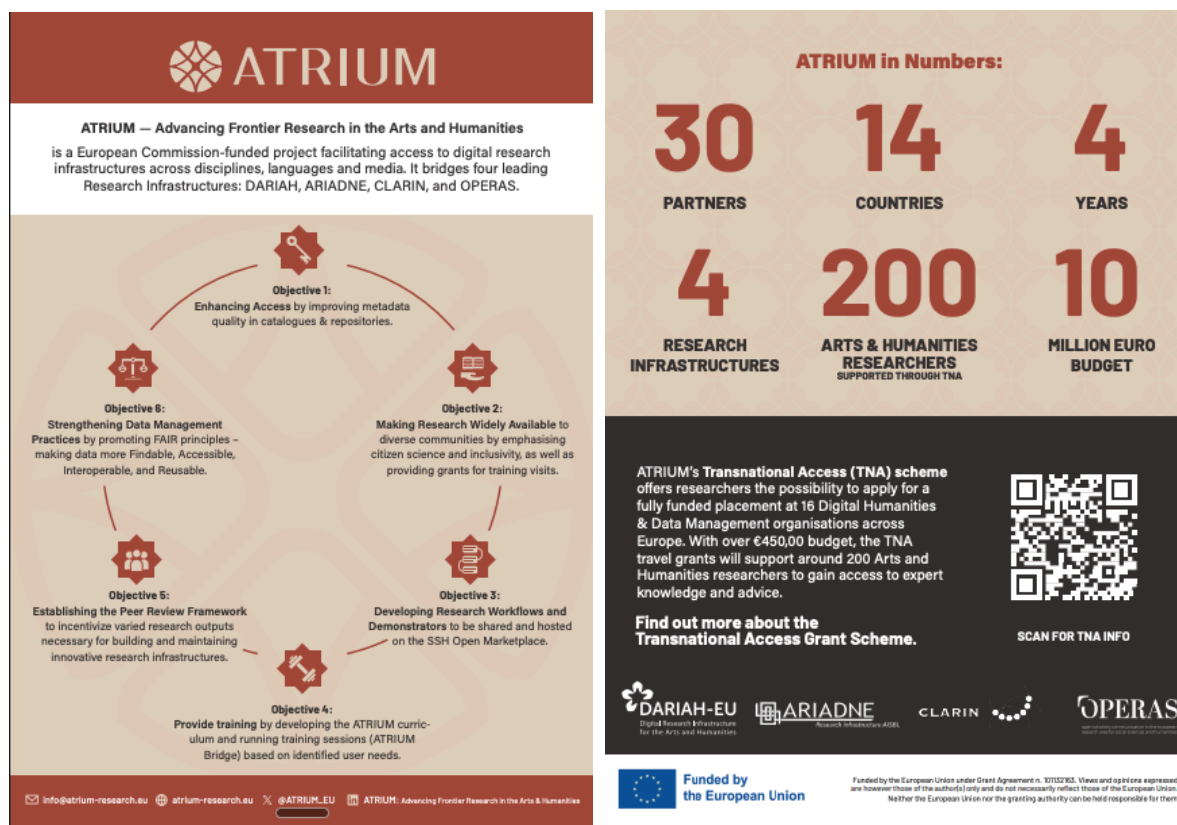
A [press release template](#) is available in the Shared Drive, and this template is being used for media announcements, individual emails to prospective stakeholders, and when official communications need to be disseminated through mailing lists.



Press release template

6.4 Communication materials

The first informational flyer was produced in Year 1 and is available on the ATRIUM website, serving as a generic flyer to share information about ATRIUM and direct interested parties to the Transnational Access (TNA) Scheme call. As the project progresses and based upon context, equivalent flyers, posters and other printed promotional materials will be produced as required.



ATRIUM informational flyer with QR codes directing to the website.

The flyer has been translated into all the partners' languages (Czech, Dutch, French, German, Greek, Italian, Polish, Portuguese, Serbian, and Swedish) to facilitate distribution at local events, with PDF versions available on the [ATRIUM website](https://atrium-research.eu).

A standard presentation has also been prepared, in a downloadable template form to ensure maximum compatibility with ATRIUM branding and visual identity, that is freely available on the website in the Communications Kit page on the website: <https://atrium-research.eu/communications-kit/>.

A poster template is also available on the internal ATRIUM shared drive and serves as the basis for posters that represent elements of the project's output at conferences, gatherings, and annual events associated with RIs, etc.

6.5 Publications

Scientific and non-scientific publications available in open access will contribute to the dissemination process, increasing visibility, ensuring quality and credibility. In the first two years of the project, ATRIUM focused on presenting work at events and conferences. In the second half of the project, we will focus more on publishing finished outputs in journals and other publication venues.

All publications will be kept in a repository on a [dedicated section on the ATRIUM website](#), under the menu heading “Publications”.

ATRIUM-related publications in 2024:

- Arıkan-Caba, C., Carloni, M., Charvát, V.M., Durco, M., & Felicetti, A. 2024. ‘Overview of Models and Formats in the Field’. Zenodo, 30 December 2024. <https://doi.org/10.5281/zenodo.14575783>.
- Delmazo, C. & Umerle, T. 2024. ‘Report of First Researcher Forum’. Zenodo, 18 December 2024. <https://doi.org/10.5281/zenodo.14514990>.
- Niccolucci, F., Prandoni, C., Bassett, S., Geser, G., McConville, A., Niccolucci, G., & Black, M. 2024. ‘ATRIUM Communication and Dissemination Report Y1 + Plan Y2’. Zenodo, 5 February 2025. <https://doi.org/10.5281/zenodo.14811235>.
- Tasovac, T. & Garnett, V. 2024.. ‘The Guidelines for Producing the ATRIUM Curriculum’. Zenodo, 30 September 2024. <https://doi.org/10.5281/zenodo.13867113>.
- Serra, C., Pereira, C.S., Couto, P., & Santos Silva, A. 2024. ‘HBIM and OpenBIM for Management of Historic Architectural Ceramic Tiles Information.’ In: *EPoCH 2024: Emerging Perspectives on Conservation and Heritage*, Universidade Católica Portuguesa, Porto.

ATRIUM-related publications in 2025

- Baillot, A., Black, M., Carloni, M., Charvát, V.M., Ďurčo, M., & Kurzmeier, M. 2025. ‘How Not to Reinvent the Wheel – Workflows as a Leverage from the Past to the Future’. Presented at the DARIAH Annual Event 2025: The Past (DARIAH AE 2025), Goettingen, Germany, 1 July 2025. <https://doi.org/10.5281/zenodo.15783982>.
- Baillot, A., Pagé-Perron, E., Black, M., Durco, M., & Tasovac, T. 2025. ‘Go with the (Work)Flow! Creating Reusable and Replicable Workflows for Digital Humanities Research’. Zenodo, 23 June 2025. <https://doi.org/10.5281/zenodo.15721848>.
- Barget, M. & Schreibman, S. 2025. ‘Reading Diverse Materials from the Letters 1916-1923 Collection with HTR’. Presented at the ATRIUM ATR Summer School, Berlin, Germany, Zenodo, 5 September 2025. <https://doi.org/10.5281/zenodo.17061629>.
- Carloni, M., Durco, M., Charvát, V.M., Goosen, T., Homo, J., Isaac, A., Kurzmeier, M., & Bardi, A. 2025. ‘MetaCat Suite: Towards a Systematic Analysis of Catalogues’ (version 1.0.0). Zenodo, 26 September 2025. <https://doi.org/10.5281/zenodo.17208781>.
- Carloni, M., Ďurčo, M., Charvat, V.M., Goosen, T., Homo, J., Isaac, A., Kurzmeier, M., & Bardi, A. 2025. ‘MetaCat suite: Towards a systematic analysis of catalogues’, pp. 76-80, in: CLARIN Annual Conference Proceedings 2025, Vienna, Austria, https://www.clarin.eu/sites/default/files/CLARIN2025_ConferenceProceedings.pdf
- Chiffolleau, F. 2025. ‘Lessons from the ATRIUM ATR Summer School (September 1-5, 2025)’. Zenodo, 19 September 2025. <https://doi.org/10.5281/zenodo.17159181>.
- De Santis, L. & Bertozzi, A. 2025. ‘Boosting Data Interoperability of GoTriple.eu – Ontology Alignment in the ATRIUM Project’. Zenodo, 29 May 2025. <https://doi.org/10.5281/zenodo.15592039>.

- De Santis, L. & Pedinotti, P. 2025. 'An LLM-based Approach for Translating Keywords in Scientific Publications'. Presented at the Multilingual Digital Terminology Today 2025 (MDTT 2025), Thessaloniki. Zenodo, 19 June 2025. <https://doi.org/10.5281/zenodo.15911826>.
- Delmazo, C., van der Lek, I., Gasia, S., Bénérière, S., & Ilvanidou, M. 2025. 'The ATRIUM Skillset Assessment and Gap Analysis Report'. Zenodo, 21 August 2025. <https://doi.org/10.5281/zenodo.16918112>.
- Delmazo, C., Umerle, T., Homo, J., De Santis, L., Lombardo, T., Rosiński, C., Wołczuk, N., Rychlik, K., & Wachek, B. 2025. 'Report on the First ATRIUM Mutual Learning Exercise (GoTriple)'. Zenodo, 24 June 2025. <https://doi.org/10.5281/zenodo.15728985>.
- Faka, M., Orabi, R., Tsagka, A., Papageorgiou, A., Vassallo, V., Hermon, S., Bakirtzis, N. (2025), Hypothetical Reconstruction for the Conservation, Preservation and Valorisation of Cultural Heritage: the Kampanopetra Basilica in Salamis, Cyprus. In Digital Heritage, Campana, S., Ferdani, D. Graf, H. Guidi, G. Hegarty, Z., Pescarin, S., Remondino, F. (eds), *The Eurographics Association*, 10.2312/dh.20253309
- Filiposka, S. 2025. 'ATRIUM Training: FAIR-by-Design Methodology for Learning Materials'. Zenodo, 21 March 2025. <https://doi.org/10.5281/zenodo.15064638>.
- Gouzi, F., Gelati, F., Baillot, A., & Tasovac, T. 2025. "Enhancing Transparency and Reusability through Diamond Publishing Model: *Transformations, a DARIAH Journal*". Zenodo, 22 September 2025. <https://doi.org/10.5281/zenodo.16779916>.
- Gouzi, F., Baillot, A., Bénérière, S., Delmazo, C., & Tasovac, T. 2025. 'Building a Peer Review Evaluation Framework for Non-Traditional Research Outputs'. Zenodo, 16 July 2025. <https://doi.org/10.5281/zenodo.15967748>.
- Ilvanidou, M., Carloni, M., Aslanoglou, A., & Dritsou, V. 2025. 'Towards a Collaborative Map Annotation Workflow: Annotating Ancient Places on Rigas' Charta of Greece'. Presented at the Computer Applications and Quantitative Methods in Archaeology 2025 (CAA 2025), University of West Attica, Athens, Greece. Zenodo, 7 May 2025. <https://doi.org/10.5281/zenodo.15776216>.
- Niccolucci, G., Prandoni, C., Niccolucci, F., & Geser, G. 2025. 'Engaging diverse communities: the ATRIUM project's participatory research initiatives'. DH2025 Conference, Lisbon, Portugal. Zenodo, 18 July, 2025. <https://doi.org/10.5281/zenodo.16096728>.
- Pajdla, P., Novák, D., Harasim, R., Křivánková, D., Straňák, P., Lutsai, K., & Lečbychová, O. 2025. 'Leveraging AI for Enhanced Archaeological Data Extraction: Workflows for Textual and Image-Based Data'. Presented at the CAA2025 Digital Horizons (CAA2025), Athens. Zenodo, 7 May 2025. <https://doi.org/10.5281/zenodo.15582856>.
- Pajdla, P. & Harasim, R. 2025. "Workflow Pro Automatické Rozpoznávání Archeologických Nálezů Pomocí Umělé Inteligence (AI)". Presented at the Počítačová podpora v archeologii 2025 (PPA2025), Broumov. Zenodo, 28 May 2025. <https://doi.org/10.5281/zenodo.15606528>.
- Pajdla, P., Harasim, R., Novák, D., & Lečbychová, O. 2025. 'Automated Archaeological Image Annotation'. Presented at the 31st EAA Annual Meeting (EAA2025), Belgrade, virtual. Zenodo, 3 September 2025. <https://doi.org/10.5281/zenodo.17063021>.

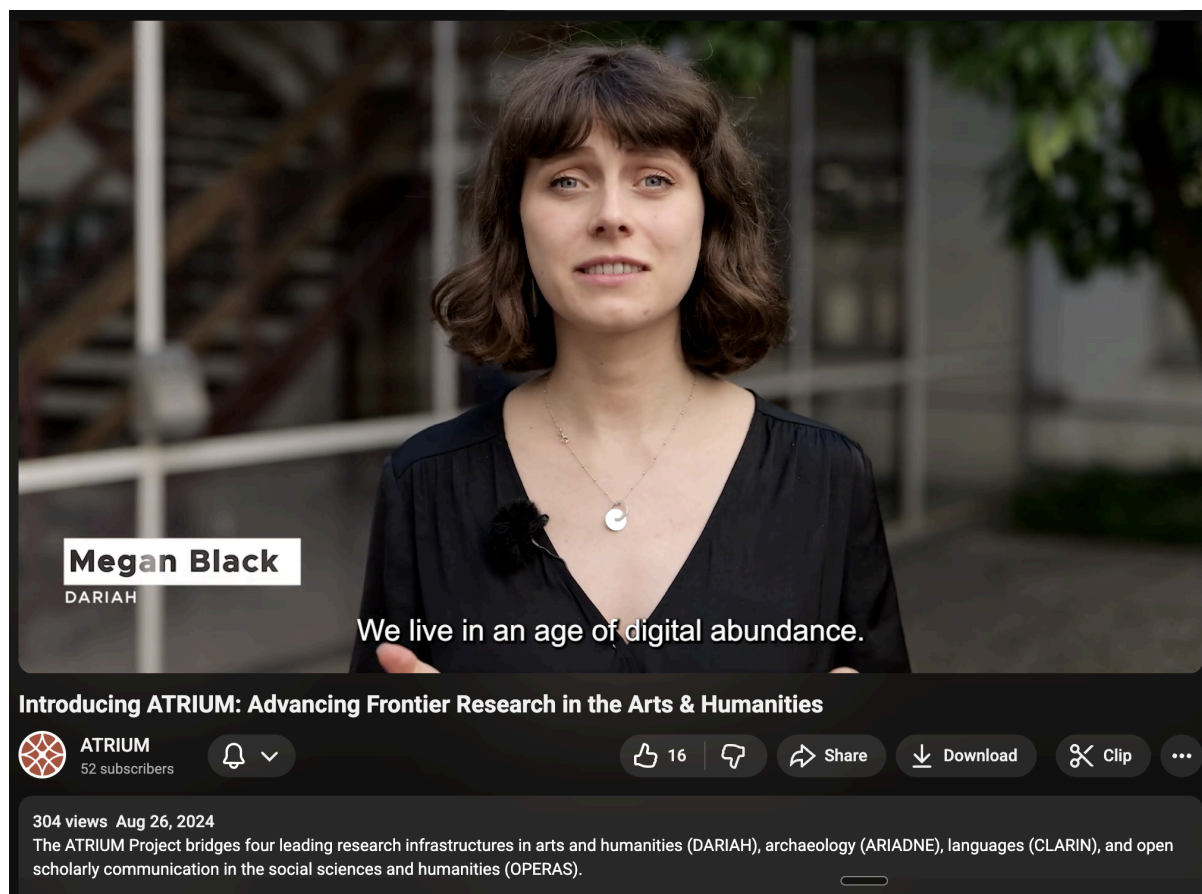
- Umerle, T., Lombardo, T., van der Lek, I., Ilvanidou, M., & Delmazo, C. 2025. 'Engaging Researchers for Improving Services and Training: Insights from the ATRIUM Survey and Researcher Forum'. Zenodo, 17 July 2025. <https://doi.org/10.5281/zenodo.16032754>.
- Van Uytvanck, D., Durco, M., & van den Heuvel, H. 2025. 'Interim Assessment on Service Interoperability and EOSC Integration'. Zenodo, 30 September 2025. <https://doi.org/10.5281/zenodo.17232562>.

Potential and prospective journals to publish ATRIUM-related content in:

- KULA journal: <https://kula.uvic.ca/index.php/kula>
- *International Journal of Architectural Heritage* (Taylor & Francis): <https://www.tandfonline.com/toc/uarc20/current>
- *Journal of Cultural Heritage* (Elsevier): <https://www.sciencedirect.com/journal/journal-of-cultural-heritage>
- *Language Resources and Evaluation*: <https://link.springer.com/journal/10579>
- *Natural Language Processing*, Cambridge University Press: <https://www.cambridge.org/core/journals/natural-language-engineering#>
- *Transactions of the Association for Computational Linguistics (TACL)*: <https://aclanthology.org/venues/tacl/>
- *Post-Medieval Archaeology*: <https://spma.org.uk/our-journal>
- *Computational Humanities Research*, Cambridge University Press: <https://www.cambridge.org/core/journals/computational-humanities-research/information/about-this-journal>

6.6 Videos

The first informational video introducing ATRIUM as a project, entitled "Introducing ATRIUM: Advancing Frontier Research in the Arts and Humanities" was uploaded to the ATRIUM YouTube channel in M8, and is embedded on the website homepage. This 4-minute video features interviews with representatives from the four Research Infrastructures involved, who outline the project's goals and explain its relationship to each of their institutions. Each interviewee mentions an important aspect of ATRIUM, such as bridging the four infrastructures, facilitating access to workflows, establishing demonstrators, developing training resources, and the TNA scheme.

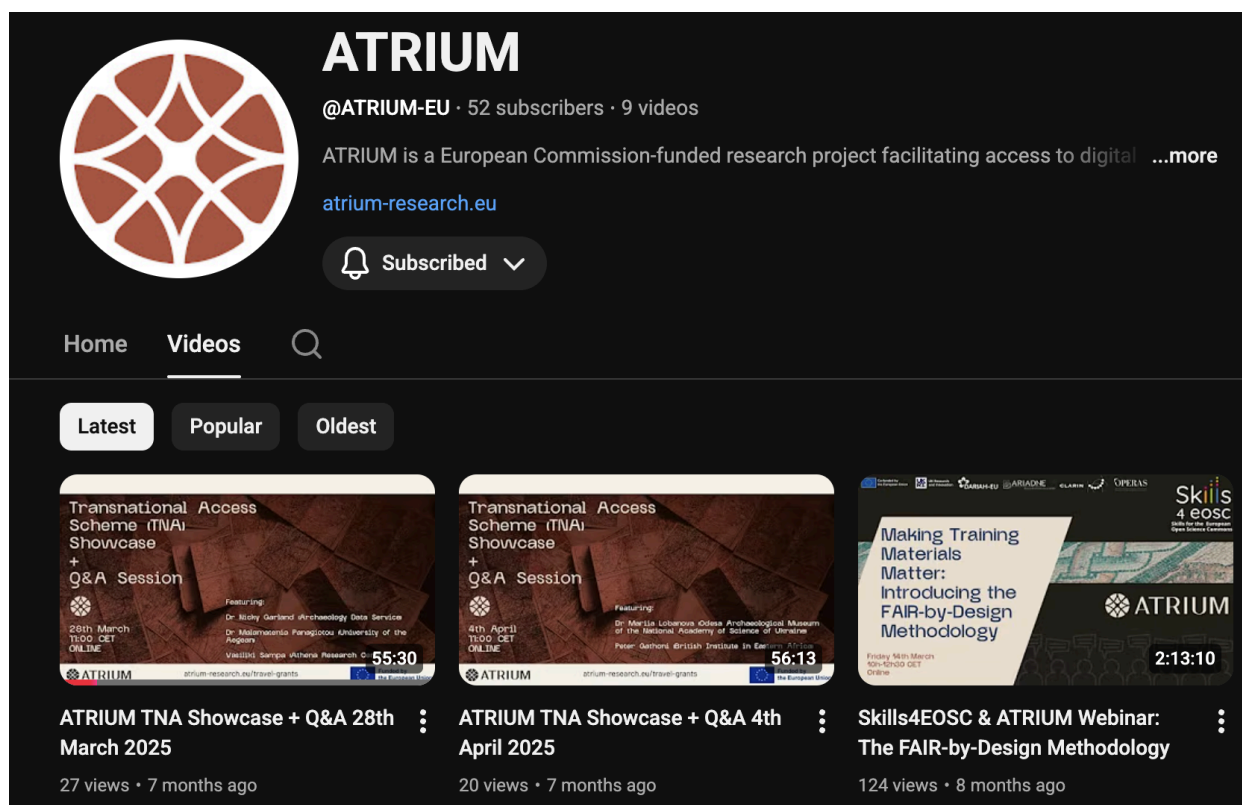


The first ATRIUM informational video, produced in Y1.

Four shorter videos dedicated to explaining what the project means for each of the four Research Infrastructures were also produced in addition to the initial one and have been distributed via the project's social media accounts, and are used for general promotion.

Throughout Year two, further videos in the form of recordings have been uploaded to ATRIUM's YouTube channel, including recordings of the first TNA Showcase webinar series, a [Skills4EOSC](#) and ATRIUM collaborative webinar, and a recording of the ARIADNE Portal demonstration webinar.

Further informational videos are planned for Year 3, which will feature informational content on Workflows, ATRIUM's Peer Review Framework, and spotlight videos focusing on participants of the TNA scheme. Production has already begun on the first two of these planned videos, with filming and further production with a designated videographer to take place in M25 at Centre Marc Bloch in Berlin during the DARIAH-EU Strategy Days.



ATRIUM's YouTube channel featuring videos uploaded in Y2.

7. Events

The project's participation in various conferences, events, and gatherings is referenced on the website, which has a designated section for events, as well as qualifiers designed to filter the information on the website, according to the following categories:

- ❖ "Upcoming"
- ❖ "Past"
- ❖ "Organised"
- ❖ "Presented at"
- ❖ "Supported"
- ❖ "Endorsed"

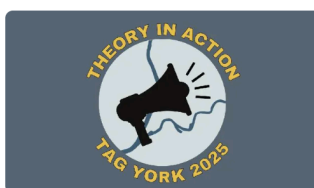
Events

All Organised Presented at Supported



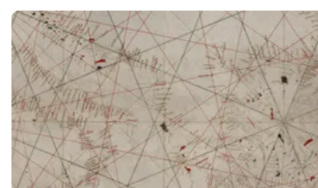
CAA 2026 in Vienna, Austria

Date: March 31 – April 4, 2026
Location: Vienna, Austria



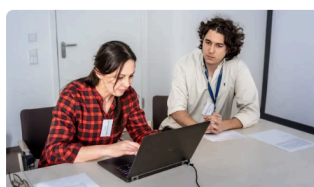
Theory in Action TAG 2025

Date: December 15 – 17, 2025
Location: York, UK



Linked Pasts 2025

Date: December 1 – 12, 2025
Location: Online



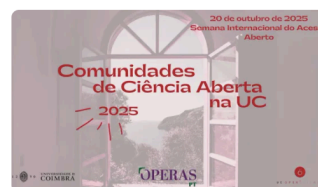
2nd ATRIUM Researcher Forum: Transcription Portal

Date: November 25, 2025
Location: Munich, Germany



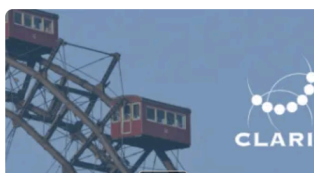
Hackathon: Collaborative Translation Activity for GoTriple Ontology

Date: October 22, 2025
Location: Hybrid



Open Science Communities at UC 2025

Date: October 20, 2025
Location: University of Coimbra



Events page on ATRIUM website

Step-by-step promotion of events is conducted through ATRIUM outreach channels, such as scheduled social media posts, resharing and reposting of tagged posts on project social media, and updates in the newsletter. At a later project stage, the ATRIUM integrated services and use

cases of digital research workflows will be showcased through various platforms, such as tutorials and workshops at relevant conferences, in addition to dedicated Hackathons.

Event promotion, coverage and follow-up is central for ATRIUM's outreach. Every ATRIUM related event, workshop, or webinar is communicated and posted on the dedicated section of ATRIUM's website and social media channels, covering activities before, during and after an event. For example, a news item from each event where the project has been represented, such as this highlight from Y2, ATRIUM's presence at the CAA Conference in Athens, Greece which saw the following news item:

<https://atrium-research.eu/news/caa-2025-reusable-digital-research-workflows-for-archaeology/>, with contributions by representatives from key partners of the project.

Workshops & webinars: In addition to the project's presence at conferences, ATRIUM has provided a series of online workshops and webinars throughout Y1 and Y2 on the project's core topics and demonstrators on online platforms such as Zoom. Video recordings of these events are available on the dedicated project's YouTube channel and will be integrated with proper contextual information and metadata into DARIAH-Campus. In Y3, further follow-up webinars along with annual TNA showcases will be facilitated.

Key online workshops and webinars from Y2 include:

- ❖ "Making Training Materials Matter: Introducing the FAIR-by-Design Methodology", jointly organized by Skills4EOSC and ATRIUM, which took place in M15 with the recording of the webinar uploaded to the ATRIUM YouTube channel:
https://www.youtube.com/watch?v=Gagjo_6lJFI
- ❖ The first TNA Showcase, which comprised two webinars that also took place in M15, featuring presentations by recipients of the TNA scheme who shared their experiences and answered a Q&A to provide information with interested prospective candidates. Both recordings are available on the ATRIUM YouTube channel:
<https://www.youtube.com/watch?v=nzeKNRTGaSq>

Researcher Forum and Mutual Learning Exercise: In the context of Task 7.2 The ATRIUM Bridge, ATRIUM has organised a series of workshops for researchers and data providers. The Researcher Forum is a workshop to foster closer interactions between researchers using infrastructure services and the providers developing those services. It helps better understand users' roles, needs, build more beneficial contacts, develop and innovate around services. The Mutual Learning Exercise is another workshop format that gives service providers and data providers the opportunity to share knowledge and best practices on (meta) data management, enrichment, aggregation and interoperability.

- ❖ The first ATRIUM Researcher Forum, which took place in M10 in the Poznań Supercomputing and Networking Center (PCSS) in Poznań, Poland, contributed to the

improvement of GoTriple, a multilingual discovery platform which is part of the OPERAS Service Catalogue.

- ❖ The First ATRIUM Mutual Learning Exercise took place at the office of the Spanish Foundation for Science and Technology (FECYT) in Madrid in M16 again focused on the GoTriple platform. The second ATRIUM Researcher Forum focused on the CLARIN Transcription Portal and took place in M23 in Munich.
- ❖ The second ATRIUM Mutual Learning Exercise will take place in Greece in Summer 2026. The organisation will start at the beginning of Y3.

Y1 ATRIUM Participation in Events

Event	Date	ATRIUM Participation	Audience	Event Listing on ATRIUM website
Conference SAA Annual meeting in New Orleans	18 April 2024	Presentation: "ATRIUM workflows and demonstrators and controlled vocabularies in archaeology"	30 attendees	https://atrium-research.eu/events/society-for-american-archaeology-annual-meeting/
ATRIUM Services and Semantics at the OPERAS Conference, Zadar	24 April 2024	Presentation: "How to Integrate Library Data into GoTriple: a Collaboration with the Text+ Consortium"	30 attendees	https://atrium-research.eu/events/operas-conference-2024/
The International Congress on Archaeological Sciences in the Eastern Mediterranean and the Middle East (ICAS-EMME), Cyprus	15 May 2024	Archaeology Conference session; speakers.	50 attendees	https://atrium-research.eu/events/the-international-congress-on-archaeological-sciences-in-the-eastern-mediterranean-and-the-middle-east-icas-emme/
SSH Open Marketplace ATRIUM Workshop at DARIAH Annual Event, Lisbon	18 June 2024	Presentation given by MP Editorial Board members & ATRIUM project members.	50 attendees	https://atrium-research.eu/events/dariah-annual-event-2024/
ARIADNE RI Training School - Heraklion	18 July 2024	Focused on Unpath'd, CDLI & other datasets	13 attendees	

EAA Conference, Rome	29 August 2024	Organiser, Chair, Speakers: "Research Infrastructures for FAIR data sharing in the heritage section"	40 attendees	https://atrium-research.eu/events/aaa-european-archaeological-association-conference/
atRium Training School in Brno	16 September 2024	Organised as part of TNA scheme, hosted by the Archaeological Information System of the Czech Republic (AIS CR) research infrastructure at the Institute of Archaeology, Czech Academy of Sciences, Brno.	30 attendees	https://atrium-research.eu/events/atrium-training-school-in-brno/
TRANSCRIBOQUEST 2024	11 September 2024	Training session organized as part of TNA scheme.	33 attendees	https://atrium-research.eu/events/transcribo-quest-2024/
ATRIUM Researcher Forum in Poznan	17 October 2024	Organiser; Improving GoTriple with and for researchers.	21 attendees	https://atrium-research.eu/events/atrium-researcher-forum/
ATRIUM workflows and demonstrators at DaSCHCon: Archaeology & Interoperability, Switzerland	23 October 2024	Presentation: "The ARIADNE Portal at the Heart of the ATRIUM Project"	50 attendees	https://atrium-research.eu/events/daschcon-archaeology-and-interoperability/
Digital Archeology CAA-SE	21 November 2024	Speaker / General project communication	50 attendees	

Y2 ATRIUM Participation in Events

Event	Date	ATRIUM Participation	Audience	Event Listing
tourismA – Salone Archeologia e Turismo Culturale in Florence	21-23 February 2025	Exhibition Booth showcasing Ariadne RI and ATRIUM project with videos and flyers disseminated. Participated in session “Museums and Libraries: Ongoing Efforts for Accessibility”	20+ flyers, footfall at booth 200+, 20 attendees at session	https://atrium-research.eu/events/tourism-a-salone-archeologia-e-tourismo-culturale/
DH Nordic and Baltic 2025 in Tartu, Estonia	5-7 March 2025	Presentation given by CLARIN focusing on the upcoming ATRIUM summer school opportunities.	200 attendees	https://atrium-research.eu/events/dhnb-2025-digital-dreams-and-practices/
Joint Webinar Event ATRIUM-Skills4EOSC on the Fair-by-design methodology	14 March 2025	Outline the methodology for FAIR-by-design production of learning materials. Demonstrated a key six-stage workflow for ensuring training materials adhere to FAIR principles: Findable, Accessible, Interoperable, Reusable.	100+ attendees via Zoom, recordings made available via ATRIUM YouTube channel.	https://atrium-research.eu/events/making-training-materials-matter-introducing-the-fair-by-design-methodology/
TNA One-Year Showcase	28 March & 4 April 2025	Two webinars showcasing TNA recipients, Q&A.	60+ registrations via Zoom for each webinar, recordings made available via YouTube	https://atrium-research.eu/events/tna-showcase-4th-april/
ATRIUM First Mutual	29 April 2025	Organiser, focused on GoTriple data	13 participants ¹	https://atrium-research.eu

¹ it was planned for 20+ people, but there was the blackout in the day before and this prevented some people from participating.

Learning Exercise in Madrid		providers to share knowledge and best practices.		u/news/atrium-first-mutual-learning-exercise/
CAA 2025 - Digital Horizons: Embracing heritage in an evolving world in Athens	5-9 May 2025	Session 19: "Reusable Digital Research Workflows for Archaeology"	80+ attendees	https://caa-international.org/conference/future-conferences/caa2025/
FitSM training - Foundation course (online)	13 May 2025	Participants were provided with a comprehensive introduction to lightweight IT service management (ITSM)	13 participants	https://atrium-research.eu/events/fit-sm-foundation-training-course/
5th Workshop on Open Citations and Open Scholarly Metadata (WOOC2025) in Bologna	28-29 May, 2025	Presentation: 'Boosting data interoperability of GoTriple.eu: Ontology alignment in the ATRIUM project'	100 attendees	https://atrium-research.eu/events/workshop-on-open-citations-and-open-scholarly-metadata/
Digital Humanities Benelux 2025 in Amsterdam	4-6 June 2025	ATRIUM poster presented: "Go with the (Work)flow! Creating Reusable and Replicable Workflows for Digital Humanities Research"	50 participants engaged	https://2025.dhbenelux.org/
DARIAH Annual Event in Göttingen, Germany	17 -20 June 2025	Presentation "How not to reinvent the wheel – workflows as a leverage from the past to the future," ATRIUM presented on SSHOC posters.	80 attendees, 60 at poster session, 30+ flyers distributed.	https://annualevent.dariah.eu/

Multilingual Digital Terminology Today 2025 in Thessaloniki	19 June 2025	Net7 presented “An LLM-based Approach for Translating Keywords in Scientific Publications”	50 attendees	https://mdtt2025.web.auth.gr/en/
Athena Research Centre Summer School in Athens	9 July 2025	Summer Institute: Digital Humanities for Hellenic Studies - Visualizing the Past: Mapping Athens’ Lost Neighborhood	Not available	https://hellenic.princeton.edu/opportunities/summer-institute-digital-humanities-hellenic-studies-%E2%80%93-visualizing-past-mapping
DH2025, Alliance of Digital Humanities Organisations in Lisbon	15-18 July 2025	<p>Presentation: “Engaging diverse communities: the ATRIUM project’s participatory research initiatives”</p> <p>Posters presented: “Engaging Researchers for Improving Services and Training: Insights from the ATRIUM Survey and Researcher Forum” and “Building a Peer Review Framework for Non-Traditional Research Outputs”</p>	150 attendees	https://dh2025.adho.org/
2ESU DH 2025 (The European Summer University in Digital Humanities ‘Culture and Technology’) in Besançon	2 July 2025	Session: Bridging Digital Humanities and Cultural Heritage: Key Insights from CLARIN, ATRIUM, and ECHOES / Speech: Key Insights from the ATRIUM Researchers Survey (Online presentation)	60 attendees	https://esudh.github.io/esutwoweeks/#bridging-digital-humanities-and-cultural-heritage-key-insights-from-clarin-atrium-and-echoes

Interspeech Conference 2025 in Rotterdam	18 August 2025	Presentation: "Transcribing Oral History Recordings Using the Transcription Portal"	15 session attendees	https://www.interspeech2025.org/
ATRIUM Summer School on Automatic Text Recognition in Berlin	1-5 September 2025	5-day training event is designed for researchers, digital humanists, and cultural heritage professionals exploring state-of-the-art OCR and HTR technologies in their projects.	16 participants	https://atrium-research.eu/events/atrium-atr-summer-school/
TranscriboQuest 2025 in Lyon	3-5 September 2025	Organized by ATRIUM and Biblissima+, this event offered participants the opportunity to work with historical sources and enhance their skills in automatic text transcription under the guidance of expert trainers.	35 participants	https://atrium-research.eu/events/transcribo-quest-2025/
Annual Meeting of the European Association of Archaeologists (EAA) in Belgrade, Serbia	3-6 September 2025	Session 268: Archaeology, artificial intelligence, and image analysis: Automated Archaeological Image Annotation: AI-Assisted Object Recognition and Metadata Enrichment	20+ attendees	https://www.e-a-a.org/ea2025
Digital Heritage – International Congress 2025 in Siena	8-13 September 2025	Presentation: "Hypothetical Reconstruction for the Conservation, Preservation and Valorisation of Cultural Heritage: the	200 conference attendees	https://digitalheritage2025.unisi.it/

		Kampanopetra Basilica in Salamis, Cyprus"		
Enriching Digital Heritage with LLMs and Linked Open Data in Leiden	8 September 2025	Workshop: From Recognition to Understanding: Framing Named Entity Recognition for Enriching Cultural Heritage with LLMs and Linked Open Data	20 Participants	https://www.lorentzcenter.nl/enriching-digital-heritage-with-llms-and-linked-open-data.html
ATRIUM 3D Training School in Brno, Czech Republic	15-19 September	Summer school to learn how to create 3D models of archaeological artefacts and historic monuments through photogrammetry and laser scanning, as well as how to process and manage them.	30 Participants	https://atrium-research.eu/events/atrium-3-d-training-school/
CLARIN Annual Conference in Vienna	30 September – 2 October 2025	Presentation: "MetaCat suite: Towards a systematic analysis of catalogues"; "State of the Technical Infrastructure"; Poster presentation "The ATRIUM Skillset Assessment and Gap Analysis Report"	150 attendees; 240 attendees; 230 at Poster Session	https://www.clarin.eu/content/clarin-annual-conference
Open Science Conference 2025 in Hamburg	9 October 2025	Enhancing transparency and reusability through Diamond publishing model: Transformations, A DARIAH Journal'	150 attendees	https://www.open-science-conference.eu
Open Science Communities at UC 2025 in Coimbra	20 October 2025	ATRIUM Project Presentation	100 attendees	https://atrium-research.eu/events/open-science-communities-at

				-uc-2025/
Hackathon: Collaborative Translation Activity for GoTriple Ontology (online)	22 October 2025	Invite-only, real-world test case for Mondaecus, a collaborative translation platform developed to support scientific multilingualism and collective translation workflows.	20 participants	https://atrium-research.eu/events/hackathon-collaborative-translation-activity-for-go-triple-ontology/
2nd ATRIUM Researcher Forum: Transcription Portal in Munich	25 November 2025	ATRIUM Researcher Forum aims at fostering closer interactions between researchers active in and around research infrastructures with service providers.	20 participants	https://atrium-research.eu/events/2nd-atrium-researcher-forum-transcription-portal/
Publish-Review-Curate: Turning Scholarly Publishing on Its Head in Cambridge, UK	2-3 December 2025	Presentation on 'PRC as a Model for Rethinking Scholarly Publishing in the Arts and Humanities'.	45 Participants	https://zenodo.org/records/17831896
Centre Marc Bloc: Fellowship Talks	11 December 2025	Introduction to ATRIUM with a focus on Workflows and TNAs for PhD students and fellows.	16 Participants	
Theory in Action TAG 2025 in York	15-17 December 2025	Hosting session at the upcoming TAG conference: "Towards adaptation: environmental sustainability in archeological workflows"	Not yet available	https://atrium-research.eu/events/theory-in-action-tag-2025/

Key events, Calls for Papers, and upcoming deadlines are monitored and updated on the shared ATRIUM Events Google Calendar, which all partners are subscribed to.

An internal spreadsheet is in use to keep track of upcoming and relevant events (see below for some of the main future events planned in Y3).

Main events planned in Y3 (provisional)

Date	Location	Event Title	Details
27 February - 1 March 2026	Florence, Italy	ATRIUM mid-term event at tourismA (see below)	https://www.tourisma.it/home-2/
23 - 26 February 2026	Vienna, Austria	DHd 2026	https://digitalhumanities.de/2025/06/20/call-for-papers-dhd2026/
31 March - 4 April, 2026	Vienna, Austria	CAA 2026	https://2026.caaconference.org/
22 April 2026	Online	2nd FitSM Training (Foundation Course) for ATRIUM	To be announced
26-29 May 2026	Rome, Italy	DARIAH AE 2026	https://annualevent.dariah.eu/
Summer 2026	Athens, Greece	ATRIUM Second Mutual Learning Exercise	To be announced
Summer 2026	Athens, Greece	ATRIUM Training Workshop	To be announced
28 September - 1 October 2026	Brighton, United Kingdom	CLARIN Annual Conference	https://www.clarin.eu/content/clarin-annual-conference
Summer 2026	Czechia	ATRIUM Training School	To be announced
September 2026	Lyon, France	Transcriboquest 2026	To be announced
November 2026	York, UK	ADS Winter School	To be announced

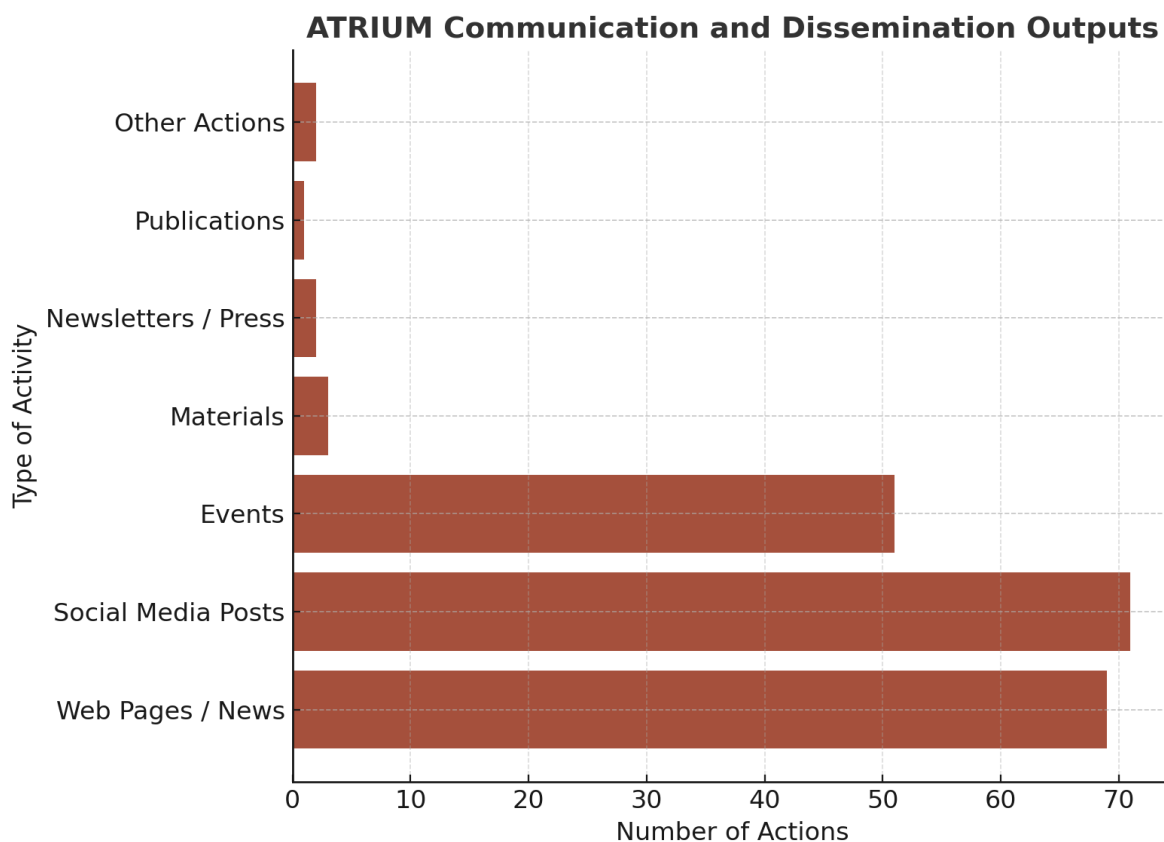
7.1 ATRIUM Mid-Term Event

In the context of the [tourismA fair in Florence](#), one of Italy's leading events dedicated to archaeology and cultural heritage communication, the ATRIUM project will host a public conference on 27 February 2026 at the Palazzo dei Congressi, presenting the project's vision, digital workflows, and community-engagement activities. ATRIUM will also maintain an exhibition booth throughout the fair, from 27 February to 1 March 2026, providing visitors with information materials, scientific posters, and interactive digital demonstrations, and offering opportunities for dialogue with project partners and stakeholders.

8. Partners' contribution to dissemination

This section highlights the efforts made by each partner through their own institutional channels to bolster ATRIUM's overall communication plan.

During the reporting period, ATRIUM partners engaged in a variety of communication and dissemination activities aimed at promoting the project's goals, outcomes, and opportunities for involvement. In total, 423 distinct actions were reported, which included web publications, social media posts, participation in events, and the creation of dissemination materials. These activities were designed to reach a diverse audience of cultural heritage professionals, academic researchers, policymakers, and the general public, ensuring broad visibility and engagement throughout Europe.



Digital communication emerged as a key tool for partners to raise awareness about the project. A total of 69 web pages or online posts were published on institutional or research portals like ARIADNE RI, ADS, and CLARIN, showcasing ATRIUM objectives, news, and updates. At the same time, partners actively used social media channels, primarily X (Twitter), resulting in 71 posts that reached audiences ranging from a few dozen to over 2,000 followers per channel. Posts were made in several languages (mainly English, but also Czech and Greek), reflecting the project's transnational character and commitment to inclusivity. These online initiatives encouraged ongoing interaction with stakeholders and helped maintain project visibility beyond formal events.

Engagement through events played a crucial role in the partners' dissemination efforts. Across the consortium, 51 events were reported, including conferences, workshops, and public presentations and featuring both organised sessions and invited talks. Noteworthy examples include partner participation in significant venues such as the European Archaeological Association Annual Congress and the DARIAH Annual Event 2024. Estimated attendance varied somewhat, with some events hosting intimate groups of around 30 to 40 participants, while others attracted over 150 attendees. These gatherings were great opportunities for partners to showcase ATRIUM success stories, share their methods, and connect with the broader research community.

Specific materials were distributed both in print and online to support outreach efforts, including on open-access platforms like Zenodo. Additionally, partners engaged in extra outreach efforts, such as targeted media communications. Newsletters and press releases were sent out via institutional mailing lists, reaching about 400 subscribers across Europe. Academic outreach was also highlighted through scientific publications such as the one titled “HBIM and openBIM for management of historic architectural ceramic tiles information,” which was presented at EPoCH 2024 by LNEC.

9. Monitoring and evaluation of the dissemination and communication activities

9.1 Monitoring tools

Supervision of the communication and dissemination activities is carried out regularly. In order to best monitor the impact of the communication and dissemination strategies, a shared form has been created for partners to log and record their activities. The form is composed of several sections which represent different means and tools to spread information about the project and the results: Web Pages (pages or posts on websites/portals), Social Pages (posts on social channels), Newsletters / Press releases, Publications (scientific and non-scientific), Dissemination Materials, Events (presentations at third-party events or events organised by the partner), Other activities (press releases, TV/radio campaigns, videos, etc.). The form also allows for the reporting of relevant news for publication on the project website. Through this instrument it is possible to monitor the evolution of each type of activity and the specific target audience reached. All the partners are reminded periodically to update their activities.

The project website plays a fundamental role in the communication and dissemination activity and it is of paramount importance for monitoring usage (e.g. accesses, downloads, etc.). For this purpose, an analytics tool has been integrated into the website from the beginning, which uses Google Analytics to generate the required statistics.

WP2 team meetings are held on a monthly basis to review activities, assess progress, and plan for the upcoming months. In addition, as part of the general monitoring of the progress of all the project activities, a monthly summary report is produced for each Work Package. This report includes information on: actions/outcomes achieved within the WP, collaboration with other WPs and input needed, recent decisions, next actions / steps, problems encountered / solutions recommended.

9.2 Key Performance Indicators

To evaluate the success of the dissemination activities, a series of indicators is used, as detailed in the table below:

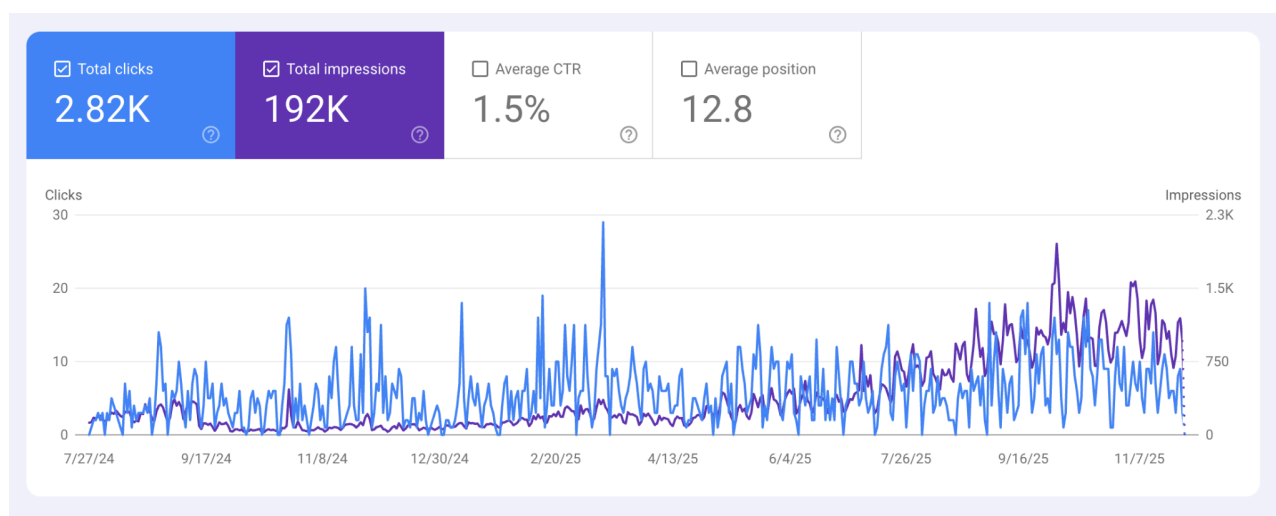
Quantity Indicator (cumulative)	M6 (actual)	M12 (actual)	M24 (planned)	M24 (actual)	M36 (planned)	M48 (planned)
Avg. number of website unique visitors per month	90	97	150	104	200	250
Total no. of website visitors	361	781	2,000	2,800	3,500	5,000
Number of EU/EEA countries reached through website	4	32	40	34	45	50
Number of contacts in the mailing list	67	128	200	207	300	400
Number of X/Twitter followers	260	371	500	396	800	1000
Number of X/Tweet impressions	-	200	400	9,876	15,000	20,000
Number of LinkedIn followers	298	649	600	1422	800	1000
Number of Bluesky followers	-	15	300	281	500	800
Number of press releases	1	2	3	2	4	6
Number of YouTube subscribers	-	41	100	53	150	200
Number of cumulative YouTube views	-	339	500	650	1000	2000
Number of leaflets/other publicity materials distributed	200	300	600	400	900	1,300
Number of presentations at third-party events	2	6	12	17	24	40
Number of attendees reached at conferences	100	300	600	750+	1500	2500
No. of scientific publications	-	1	4	4	7	10
Number of views of deliverables on ATRIUM Zenodo	30	40	80	3903	5000	7000
Number of downloads on ATRIUM Zenodo	-	-	1200	3047	4000	8000

Total number of views on Zenodo	-	-	1500	3895	3000	5000
Number of TNA Blog posts published on website	0	3	10	17	25	50

The indicators are mainly positive with most targets reached and some well exceeded. The total number of website visitors exceeds the target although the country coverage is not quite as wide as anticipated. The combined social media numbers for X (Twitter), Bluesky and LinkedIn are well over target - LinkedIn in particular having a much higher number of followers than anticipated whilst X and Bluesky are a little lower than anticipated. The number of YouTube subscribers is also lower than targeted but the actual number of views of the ATRIUM videos is higher. The partners have been actively engaging in various events with 17 presentations, more than targeted, but haven't quite distributed as many leaflets as anticipated. However, engagement with the research community is good as the figures for the views (deliverables and all publications) and downloads on Zenodo are well over target. Overall, the KPI's indicate effective engagement with the ATRIUM stakeholders. The change in preferences for social media channels could not have been foreseen at the start of the project but the team will continue to monitor these channels and take action accordingly.

9.3 Website statistics

Statistics from the project website have been obtained using Google Analytics. As of M22, the overall most popular countries featuring individual visitors to the project website (measured in times a user clicked through to the site) are: Greece, United Kingdom, Austria, Italy, Spain, Poland, Czechia, and Germany. The cumulative website impressions (measured in how many times a user saw a link to the site in search results) were highest for the following countries: United States (36,887 impressions), United Kingdom (27,710 impressions) and India (11,614 impressions).



Sample website statistics analysis from Google Analytics.

The most popular pages were: The ATRIUM home page (<https://atrium-research.eu>), the page for the TNA scheme (<https://atrium-research.eu/travel-grants/>) and the page for the TNA summer school (<https://atrium-research.eu/tna-summer-schools/>). The most popular ATRIUM-related search terms which led people to the website directly via clicks were: "atrium project", "atrium research", "atrium". The most popular search terms which led people to the website directly via impressions (how many times a user saw a link to the site in search results) were "atrium", "atrium research", and "ads archaeology". The majority of visitors to the project site accessed it via desktop (2,240 clicks, 118,511 impressions) but a not insignificant amount of visitors accessed it via mobile (573 clicks, 71,998 impressions).

10. Assessment of expected project outcomes and impacts

10.1 Assessment approach

The ATRIUM impact evaluation addresses the *Expected Outcomes* stated in the Research Infrastructures Work Programme 2023-2024 for projects funded under the topic “Research infrastructure services advancing frontier knowledge” (HORIZON-INFRA-2023-SERV-01-02) (European Commission 2022).

The *Expected Outcomes* are:

- “Wider, simplified, and more efficient access to the best research infrastructures available to researchers to conduct curiosity-driven research, irrespective of location.”
- “Improved and harmonised RI services and broader use of RI resources across the EU and Associated Countries deriving from the exploitation of synergies and complementarities.”
- “Better management, including implementing FAIR data principle, of the continuous flow of data collected or produced by Research Infrastructures.”
- “Breakthrough and leading-edge research enabled by advanced research infrastructure services made available to a wider user community.”
- “A new generation of researchers trained to optimally exploit all the essential tools for their research.”
- “Cross-disciplinary fertilisations and a wider sharing of information, knowledge and technologies across Arts and Humanities disciplines fostered by closer interactions between researchers active in and around Research Infrastructures.”

Impact pathways

The general logic of impact is that a project delivers certain results, the use of which generates outcomes, which then lead to impacts. For example, in the case of skills development a project provides training materials and workshops (results), which are used by researchers to acquire certain skills (outcomes), and based on these the researchers conduct novel ways of research (impact).

Such impact pathways typically take a longer period of time so that the impacts often do not appear during a project's life cycle but can take years after project completion to become manifest and measurable. By requiring projects to report on achievements regarding *Expected Outcomes* the Research Infrastructures Work Programme acknowledges this fact. However, systematic exploitation of key project results can lead to impacts within and beyond the project life cycle (see below).

Assessment of Expected Outcomes

The stakeholder engagement plan targets different intended direct users of ATRIUM research and development results as well as other stakeholders (see Section 2). The *Expected Outcomes*, as stated by the Research Infrastructures Programme (see above), concern direct users of the project portfolio of research services, workflows, training and other capacity building. These comprise A&H researchers and students of research institutions, data curators of cultural heritage institutions (collections, repositories), and technical support staff of the institutions. Furthermore, non-professional communities interested in A&H and heritage studies, i.e., citizen science communities, the project involves.

According to the topic “Research infrastructure services advancing frontier knowledge” of the Research Infrastructures Programme, under which ATRIUM is funded, the project focuses on supporting advanced and leading-edge A&H research. Therefore, the assessment of *Expected Outcomes* does not include stakeholders such as research policy makers, funding bodies, creative industries, media, and the general public, as they are not direct users of the project results.

For the evaluation of the *Expected Outcomes* a large set of key performance indicators (KPIs) has been elaborated. These KPIs build on and extend the small first set of indicators of success given in the chapter on impact in Part B of ATRIUM’s Description of Action (DoA).

Where possible for targeted results and outcomes within the project’s duration, quantitative KPIs have been defined, while for others this is not meaningful, hence qualitative descriptions of what has been achieved are provided. Furthermore, the assessment of the KPIs reported in this deliverable has been carried out at the mid-point of the four-year project. At this stage of the project, some KPIs cannot be assessed, but a description of the work conducted so far is given.

Pathways for impacts beyond the project

To proceed from project outcomes and potential impacts achieved within the project life cycle to impacts beyond the project, ATRIUM is developing exploitation strategies for Key Exploitable Results (KERs). This activity has been supported by the Horizon Results Booster service regarding the methodology and elaboration of exploitation pathways for two KERs, text-based workflows and the peer review framework for non-traditional research outputs in the A&H (see Section 11). Such pathways will also be developed for several other KERs with the goal to generate impacts beyond the project. Preliminary exploitation pathways for these KERs are briefly described in Section 11.5.

Structure of the assessment of Expected Outcomes

The sections that follow address the different areas in which the project seeks to achieve important results and outcomes. These areas concern integrated Research Infrastructure services, improved data management, defined and demonstrated research workflows, skills for advanced research practices, and fostered cross-disciplinary fertilisations. Each section includes:

- the expected outcome(s) addressed,
- a description of ATRIUM's approach and work in the respective area of activity,
- a table of the targeted project results and their status, KPIs for the expected outcomes and their assessment,
- envisaged impacts beyond the project.

It should be noted that the assessment concerns achievement in the first half of the four-year project. At this stage of the project some KPIs cannot be accessed because results have become available at the end of this period or will be delivered in the next two project years.

10.2 Assessed project activities

10.2.1 Research infrastructures and services

Expected Outcomes

"Wider, simplified, and more efficient access to the best Research Infrastructures available to researchers to conduct curiosity-driven research, irrespective of location."

"Improved and harmonised RI services and broader use of RI resources across the EU and Associated Countries deriving from the exploitation of synergies and complementarities."

ATRIUM approach

The overall approach of the ATRIUM project to achieve the expected outcomes is enabling efficient access to, and improved interoperability of, research resources and services of the participating Research Infrastructures (RIs). This will simplify and extend the possibility of using the digital RI resources and services for curiosity-driven research, irrespective of location, as all resources and services are accessible online.

Research Infrastructures in ATRIUM

The goal of ATRIUM is not to build an overarching infrastructure across the key platforms of the participating RIs, which are already successfully providing different resources to their respective communities. These four platforms are the [ARIADNE Portal](#), [CLARIN Virtual](#)

[Language Observatory](#), [Go Triple](#) (OPERAS) and [SSH Open Marketplace](#) (DARIAH and other members of the SSH Open Cluster).

The SSH Open Marketplace (Barbot et al. 2024) plays a key role in ATRIUM, as all shared services and tools (software), as well as defined workflows, will be findable and accessible via this platform. The platform contextualises resources by relating them to the activities in the research lifecycle for which they are relevant. The search interface and rich metadata of the platform will support wider and more efficient access to the services, tools and workflows ATRIUM partners jointly make available.

Development of MetaCat

Due to their different setup and resources, a direct integration between the four key platforms of ATRIUM is not possible. However, the project develops MetaCat (Carloni et al. 2025a/b), a systematic and machine-readable representation (knowledge graph) of the data their catalogues contain, together with their ontologies and vocabularies. A suite of tools will enable interactive exploration, analysis and comparison of this information.

The MetaCat data model and knowledge graph build on the ARIADNE Object Catalogue (AO-Cat) ontology (Felicetti et al. 2023) and domain vocabularies. The AO-Cat ontology is based on the [CIDOC Conceptual Reference Model](#), and also the ontology of the SSH Open Marketplace, the [SSHOC Reference Ontology](#), uses a data model based on CIDOC CRM and other models (Bekiari et al. 2022). Work is ongoing to align the [GoTriple ontology](#) with CIDOC-CRM (Bertozzi & De Santis 2025). It is envisaged that the knowledge graph of MetaCat will make it possible to identify existing overlaps and possible mappings between ontologies and between vocabularies, which support queries across the catalogues.

ATRIUM Service & Software Catalogue

Synergies and complementarities between the Research Infrastructures are particularly being exploited by bringing together services and tools (software) of the RIs and their member organisations in the [ATRIUM Service & Software Catalogue](#), that is [included in the SSH Open Marketplace](#). Services and software are generally provided in open access and under liberal licenses.

At present, the project makes available 52 services and tools for Arts and Humanities data resources (texts, images, sound recordings, 3D and geospatial data) and different tasks, for instance, optical character recognition (OCR), natural language processing (NLP), vocabulary mapping, annotation, transcription, translation. Project partners have also been working to improve or adapt available services, e.g., the image annotation service Recogito Studio, the Speech Transcription Portal, and NLP services.

Some of the services and tools will be employed in the ATRIUM workflows and demonstrators. ATRIUM aims to make services and tools work together better, i.e., improve their interoperability and composability in order to enable carrying out complex research workflows.

Regarding the interplay of data hosting and processing services, ATRIUM partners implement the standard protocols and data viewers of the International Image Interoperability Framework (IIIF) for images and 3D-HOP for 3D models (see Section 10.2.2).

Relation to the European Open Science Cloud (EOSC)

The work on service interoperability in ATRIUM aligns with the enriched EOSC Interoperability Framework and Guidelines for onboarded services (EOSC 2025; European Commission 2021; Scardaci et al. 2023). It will contribute to interoperability by testing and evaluating the combination of services of the ATRIUM Catalogue and EOSC services. For example, the EOSC EU Node provides a suite of services which enables researchers to conduct data-intensive research, i.e., interactive notebooks, virtual machines, cloud container platform, bulk data transfer, large file transfer, file sync and share ([EOSC EU Node - Services](#)). How and under what conditions the services could be used is being investigated by ATRIUM researchers for different A&H use cases (ATRIUM 2025c: 8).

Research infrastructures and services - Assessment of KPIs for expected outcomes

Targeted project results	Status	KPIs for expected outcomes	Assessment
MetaCat knowledge graph (Linked Data) of integrated RI catalogues and exploration tools	Experimental integration and tools in development	Researchers accessing the integrated RI catalogues (requires experience with Linked Data and exploration tools) Estimate: 50	Accesses and examples of use Not assessed at this stage of the project
ATRIUM services and tools integrated on the SSH Open Marketplace	At present 52 services and tools	Researchers accessing services and tools on the Marketplace; each service or tool is described on one web page Estimate: 600 accesses (pageviews)	Accesses of Marketplace web pages of services and tools: 240 pageviews (unique: 199) in the period January to November 2025 ² Examples of use will be collected

² Most interest attracted (pageviews/unique pageviews): UDPipe (28/24), ARIADNE Portal (29/27), Virtual Transcription Laboratory (22/16), eScriptorium (16/12), Recogito Studio (15/12).

<p>EOSC services/software integrated and <i>vice versa</i></p> <p>Work in progress testing and evaluating the integration of services based on the EOSC Interoperability Framework and Guidelines, and investigating how services for data-intensive research available on the EOSC EU Node can be applied for A&H use cases.</p>	<p>Experimental integration in development</p>	<p>Researchers accessing integrated EOSC services (requires experience in data-intensive research)</p> <p>Estimate: 50</p>	<p>Accesses and examples of use</p> <p>Not assessed</p>
<p>Portfolio of integrated technical services that comprise the integrated RI catalogues, services and tools on the SSH Open Marketplace, relevant EOSC services, research workflows and demonstrators (see below)</p>	<p>Work in progress</p>	<p>Total of researchers accessing the technical services of the portfolio</p> <p>Target set in the DoA: 400</p>	<p>Accesses and examples of use</p> <p>Partially assessed for services & tools (above) and workflows (see below), not for MetaCat and workflow demonstrators</p>

Envisaged impacts beyond the project

The MetaCat knowledge graph and tools and other innovative RI catalogue services (e.g., SSH Open Marketplace) provide researchers novel ways to explore available research resources.

Synergies between the core A&H Research Infrastructures (ARIADNE, CLARIN, DARIAH, OPERAS) are being exploited based on sharing complementary resources on the SSH Open Marketplace, which supports broader use of the resources.

A&H scholars benefit in their research from using the resources (services and software, workflows) integrated on the SSH Marketplace, and the service integration with EOSC (e.g., services for data-intensive research available on the EOSC EU Node).

The shared and integrated resources leverage the use of leading-edge digital methods, collaboration and productivity in A&H research.

10.2.2 Data management

Expected Outcome

“Better management, including implementing FAIR data principles, of the continuous flow of data collected or produced by Research Infrastructures.”

ATRIUM approach

ATRIUM aims to improve the management of data by the RI components repositories and catalogues through promoting and supporting FAIRification of data resources (Wilkinson et al. 2016), i.e., the implementation of persistent identifiers, standard metadata, domain vocabularies and ontologies. Furthermore, the flow of data will be improved with Application Programming Interfaces (APIs) for programmatic access to data resources and use of standard protocols for data exchange and visualisation in the A&H.

These activities provide a basis and starting points for the flow of data in ATRIUM research workflows. Primary target groups of the activities are repositories and collections in the ATRIUM network, particularly providers of data for defined workflows. Regarding the implementation of FAIR data principles, there are already many initiatives in the A&H. The special contribution of ATRIUM is highlighting FAIRification and standardisation of data resources as a basis for A&H research workflows. ATRIUM also provides an inventory of data formats, metadata schemas, ontologies, controlled vocabularies that are relevant standards in the field of A&H and cultural heritage data management (ATRIUM 2024c).

Promoting the use of persistent identifiers

The FAIR principles require “F1. (meta)data are assigned a globally unique and persistent identifier” and “F3. metadata clearly and explicitly include the identifier of the data it describes”, enabling sustainable retrieval of the data. ATRIUM promotes the use of persistent identifiers and showcases their practical benefits, e.g., making data accessible for computational research using Application Programming Interfaces (APIs). Importantly, in sharing research workflows, persistent identifiers ensure traceability to the data stored in repositories, supporting the reproducibility of research.

Improving metadata quality

The FAIR principles require “F2. data are described with rich metadata (defined by R1 below)”, “R1. (meta)data are richly described with a plurality of accurate and relevant attributes”, including “R1.3. (meta)data meet domain relevant community standards”. ATRIUM promotes the use of standard metadata and supports the conversion and enrichment of metadata to enable the transition to community standards and the combination of resources from different repositories and catalogues. This includes the transformation of metadata to, and enrichment by, Linked Data. Linked Data are based on the [Resource Description Framework \(RDF\)](#), which

fulfils the FAIR principle “11. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation”.

Using controlled vocabularies and ontologies

The FAIR principles require “2. (meta)data uses vocabularies that follow FAIR principles”, but do not explicitly address the question of which vocabularies should be used. This is implied in the principles for metadata, particularly that they should be „richly described with a plurality of accurate and relevant attributes“, meeting „domain relevant community standards“.

ATRIUM promotes the use of controlled vocabularies (e.g., thesauri, gazetteers) for metadata fields such as subjects or geolocations, for instance. For semantic interoperability between data resources, a mapping of proprietary vocabularies (e.g., term lists) to controlled community vocabularies (e.g., the Art & Architecture Thesaurus) may be necessary. For such mappings, the ATRIUM service catalogue includes the [ARIADNE Vocabulary Matching Tool](#).

At the higher level of ontologies, mapping of A&H and cultural heritage datasets to the [CIDOC Conceptual Reference Model](#) can improve the semantic interoperability between aggregated data resources. For such mappings the ATRIUM service catalogue includes the [Mapping Memory Manager \(3M\)](#).

Applying workflows to make data better findable and accessible

Several of the ATRIUM workflows make data resources better findable and accessible with additional metadata. To give but two examples which involve controlled vocabularies: Gazetteers such as Geonames will be used to identify in documents references to places and use them for geotagging the documents (ATRIUM workflow T4.5.2). Another example is the tagging and classification with vocabularies of photographs of archaeological fieldwork and artefacts following their automatic recognition and segmentation. The resulting metadata will be included in the local repositories and aggregated by the ARIADNE Catalogue (ATRIUM workflow T4.4.2).

Using Application Programming Interfaces (APIs)

ATRIUM aims to automate as far as possible the execution of defined research workflows, starting from the discovery of data in repositories or catalogues and proceeding along the further steps of a research workflow and data processing pipeline. For this goal it is particularly important that the data providers implement Application Programming Interfaces (APIs) as service interfaces, allowing for programmatic access to the data they hold. ATRIUM will leverage pre-existing or newly developed APIs to directly access data objects such as documents or images that are referred to with a persistent identifier or stable URL.

Among the different API types most often implemented by cultural heritage institutions are the [OAI-PMH](#) interface, for harvesting their collection metadata, and RESTful APIs, based on

Representational State Transfer (ReST).³ Where data providers for ATRIUM workflows are lacking APIs, the project will provide guidance for their implementation. Notably, the four ATRIUM catalogues, ARIADNE Catalogue, CLARIN VLO, GoTriple and SSH Open Marketplace, already provide APIs.⁴

In ATRIUM the APIs of repositories and catalogues to be used in research workflows will be registered in the [CLARIN Digital Object Gateway \(DOG\)](#), from which direct links to data objects can be automatically fed to the [CLARIN Language Resource Switchboard](#) for data processing services. Upon receiving data links and selecting a task to perform, the Switchboard suggests the user matching services or tools (software) for processing the data. Services and tools for processing data of ATRIUM research workflow demonstrators will also be connected to the Switchboard.

Applying standard protocols for data exchange and visualisation

Regarding the interplay of data hosting and processing services, ATRIUM will showcase the use of the interoperability standards of the International Image Interoperability Framework - [IIIF](#) for images and [3D-HOP](#) for 3D models. Exposing data through these protocols allows standardised data representation and improved comprehension with the functionalities of dedicated data viewers. IIIF viewers allow interaction with images in different ways, e.g., deep zoom, annotation and comparison. The 3D-HOP framework enables interactive online presentation of high-resolution 3D models for exploring and analysing cultural heritage artefacts and buildings.

Fostering collaboration between repositories and catalogues

ATRIUM RIs represent examples of best practice for the flow of (meta)data between repositories and catalogues that harvest and integrate their metadata, fulfilling FAIR principle “F4. (meta)data are registered or indexed in a searchable resource”. Examples are the catalogue of ARIADNE and the GoTriple platform, which aggregate, transform, enrich and integrate metadata from many repositories based on Linked Data.

Indeed, the collaboration between repositories and catalogues/platforms is crucial for the harmonisation and interoperability of the heterogeneous A&H data resources based on community standards. Implementing the FAIR principles strengthens this collaboration as reported by De Santis (2024) in the case of the FAIRification journey of GoTriple. Therefore, ATRIUM fosters feedback loops between services and their data providers, promoting the implementation of standards and other good practices, e.g., using the Mutual Learning Exercise format (ATRIUM 2025a).

³ RESTful APIs (pubnub 2023); other APIs are based on Simple Object Access Protocol (SOAP), Remote Procedure Call (RPC for XML or JSON), and GraphQL for upgrading RESTful environments (Bigelow 2024; Chadere 2025).

⁴ ARIADNE Catalogue: API of the GraphDB that is included in the ARIADNEplus Lab, <https://ariadne-infrastructure.eu/the-ariadneplus-lab-vre/>, CLARIN VLO API, testing version: <https://beta-vlo.clarin.eu/api>, GoTriple API: <https://api.gotriple.eu>; SSH Open Marketplace API: <https://marketplace-api.sshopencloud.eu/swagger-ui/index.html?url=v3/api-docs>

Data management - Assessment of KPIs for expected outcomes

Targeted project results	Status	KPIs for expected outcomes	Assessment
Data providers supported by RIs for implementing FAIR principle (e.g., persistent identifiers, community standards for metadata, vocabularies, ontologies, and service provision)	Support of new data providers where necessary	A&H datasets FAIRified for improved flow of data in research workflows Estimate: 10 datasets	Number and examples of FAIRified datasets Not assessed
Datasets enriched with ATRIUM data processing workflows (e.g., enrichment of metadata, annotation of research objects, enrichment of metadata, Linked Data)	Data processing pipelines in development	Datasets enriched for improved flow of data in A&H research workflows Estimate: 12 datasets	Number and examples of enriched datasets Not assessed
Implemented novel data and service access mechanisms for accessing data resources (i.e., Application Programming Interfaces) and automated recommendation of services for processing the resources, i.e., using the CLARIN Digital Object Gateway and Switchboard	Work in progress	Researchers have programmatic access to ATRIUM data resources and processing services Estimate: 8 new or improved APIs, i.e. registered in DOG	Number of APIs and examples of use, including CLARIN DOG and Switchboard Not assessed
Implemented standard protocols for data interoperability and visualisation (e.g., IIIF and 3D-HOP viewers that allow interacting with images and 3D models in novel ways)	Work in progress	IIIF and 3D-HOP viewers made available by ATRIUM data providers for researchers and other users Estimate: 10 viewers	Number of data viewers and examples of use At present: One IIIF viewer (ARIADNE 2025)

Results of the activities above		Improved flow of data in A&H workflows Target set in the DoA: 40 datasets	Datasets made available by ATRIUM partners for workflow demonstrators: at present 25 datasets
---------------------------------	--	--	---

Envisaged impacts beyond the project

Improved flow of A&H data in research workflows, enabled by FAIRification of datasets, enrichment of datasets (e.g., annotation of research objects, enriched metadata, Linked Data), and the two points that follow.

Researchers have programmatic access to more datasets for computational A&H research, based on Application Programming Interfaces (APIs) implemented by data providers.

More researchers use data viewers for studying images and 3D models in novel ways, enabled by IIIF and 3D-HOP viewers implemented by more data providers.

10.2.3 Research workflows and demonstrators

Expected Outcome

“Breakthrough and leading-edge research enabled by advanced research infrastructure services made available to a wider user community.”

ATRIUM approach

Defined and reusable workflow as core innovation of ATRIUM in the field of A&H research

The core innovation of ATRIUM in the field of A&H research is defined workflows that can be carried out based on composable services, which leverage improved interoperability of data resources and services (e.g., FAIRified data, use of APIs, standard protocols such as IIIF and 3D-HOP).

ATRIUM supports advanced, leading-edge research in the A&H by providing workflow descriptions and associated demonstrators for complex computational research on text, image, 3D, sound, and geographic data. These are being made available to the wider user community via the SSH Open Marketplace, empowering researchers to apply standardised workflows to data available from repositories as well as their own data.

The project provides human-readable workflows as well as computational demonstrators of workflows (Baillot et al. 2025a). The human-readable workflows are textual descriptions and

diagrams of the workflow steps, i.e., provide step-by-step guidance and instructions for carrying out the workflows. The demonstrators apply executable workflows that are composed of services for data processing, visualisation and analysis.

ATRIUM workflows

ATRIUM researchers, service providers and data managers develop workflows for different types of data and data processing tasks, including:

- Text recognition and information extraction workflows, e.g., automatic text recognition, segmentation, vocabulary driven subject extraction;
- Image visualisation, annotation and comparison workflows, with a focus on applying the International Image Interoperability Framework (IIIF) and open source tools, such as Cantaloupe (IIIF image server) and Altamira (IIIF image viewer);
- 3D-based workflows, e.g., digital representation of heritage assets and Heritage Building Information Modelling (HBIM);
- Sound-based workflows with a focus on speech, e.g., recordings in the field or oral history interviews;
- Geospatial data workflows, e.g., geotagging of texts using named entity recognition, extraction of place-based data, collaborative reusable annotations of maps.

The ATRIUM Workflows Catalogue, with at present 17 workflows, is [available on the project website](#) and [included in the SSH Open Marketplace](#), where workflows also link to related services and tools (ATRIUM and other), which are registered on the marketplace.

ATRIUM demonstrators

ATRIUM will demonstrate several use cases of developed research workflows. The demonstrators are real-world examples of workflow implementation, key to showing how research workflows can be reused and adapted to different project contexts. The demonstrators will use data from repositories of ATRIUM partners as well as from other sources.

At least 10 demonstrators will be developed, which concern different types of data and fields of research:

- Texts (2 demonstrators): OCR of archaeological documentation; information extraction for fieldwork reports and published papers;
- Sound recordings (1): Recordings in the context of archaeological fieldwork;
- Images (3): Early mediaeval sculpture; Bronze Age rock art; archival photographic collections image annotation;
- 3D data (2): 3D architectural models; historic building information modelling (HBIM);

- Geospatial data (2): Collaborative map annotation; using place to connect multiple disciplines across the A&H and beyond.

The workflow demonstrators will involve different data standards and services. For example, the image-based workflows will build on the IIIF standards and viewers, which allow interaction with images in different ways, e.g. deep zoom, annotation and comparison. For 3D data such as architectural models, interactive web presentations of high-resolution models based on 3D-HOP will allow exploring and analysing built cultural heritage. Results of the processing of textual data will include enhanced optical character recognition (OCR), subject metadata and annotations, and for sound recordings textual transcriptions will be generated.

The demonstrators will be hosted on the ARIADNE portal and on platforms dedicated to certain types of data (e.g., Speech Transcription Portal or Recogito Studio for annotation of images). The Interim Report on Demonstrators (ATRIUM 2025d) describes the development of the workflow demonstrators.

Benefits of sharing defined and demonstrated workflows

Workflows defined and shared on the SSH Open Marketplace provide researchers with a step-by-step guide on how to integrate digital practices in their research work, and point to recommended data services, tools and other resources. The workflows thus illustrate which resources researchers are using in practice, they are meant to represent best practices, and are reusable by other researchers (Barbot et al. 2024).

The approach of providing defined workflows solves the problem, especially for newcomers to digital A&H research, that there are ever more services and tools (software) offered for different research tasks, making it difficult to find and select the best ones. In contrast, workflows defined by experienced researchers link only tools/services proven to be useful for the tasks at hand.

In their current research practices, A&H researchers often use some standalone tools for parts of their workflows and face difficulties to move data along the different tasks of the research process. ATRIUM aims to remove these issues with data workflows based on interoperable and composable services.

Making defined and demonstrated research workflows available enables others to reuse them for similar projects, including validation of previous research through replication using different software or data. Sharing of workflows is part of Open Science practices and allows researchers to get peer review, visibility and citations for these innovative research outputs.

Therefore workflow papers are included in the ATRIUM Peer Review Framework, highlighting the benefits of sharing workflows for the research community, and encouraging more researchers to contribute workflow descriptions to the SSH Open Marketplace. The advantages of using and sharing defined workflows are of course also highlighted in sessions and presentations at A&H events (e.g., the session “Reusable Digital Research Workflows for

Archaeology” at the CAA conference 2025), in publications (e.g., the first volume of the DARIAH journal *Transformations*, Baillot et al. 2025b), training materials of the ATRIUM Curriculum (in development), and summer schools of the ATRIUM Transnational Access (TNA) programme and other trainings.

Research workflows and demonstrators - Assessment of KPIs for expected outcomes

Targeted project results	Status	KPIs for expected outcomes	Assessment
<p>ATRIUM research workflows integrated on the SSH Open Marketplace</p> <p>Workflows for different data (e.g., texts, images, sound recordings, 3D and geographic data) and tasks such as extraction of information, annotation, transcription, comparison of research objects.</p>	<p>Target set in the DoA: 25</p> <p>At present 17 workflows have been published on the marketplace</p>	<p>Researchers accessing ATRIUM workflows on the Marketplace</p> <p>Each workflow is described on one web page</p> <p>Estimate: 1000 accesses (pageviews)</p>	<p>Accesses of Marketplace web pages of workflows: 440 pageviews (unique: 373) in the period January to November 2025⁵</p> <p>Examples of use will be collected</p>
<p>Demonstrators of ATRIUM research workflow showing enhanced access to data and data processing capability</p>	<p>Work in progress</p> <p>Planned are at least 10 demonstrators</p>	<p>Researchers accessing demonstrators of research workflows on the ARIADNE portal or platforms for certain types of data</p> <p>Estimate: 500 accesses</p>	<p>Accesses and examples of use</p> <p>Not assessed</p>

Envisaged impacts beyond the project

More A&H researchers use ATRIUM research workflows and demonstrators in their projects.

⁵ Most interest attracted (pageviews/unique pageviews): 3D Digital Representations of Heritage Assets (112/82), 3D-HBIM workflows (101/87), Automatic Text Recognition Roadmap (33/32) and Automatic Image Annotation Workflow (32/30).

Newcomers to A&H computational research are empowered by workflows of experienced researchers to apply advanced digital practices, services and tools.

More A&H researchers share workflows (on the SSH Open Marketplace, in workflow papers) to get visibility and recognition for these innovative research outputs.

Broader recognition in the A&H research community of the benefits of described workflows, e.g., more transparent, better shareable and replicable research.

10.2.4 Development of skills

Expected Outcome

"A new generation of researchers trained to optimally exploit all the essential tools for their research."

ATRIUM approach

The ATRIUM project understands that the development of skills and other capacities must be built into the very notion of Research Infrastructures providing services and tools. This includes the upskilling of researchers, championing FAIR data principles, establishing bridges between researchers and service providers, and creating incentives to share and evaluate research outputs. The ATRIUM skills development activities (ATRIUM Curriculum, other training offers, TNA programme) particularly focus on using the available services, tools and defined research workflows. Regarding the evaluation of research outputs, ATRIUM will provide and promote a Peer Review Framework for non-traditional outputs such as, for instance, data and workflow papers.

ATRIUM Curriculum

The project contributes to the skills development of A&H students and researchers by developing the ATRIUM Curriculum (ATRIUM 2024a), an online curriculum and materials for training and self-learning to be hosted on [DARIAH-Campus](#), and offering workshops, both in person and virtual, with a focus on ATRIUM's services and tools (software) and their use for research workflows. The project investigated the skills that are required for applying ATRIUM's services and software and related training needs (ATRIUM 2025b). The results will inform the development of training formats and materials for the ATRIUM Curriculum.

Other training offers

In addition to the ATRIUM Curriculum, when available, project partners (co-)organise training based on different skills development formats, e.g., workshops, summer schools (other than of the TNA programme below), certificate courses.

The training events in the first two project years included the SSH Open Marketplace Workshop (30 participants), FAIR-by-Design Training Materials workshop (15), Enriching Digital Heritage with LLMs and Linked Open Data workshop (20), ARIADNE RI Training School (13), DARIAH Summer School on Automatic Text Recognition (17), AUEB & Princeton Athens Center Summer School (15), FitSM Foundation Training Course (13).

ATRIUM Transnational Access

During its life span the project runs a [Transnational Access \(TNA\) programme](#) for young A&H researchers to attend summer schools or individual stays at partners' centres of expertise for acquiring knowledge and skills for their research projects.

The TNA training supports the application of advanced digital methods to A&H research including, for example, use and adaptation of language technologies, 3D documentation, tools for transcribing historical documents, use of R programming for language statistical computing and data visualisation.

The TNA programme can fund around 200 researchers to visit one of the 14 centres of expertise and benefit from their knowledge, mentorship and available services and tools. Participants of the programme are encouraged to share their experiences on the [ATRIUM TNA blog](#) and, where possible, share their tools or workflows on the SSH Open Marketplace.

ATRIUM Peer Review Framework for non-traditional research outputs

Concerning the outputs created from using various tools and services, ATRIUM is making a pioneering effort of developing and promoting community consensus on a Peer Review Framework for non-traditional research outputs to be considered in the research assessment reform in the Arts and Humanities.

This activity relates to major reform initiatives, particularly the [Coalition for Advancing Research Assessment \(CoARA\)](#), e.g., their Working Group "Evaluating Social Sciences and Humanities (SSH) research globally", and the [European Network for Research Evaluation in the SSH \(ENRESSH\)](#).

A first version of the ATRIUM Peer Review Framework will be published in December 2025 explaining the background and approach of the framework and cover data papers, workflow papers and training materials (Gouzi et al. 2025; ATRIUM 2025e). An update of the framework will include software, digital scholarly editions and 3D models. These research products currently play only a minor role (if any) in research assessment, which in the A&H domain still privileges traditional monographs and journal papers. Highlighting the importance of

non-traditional research outputs and supporting their peer review will provide incentives for A&H researchers to create and openly share with the research community more such outputs.

Regarding sharing of datasets and data papers, a task in ATRIUM is to integrate datasets from A&H research repositories into the publishing platform [Episciences](#) for Diamond Open Access overlay journals, e.g., the DARIAH journal [Transformations](#) (Gouzi 2024). This will increase the visibility of A&H research data repositories and contribute to promoting datasets and data papers as recognised project outputs. Overlay journals such as those hosted by Episciences can serve as bridges between open repositories, publications and datasets (Tournoy 2023).

As ATRIUM has a focus on research workflows, project partners particularly promote workflow papers as essential research outputs in the A&H. For example, the first volume of the DARIAH journal *Transformation* explores the topic “Workflows: Digital Methods for Reproducible Research Practices in the Arts and Humanities” (Baillot et al. 2025b), and there is the aim to establish workflow descriptions as “a recognised publication format in the scholarly landscape of the arts and humanities” (Baillot et al. 2025c).

ATRIUM will actively promote the adoption of the Peer Review Framework by A&H research centres and journals, and will also seek acknowledgement of the framework by CoARA and ENRESSH and in Open Science policy and research assessment reform documents.

Development of skills - Assessment of KPIs for expected outcomes

Targeted project results	Status	KPIs for expected outcomes	Assessment
ATRIUM Curriculum available online for self-learning and training courses	The curriculum will become available in 2026	Researchers and students accessing the curriculum to acquire advanced digital skills, particularly for applying ATRIUM digital methods, workflows, services and tools for their studies Estimate: 300	Accesses, examples of use (e.g., courses) Not assessed

Participants of virtual and in-person training (co-)organised by ATRIUM partners based on different skills development formats (not including users of the ATRIUM Curriculum and TNA programme)	Regular provision of such training	Researchers trained in advanced digital A&H practices Estimate: 300	123 trained in the first two project years
ATRIUM TNA programme: The programme can provide around 200 grants for participants of TNA summer schools or individual visits of ATRIUM competence centres in different fields of digital A&H research	Four summer schools and several individual access placements	Researchers who benefitted from TNA to discuss their projects, acquire knowledge and skills, and access research resources Estimate: 200	133 successful applicants from 34 countries, 102 placements at summer schools and 31 individual access placements at 11 host organisations. Assessment: submitted reports and articles of participants on the TNA blog
Total of researchers trained in advanced digital A&H practices (above three activities)		Target set in the DoA: 300	At present: 256
Peer Review Framework for non-traditional research outputs available	First edition in December 2025	The first edition explains the framework and features data papers, workflow papers and training materials; the second edition (2027) tools (software), digital scholarly editions and 3D models	Not assessed

A&H research centres adopting the Peer Review Framework	Dissemination can start	Framework adopted by A&H research centres, promoting uptake Target set in the DoA: 40 centres	Not assessed Adoption to be documented
A&H journals adopting the Peer Review Framework	Dissemination can start	A&H journals adopted the Peer Review Framework, promoting uptake Expected early adopters include the DARIAH journal <i>Transformations</i> , other Episciences journals, and OpenEdition journals in the A&H field	Example: <i>Transformations</i> now accepting data papers and workflow papers Other examples to be collected
Endorsement of the Framework by major research assessment reform initiatives	Dissemination can start	Framework endorsed by CoARA, ENRESSH (and possibly new initiatives) promoting uptake	Not assessed
Framework referenced in Open Science policy and research assessment reform documents	Dissemination can start	Framework referenced in relevant documents promoting uptake	Not assessed References to be collected

Envisaged impacts beyond the project

Starters in digital A&H using the ATRIUM Curriculum transition faster to leading-edge research applying ATRIUM services, workflows and other resources.

Uptake by A&H journals and researchers of the ATRIUM Peer Review Framework for non-traditional research outputs, e.g., data and workflow papers, tools (software), digital scholarly editions, 3D models.

Broader recognition in the A&H domain of the value of non-traditional digital products in the ongoing research assessment reform.

10.2.5 Cross-disciplinary fertilisations

Expected Outcome

“Cross-disciplinary fertilisations and a wider sharing of information, knowledge and technologies across Arts and Humanities disciplines fostered by closer interactions between researchers active in and around Research Infrastructures.”

ATRIUM approach

In ATRIUM, cross-disciplinary fertilisations are fostered by the interaction of researchers, digital service developers and data managers from different A&H domains in the network of Research Infrastructures. The RIs and their domains are ARIADNE (archaeology and cultural heritage research), CLARIN (humanities and social sciences using language technologies), DARIAH (different disciplines of the arts and humanities), and OPERAS (social sciences and humanities with a focus on open scholarly communication). Furthermore, trans-disciplinary fertilisations are fostered in the collaboration with non-professional communities, which brings together interests and perspectives of academic and non-professional communities.

ATRIUM develops solutions, especially defined workflows, which allow researchers more efficient ways to conduct projects using various data sources of A&H research, e.g., texts, sound recordings, images, 3D models, geo-spatial data. Thus the workflow solutions are relevant for researchers across the A&H domains and cross-disciplinary collaborations, e.g., researchers from different domains working with shared datasets.

The workflow descriptions and related technical services and tools are shared on the SSH Open Marketplace, and several demonstrators of the application of workflows are being developed. For delivering these project outcomes, cross-disciplinary collaboration between A&H researchers and computer scientists is essential, and it is expected that the outcomes inspire more such collaborations.

Importantly, ATRIUM goes beyond fostering cross-disciplinarity by also involving in the project non-professional communities interested in cultural heritage and humanities studies (see Section 3). Examples are citizens documenting rock art or contributing descriptions of artefacts found with metal detection tools to national finds portals. For example, in the Czech Republic the Portal of Amateur Collaborators and Register of Individual Finds (AMCR-PAS) (Pajdla et al. 2023) received 4,497 records of finds in the period January 2024 to October 2025.

In a survey, members of the five target communities informed the project about their needs and requirements and potential contributions from ATRIUM. The goals of the work with the

non-professional communities include receiving feedback on the implementation of relevant ATRIUM services and other solutions, as well as stimulating others to consider these as useful for their activities.

Communities can also contribute data for the development of ATRIUM services and workflows. For example, the Archaeological Map of the Czech Republic (AMCR) received the dataset of the amateur portal Lovec pokladů (Treasure Hunter), 221,915 artifact records and 105,165 coin images, for training the image recognition model which will be used in the [ATRIUM automatic image annotation workflow](#) (Pajdla et al. 2025).

The Pelagios Network in a community co-creation initiative supported by Open University's Open Societal Challenges programme, enables residents of the Campsbourne Estate in North London to carry out digital mapping of their cultural heritage. The Memory Mapper application will be integrated into the Pelagios tool suite Recogito Studio that is included in the ATRIUM Catalogue of services.

ATRIUM researchers also work together with citizens with special needs to improve their access to cultural heritage. A special product of this activity is AGLAIA, a glossary of archaeological terms for translation into the International Sign Language. The glossary covers terms frequently used during visits of archaeological museums and sites.

Furthermore, cross-disciplinary fertilisation is being fostered by ATRIUM between scholars and developers of services, for example, workshops in which service developers learn about the requirements of scholars' projects, and scholars learn how certain services can support their research workflows. In ATRIUM Researcher Forums, scholars participated in usability tests, helping improve the GoTriple platform (ATRIUM 2024b) and the Speech Transcription Portal (Delmazo 2025), and experts provided suggestions on future developments of the services.

ATRIUM Mutual Learning Exercises bring together providers of research services, e.g., data repositories, catalogues and access portals, to share cross-domain knowledge and best practices in solutions for research data management, interoperability, aggregation, access and reuse (ATRIUM 2025a). The methodologies developed for the Researcher Forum and the Mutual Learning Exercise formats can be applied by other projects and institutional users.

There are also opportunities to foster cross-disciplinary fertilisation in the ATRIUM skills development activities. The Transnational Access (TNA) programme, especially the summer schools, allow young scholars with projects in different A&H domains to acquire knowledge and skills and discuss their projects with one another. The development of the ATRIUM Peer Review Framework for non-traditional research outputs involves the expertise of scholars working in different A&H domains.

Cross-disciplinary fertilisations - Assessment of KPIs for expected outcomes

Targeted results	Status	KPIs for expected outcomes	Assessment
Cross-disciplinary collaborations and projects fostered	Several collaborations fostered	Cross-disciplinary collaborations/ projects. Target set in the DoA: 5.	Collaborations between A&H researchers and computer scientists are essential in the development of ATRIUM workflows (17 already published) and demonstrators (10 in development). Such collaborations may also lead to joint projects in the next phase of the project.
Participants of Researcher Forums that bring together providers/developers and scholars of different fields of A&H research	Two forums held (2024 in Poznań, Poland; 2005 in Munich, Germany)	Mutual understanding of requirements of research data services	41 participants of two forums (Poznań: 21; Munich: 20). Effect on research data services not assessed
Participants of Mutual Learning Exercises (MLE) that bring together curators of different A&H data and providers/ developers of catalogues and portals	One MLE held in 2025, the second will take place in 2026	Sharing of knowledge and best practices for improving or developing new A&H data services	13 participants in the first MLE in Madrid, less than planned (20+) due to the historic blackout that left Spain without electricity for hours Effect on research data services not assessed

Non-professional / citizen science communities involved	Survey on the needs and requirements of five target communities and relevant ATRIUM digital solutions, ongoing other involvement	Communities involved. Target set in the DoA: 6 communities	Members of five target communities involved
Contributions by non-professional / citizen science communities	First contributions	Contributions of community members (e.g., expertise, data) to the development of products, services and workflows	Development of AGLAIA, the glossary of archaeological terms in the International Sign Language; dataset of Lovec pokladů (Treasure Hunter) for training the image recognition model that will be used in an ATRIUM workflow

Envisaged impacts beyond the project

More cross-disciplinary fertilisations fostered through increased collaboration and knowledge exchange between scholars, computer scientists, service developers and data curators active in and around A&H Research Infrastructures.

Leverage in participatory digital A&H projects involving non-professional communities, inspired by ATRIUM examples of such collaborations, including feedback of communities on relevant services, sharing of community data, as well as improved access to cultural heritage by special needs communities.

11. Preliminary exploitation plan and roadmap

The preliminary exploitation plan presented in this section articulates the strategy through which ATRIUM will enable the uptake, sustainability, and long-term valorisation of its Key Exploitable Results (KERs). It draws upon the structured work conducted through the Horizon Results Booster Go-to-Market (G2M) service and integrates the detailed analysis produced through value proposition canvases, characterisation tables, lean canvases, and exploitation roadmaps for two priority KERs: the text-based workflows for metadata quality, and the peer review evaluation framework for non-traditional research outputs. These two cases served as representative prototypes for establishing a rigorous analytical methodology that can be applied to all other KERs in the project.

The exploitation plan adopts a strategic, thematic approach by clustering ATRIUM results into families that share aims, target users, and usage contexts. This approach supports coherence across a diverse set of research, technical, and policy outputs and aligns exploitation priorities with ATRIUM's position within the wider ecosystem of European Social Sciences and Humanities (SSH) Research Infrastructures.

11.1 Purpose and background

ATRIUM generates a diverse portfolio of exploitable results, ranging from technical workflows and demonstrators to evaluation frameworks, training materials, and community-oriented guidance. To ensure that these results can be effectively adopted by researchers, cultural heritage professionals, Research Infrastructures, and policy actors, the consortium has initiated a structured exploitation process at an early stage of the project.

Between May and June 2025, ATRIUM received dedicated support under the Horizon Booster service (G2M), which enabled the consortium to analyse two initial KERs:

- **KER1:** Text-based workflows guidance for metadata quality of existing catalogues and repositories in Art and Humanities;
- **KER2:** Peer Review evaluation framework for non-traditional research outputs.

This analytical work led to the refinement of names, descriptions, user groups, competitive advantages, and IP considerations for both KERs. More importantly, it provided ATRIUM with a tested methodology that can be extended to the remaining exploitable results identified in the project's KER portfolio.

11.2 Methodological Foundations

The exploitation planning process has been shaped by the structured methodology facilitated through the Horizon Booster G2M service. This methodology provided partners with a common language and shared tools for identifying potential users, assessing needs, clarifying value

propositions, articulating competitive advantages, and defining plausible sustainability pathways.

The exploitation methodology adopted through the G2M service follows a structured, innovation-oriented approach, combining the following analytical tools:

Exploitation Intentions Table – used to consolidate information on each KER, including target users, competitive landscape, expected time to readiness, and partner involvement. This produced progressively refined versions of each KER, culminating in agreed final texts following the Exploitation Pillar Training (EPT) sessions.

Market Definition Canvas – applied to understand user behaviour through a job-to-be-done logic, identifying the deeper functional needs that potential adopters aim to address. This analysis helps define user groups, early adopters, and competing solutions at a level of abstraction that supports future KER evolution.

Value Proposition Canvas – used to identify customer pains, desired gains, and the specific ways in which each KER creates value. This tool assists in evaluating the fit between user expectations and the solutions ATRIUM provides, and in clarifying communication messages and competitive advantages.

Lean Canvas – used to identify the problem statements, solutions, unique value propositions, competitive landscape, channels, key metrics, and plausible revenue or sustainability streams.

Exploitation Roadmap – which synthesises findings into a structured plan for exploitation. It defines partner responsibilities, milestones, key performance indicators, projected costs and revenues, governance structures, and post-project sustainability measures. Each roadmap functions as a time-bound plan that bridges the end of project funding and the start of operational deployment.

In the case of both KER1 and KER2, several rounds of revision were necessary to improve clarity, particularly in relation to the description of value, the articulation of end-user needs, the mapping of competitive alternatives, and the framing of long-term sustainability mechanisms.

More specifically, the consultant's recommendations emphasised three transversal priorities: the need to improve communication and key messages for broad audiences; the importance of early market analysis; and the necessity of aligning partners on intellectual property implications, even when results are intended for open access dissemination.

These improvements have informed the methodological principles of the exploitation plan and the recommendations are reflected throughout the roadmap.

11.3 Thematic KER families in ATRIUM

ATRIUM has a diverse portfolio of results that differ in purpose, scale, and maturity. The following thematic families provide a coherent structure for exploitation planning:

Workflows and technical pipelines

This family encompasses the methodological processes developed within ATRIUM to extract, enrich, structure, and integrate cultural heritage and archaeological data. These workflows cover five data domains:

- **Text-based workflows**, supporting image-to-text conversion, OCR and HTR pipelines, information extraction, and ontology-driven process extraction.
- **Image-based workflows**, focusing on IIIF integration and the adaptation of image-recognition models for archaeological fieldwork and heritage imagery.
- **3D-based workflows**, supporting visualisation, annotation, and semantic integration of 3D cultural heritage objects, including built heritage through Heritage Building Information Modelling (HBIM).
- **Sound-based workflows**, enabling speech transcription and the extraction of semantic information from audio recordings such as oral history interviews and archaeological field documentation.
- **Geospatial workflows**, supporting collaborative annotation, geotagging, and the enrichment of historical maps and geographical corpora.

The text-based workflow is the reference case for methodological exploitation analysis.

Research assessment and policy instruments

This family includes frameworks and guidelines addressing evaluation of non-traditional research outputs, with a focus on datasets, software, training materials, workflows, digital editions, and other contributions essential to Research Infrastructures.

The peer review evaluation framework serves as the representative case.

Demonstrators and integration environments

Demonstrators show how ATRIUM workflows and tools can be applied in practice, including examples across all five data domains (text, image, 3D, sound, and geospatial). They provide real-world proof of concepts and play a central role in adoption, training, and validation.

Tools, platforms, and technical services

This includes standalone tools and services such as OCR and text-processing services, entity extraction and linking modules, IIIF integration components, 3DHOP visualisation services,

geospatial annotation platforms, and other workflow services to be integrated into the ATRIUM catalogue or into partner infrastructures.

Training, capacity building, and educational resources

This includes guidance, training curricula, tutorials, best practice documents, and community guidelines to support skills development and methodological uptake across researchers, students, non-professional communities, and GLAM professionals.

Community engagement models and citizen science approaches

This family includes ATRIUM participatory and community-driven approaches to cultural heritage research. It encompasses methods, guidelines, and examples of engagement that enable non-professional communities, heritage groups, and local stakeholders to contribute to the creation, annotation, and interpretation of cultural heritage data.

Each of these families requires a distinct exploitation pathway while contributing to ATRIUM's overall value proposition as a research infrastructure ecosystem.

11.4 Main findings from the analysis of priority KERs

11.4.1 KER1: Text based workflows guidance for metadata quality of existing catalogues and repositories in the Arts and Humanities

The analysis clarified the purpose of these workflows, which support researchers in extracting, processing, and enriching textual content from images and digitised sources. The work identified a broad potential user base, including researchers, heritage professionals, and members of the general public seeking to reuse textual information. Early adopters include Research Infrastructures such as DARIAH, ARIADNE, CLARIN, and specialist communities involved in digitisation tasks.

Problem Statements: Fragmented, difficult-to-integrate tools for OCR and text processing; high cost of commercial solutions; lack of domain-relevant guidance in SSH and heritage disciplines.

Value Proposition: Open-source, domain-specific workflows that reduce complexity, increase methodological transparency, and support high-quality, reusable research outputs, while fostering a sustainable community of practice.

Customer Segments: Researchers, archaeological specialists, digital humanities practitioners, data librarians, archivists, GLAM professionals, and digitally literate heritage communities.

Early Adopters: TNA researchers, communities within ARIADNE and SSH Open Marketplace, digitisation teams with limited budgets.

Unique Advantages: Domain specificity; embedding in trusted RIs; open-source; demonstrator-backed; community-based validation.

Use Model: Workflows hosted on SSH Open Marketplace and ARIADNE; training and documentation integrated into capacity-building programmes; demonstrators supporting uptake.

Exploitation Roadmap: Includes partner responsibility allocation, workflow publication, training and dissemination actions, sustainability analysis, and projected cost and revenue estimates (for example €150,000 for year one and €450,000 for year three).

11.4.2 KER2: Evaluation framework for non-traditional research outputs

The refined KER description highlights its role in addressing long-standing imbalances in research assessment practices, expanding recognition for diverse outputs such as datasets, software, and workflows. Early adopters include the journal *Transformations: A DARIAH Journal*, European bodies such as the Coalition for Advancing Research Assessment (CoARA), ENRESSH, and networks involved in scholarly communication reform.

Problem Statements: Bias towards monographs and articles; lack of shared criteria for datasets, software, and training; inconsistency in review practices; resistance to reform.

Value Proposition: A clear, adaptable framework enabling transparent review and crediting of diverse research outputs, aligned with European reform agendas.

Customer Segments: SSH journals, editorial boards, review committees, digital publishing platforms, training providers, Open Science reform networks.

Early Adopters: *Transformations: A DARIAH Journal*; Episciences; OPERAS; CoARA working groups.

Unique Advantages: First-mover advantage; practical criteria; strong policy alignment; community validation through pilots.

Use Model: Guidelines, templates, reviewer criteria, training modules, and integration support for journals and platforms.

Exploitation Roadmap: Includes publication of the finalised guidelines, pilot implementation, workshops with editorial boards, training roll-out, governance planning, and alignment with CoARA and ENRESSH. Cost estimates include €150,000 for the first year and €300,000 for year three.

The insights derived from these two analyses will guide the development of exploitation plans for the remaining KERs in the project.

11.5 Preliminary exploitation pathways for the broader KER families

Building on the detailed analysis of KER1 and KER2, the same methodology will be applied to all KER families in ATRIUM.

Workflows and technical pipelines

The exploitation pathway includes:

- Standardising workflows for long-term reuse
- Aligning them with recognised formats and standards
- Embedding them in the SSH Open Marketplace catalogue
- Delivering training modules and demonstrator-linked examples
- Establishing partner responsibility for maintenance
- Encouraging institutional uptake to reduce reliance on commercial tools
- Supporting consultancy opportunities for workflow adaptation

Research assessment and policy instruments

The exploitation pathway includes:

- Continued alignment with CoARA and ENRESSH
- Integration of guidelines into DARIAH training programmes
- Dissemination to journal editors, reviewers, and infrastructure networks
- Expansion to include additional case studies
- Long-term embedding in policy documents and evaluation frameworks

Demonstrators and integration environments

The exploitation pathway includes:

- Maintaining demonstrators as publicly accessible learning resources
- Using them as training assets in capacity-building programmes
- Incorporating demonstrator feedback into workflow refinement
- Embedding demonstrators into RI platforms for long-term sustainability

Tools, platforms, and technical services

The exploitation pathway includes:

- Open-source licensing for tool sustainability
- Integration into the ATRIUM ecosystem and partner infrastructures
- Documentation to facilitate future reuse
- Governance and hosting decisions for long-term operation

- Partnerships with GLAM institutions for testing and feedback

Training, capacity building, and educational resources

The exploitation pathway includes:

- Integration of materials into DARIAH-Campus
- Use in national training networks
- Translation and localisation where relevant
- Development of long-term training programmes embedding ATRIUM methodologies
- Partnerships with GLAM, academic, and community institutions

Community engagement models

The exploitation pathway includes:

- Finalise guidelines and templates for community engagement
- Document pilot experiences and participatory protocols
- Conduct user testing with selected community groups
- Collect feedback and refine engagement models
- Incorporate community-oriented materials into the ATRIUM Curriculum

11.6 Cross-cutting considerations

Communication and value proposition clarity

KER descriptions, names, and value propositions will be shortened, simplified, and made consistent across all communication materials, addressing recommendations from the expert consultant.

Intellectual Property Rights

All ATRIUM KERs will follow an open model of reuse, with appropriate attribution aligned with European Commission communication requirements. Governance of IP will be formalised through a coordinated licensing strategy across the consortium.

Sustainability and governance

Each KER family will adopt a sustainability model combining:

- Institutional maintenance by RIs
- Community involvement
- Consultancy and training revenue streams
- Follow-up project funding

Monitoring and evaluation

Key performance indicators will include:

- Workflow downloads and demonstrator usage
- Reviewer training numbers
- Journal adoption
- Reuse of tools and guidelines
- Institutional uptake
- Citations in policy documentation

11.7 Exploitation roadmap (M24–M48)

M24–M30: Consolidation and Alignment

- Finalisation of KER definitions
- Communication and value proposition refinement
- Allocation of partner responsibilities
- Initial IP and licensing framework

M30–M36: Validation and Engagement

- Early adopter pilots
- User testing across KER families
- Development of training materials
- Workshops with research communities and institutions

M36–M42: Integration and Scaling

- Embedding KERs in RI platforms
- Policy-level alignment for the peer review framework
- Expansion of demonstrators and training programmes

M42–M48: Sustainability and Legacy

- Consolidation of long-term governance
- Publication of final guidelines, infrastructure documentation, and training materials
- Final impact assessment
- Transfer of stable KERs to RI governance structures

This preliminary exploitation plan provides the foundation for the final strategic plan to be submitted at the end of the project as part of deliverable D2.2.

12. Conclusions

12.1 Results from Phase 1

During Phase 1 of the project (M1-M24), the focus was on building ATRIUM's identity, establishing core dissemination channels, and initiating engagement with academic, institutional, and non-professional communities whilst raising ATRIUM's profile with all the stakeholders as outlined in Section 4 (timeline).

The first task was to identify the key stakeholders for ATRIUM and the means by which they can be reached for effective dissemination about the project. This is important as, whilst many of the channels used may have a broad impact, some segmentation is needed to ensure focused communication to specific stakeholders of interest. In total, nine different groups have been identified and analysed to identify the best means for establishing ATRIUM's presence and ensuring their engagement. The most important groups which were the key focus for Phase 1 are Research Infrastructure members and researchers (as main end users of the project outputs) along with non-professionals (citizen scientists). ATRIUM's successful outreach to this segment is demonstrated in the following section 12.2.

A specific sub-task of this work package has been to involve new communities through participatory research in ATRIUM. Section 3 described five different non-professional groups where this work has been initiated and is starting to bear fruit, e.g. the AGLAIA - ARIADNE Glossary, with the aim of bringing in special interest groups on the fringes into the more mainstream activities undertaken by ATRIUM partners. At present, most communication has taken place directly with the people involved in these groups but the communication strategy will be widened to target similar sorts of groups during the next two years in order to involve more non-professionals.

The visual identity, as described in Section 5, has provided ATRIUM with a distinctive branding that has been easily adapted for use on the website, social media channels and other methods of communication such as presentation templates and marketing merchandise.

The dissemination and communication channels chosen for this task were described in Section 6. The range and diversity of the different channels used to promote and communicate the project activities and results have proven to be effective at reaching the target groups. The decision to use a range of social media channels has paid off in view of the emergence of competitors to X such as Bluesky and others and the unexpected surge in popularity of LinkedIn whose visitor numbers have exceeded expectations. In particular, conferences and events are a key route to reaching audiences from the academic and profession sectors and ATRIUM members have been active in this area (as seen in Section 7).

Effective execution of the dissemination and communication plan relies on the 17 partners and 13 affiliated organisations to support the team through their own networks and by reposting on social media for example, participating in over 50 events and disseminating materials such as leaflets. Section 8 presented an overview of their activities and the sizable contribution they have made so far. ATRIUM partners have also produced over 20 publications (Section 6.5)

The Key Performance Indicators for the dissemination and communication confirm that, in nearly all cases, the targets have been reached (and exceeded). The website and combined social media posts are reaching a large audience and the success of the TNA programme and high download and viewing numbers in Zenodo demonstrate solid engagement by researchers and academics in the project.

The assessment of expected project outcomes and impacts (Section 10) provided a detailed analysis of the ATRIUM results and proposes several KPI's for evaluating their impact towards the end of the project. The dissemination and communication strategy will support the promotion and take-up of these outputs, thereby contributing to the impact - this will form part of the plan for Phase 3.

The preliminary exploitation plan and roadmap (Section 11) presented a recent exercise which took two key expected results from ATRIUM (KERs), analysed using a methodology to produce action plans for their exploitation and uptake. The methodology will be applied to the other KERs to provide the task leaders with clear plans and where collaboration is needed with the dissemination and communication team to ensure that each one is effectively promoted during Phases 2 and 3 of the project.

12.2 Examples of strategy effectiveness by stakeholder group

This section presents examples of ATRIUM activities which demonstrate the success of the dissemination and communication plan in engaging the targeted stakeholders during the first phase of the project.

Internal Stakeholders – it can be seen from Section 8 that the partners involved in ATRIUM have been active in attending and disseminating at events, as well as posting on social media and promoting ATRIUM in their newsletters and blogs. Most of the Research Infrastructure members are part of the key stakeholder group, research institutions, international networks and individual researchers at varying career levels active in the Arts and Humanities.

Research institutions, international networks and individual researchers are the key stakeholders in ATRIUM and the four Research Infrastructures, along with the 26 partners and affiliates, provide a comprehensive network of organisations and communication networks covering Europe and further afield (e.g. The US, Japan and Egypt), which is very effective at reaching the Arts and Humanities research community. This can be illustrated by some of the

specific actions undertaken by ATRIUM in the first two years, which have specifically targeted researchers both within the RI networks and external to them.

The Researchers Survey carried out as part of the Skills Assessment by WP7 (ATRIUM 2025b) was widely disseminated by both ATRIUM and the partners' network and resulted in a total of 334 responses from 31 countries, with 98% coming from Europe. 65% of the respondents classified themselves as early, mid or senior stage researchers, i.e. over 200 people. The remainder were PhD and Masters students, with 22 people classifying themselves as 'Other'.

The ATRIUM Transnational Access Programme is also specifically targeted at researchers and especially those in the early stages of their careers. During Year 1, three Summer Schools and ten organisations offering individual placements attracted 108 applications, of which 54 (49%) were successful. The participants came from 32 countries, with the majority from Greece, Spain, France and the UK, and claiming to have with the majority having less than 7 years work experience. Nearly all came from a research-based organisation (universities dominating), with just a few from private/non-profit organisations and digital repositories. Call 2 attracted more applicants from Central and Eastern Europe than Call 1, with around 37% coming from countries such as Lithuania, Poland and Slovenia.

The TNA programme is widely disseminated via the partner networks, the project website and social channels, and is currently on target to provide training to 200 students by the end of the project. Some of the success stories are featured on the [TNA Blog](#).

Support staff such as providers of technical services, exhibition organisers and admin staff need to have an understanding of their organisational requirements and the environment in which researchers work. Consequently, it is necessary to make as much information available about the project and its outputs and the consequences this has for each of their roles. ATRIUM has strived to publish information about the project activities and its outputs and organise workshops and seminars to inform attendees at conferences and events as evidenced in Sections 6 and 7.

Galleries, Libraries and Museums (GLAMs) are the main repositories of cultural heritage artefacts and related publications where academics can access the necessary materials for their research on the one hand, and where the public can view and learn about cultural heritage on the other hand. ATRIUM's collaboration with the Pelagios Network (Section 3.5) has benefitted from the initiatives undertaken by the latter which have focused on strengthening the digital competences of the GLAMs community, advancing the use of Linked Open Data (LOD) and artificial intelligence in cultural heritage workflows, and supporting participatory heritage documentation in local communities. ATRIUM's outreach within this sector has been strengthened through the workshops organised by Pelagios Network. In addition, the Researchers Survey carried out by WP7 asked the participants which organisation they came from. Whilst the great majority of these were identified as Research Infrastructures or Research Performing Organisations, six came from the GLAMs sector.

Educators and students need to know which (new) skills are required for working as researchers in the various cultural heritage domains. The Research Infrastructures, and in particular, DARIAH, are prime sources of this information due to their reach and numbers of participants as well as provision of training. There is a need for collaboration with academic course providers across Europe to ensure that students are graduating with the right skills for their future careers and that they know how and where to access training for new and developing work requirements. The uptake of the ATRIUM Curriculum during the second half of the project will be a further indicator for ATRIUM's success in reaching this group of end users.

Non-academic professionals may not directly participate in research but their work will be closely related to and is dependent on cultural heritage. It is both important and interesting for such people to understand the contribution that research makes to it. Social media can be used to present and explain the work of ATRIUM along with booths at cultural heritage events aimed more at this sector.

ATRIUM has been present at the Italian event, TourismA for the last two years and will feature again in February 2026. This is a major symposium aimed at professionals who work in all aspects of Cultural Heritage (including researchers and non-professionals) and the general public, which provides a great opportunity to present and explain what ATRIUM aims to do and why to a broad audience. As well as booths and scheduled talks, there are displays and organised activities for children to participate in, providing educational and engaging information about the many different actors and organisations involved in Cultural Heritage. Hosted annually in Florence, TourismA attracts a large and inquisitive audience.

Non-professional participants, e.g. detectorists and citizen scientists, are addressed in Section 3 which describes a number of new communities which actively contribute to recorded knowledge, preservation and dissemination of their national cultural heritage. ATRIUM is developing tools and services and will be providing training for use by these communities so more tangible results should be evident during the second half of the project. This applies to the ARIADNE Portal as well, where more records of finds and rock art, for example, are being uploaded into the Catalogue and integrated viewers for images and 3D objects will be available in the coming year, providing valuable tools for amateurs who wish to compare and research their own contributions.

It should be noted that nearly half of the service and tool providers who replied to the Questionnaire for Service providers as part of the ATRIUM Skills Assessment (WP7) considered citizen scientists and the public as part of their target audience.

Politicians, policy makers and funding bodies will be focused upon during the second half of the project as ATRIUM starts to deliver results and can demonstrate its success. This can be achieved, for example, by inviting key figures to events organised by ATRIUM (e.g. the mid-term event in February).

Finally, **the media and general public** have access to the ATRIUM website and social media and also through events such as TourismA where there will be a booth for people to visit and find out more about the project. Other activities such as European Researchers' Nights are held annually at the end of September. These national events target the general public, addressing and attracting people regardless of the level of their scientific background, with a special focus on young people and their families, pupils and students, and will be a focus for M24-M48.

In summary, ATRIUM has been successful in engaging and collaborating with its key stakeholders during the first 24 months. During this period, the focus has been on the most relevant groups, these being researchers and direct beneficiaries of the project with less attention paid to more peripheral stakeholders as the project establishes itself. However, the focus will widen to include all stakeholders as ATRIUM progresses during M25-M48.

12.3 Plan for M25-M48

To date, the engagement and collaboration plan has proven to be an effective approach for building up the profile of ATRIUM in the domain of Digital Humanities and gaining the commitment of the relevant organisations and professionals, as well as the non-professional communities (as seen in Section 3). The KPIs for the communication and dissemination channels are looking positive overall, with some channels gaining in popularity at the expense of others. The strategy for M25-M48 is to continue monitoring the activities and to be flexible as required. In particular, the team will liaise with the task members responsible for each of the KER exploitation plans to co-ordinate the dissemination and communication activities and to create a structured programme of campaigns and editorial plans for social media posts, the website and newsletter assisted by the project partners.

Two further project phases are defined that will shape the strategy for the next two years:

Phase 2: consolidation and expansion (M25-M36)

This period marks a transition from awareness-raising to consolidation and community uptake. The dissemination activities will focus on the project outputs and the training and workshops that are being organised to encourage take-up, for example. As the project starts to produce results, the focus of the communication and dissemination will widen to target other groups in greater depth. For example, as the Curriculum is developed and training provided by WP7, the dissemination will also include educators and students. As more services and data become available in the ARIADNE Portal, this will provide an opportunity to reach not just researchers but non-academic professionals and the public who also use the Portal for their own interests. As mentioned previously, ATRIUM will also participate in events which focus on stakeholders such as non-professionals and the public and will invite politicians and policy makers to events organised to showcase the project outputs. In summary, the communication and dissemination

will intensify and broaden in order to encourage engagement and take-up of the outputs as well as raising the profile of ATRIUM as a success for the Digital Humanities community.

Phase 3: consolidation of impact and legacy (M37–M48)

The final project phase will see the publication of final guidance materials, policy briefs, and toolkits; the delivery of the final set of training initiatives; and increased engagement with policy makers to position ATRIUM's resources within the wider European Research Infrastructure ecosystem. Consequently, the focus will be on the associated stakeholders with a coordinated communication and dissemination campaign highlighting long-term benefits for the Arts and Humanities community targeted at all the identified stakeholders.

References

ARIADNE (2025): Corpus Vitrearum Medii Aevi records added with IIIF viewer. ARIADNE website, <https://www.ariadne-research-infrastructure.eu/2025/12/10/corpus-vitrearum-medii-aei-records-added-with-iiif-viewer/>

ATRIUM (2024a) / Tasovac, T., Garnett, V., et al.: The Guidelines for Producing the ATRIUM Curriculum. D7.2, 30/09/2024. Zenodo, <https://doi.org/10.5281/zenodo.13867113>

ATRIUM (2024b) / Delmazo, C., Umerle, T., et al.: Report on First Researcher Forum (GoTriple), 8/12/2024. Zenodo, <https://doi.org/10.5281/zenodo.14514990>

ATRIUM (2024c) / Arkan-Caba, C., Carloni, M., Charvát, V. M., Durco, M., & Felicetti, A.: Overview of Models and Formats in the Field. D3.1, 31/12/2024. Zenodo, <https://doi.org/10.5281/zenodo.14575783>

ATRIUM (2025a) / Delmazo, C., Umerle, T., et al.: Report on the first ATRIUM Mutual Learning Exercise (GoTriple), 24/06/2025. Zenodo, <https://doi.org/10.5281/zenodo.15728985>

ATRIUM (2025b) / Delmazo, C., van der Lek, I., Gasia, A., Bénére, S., & Ilvanidou, M., et al.: The ATRIUM Skillset Assessment and Gap Analysis Report. D7.1, 21/08/2025. Zenodo. <https://doi.org/10.5281/zenodo.16918112>

ATRIUM (2025c) / Van Uytvanck, D., Durco, M., & van den Heuvel, H.: Interim assessment on Service Interoperability and EOSC Integration. ATRIUM Milestone 7, 30/09/2025. Zenodo, <https://doi.org/10.5281/zenodo.17232562>

ATRIUM (2025d) / Pagé-Perron, E., Richards, J., Novák, D., Lutsai, K., et al.: Interim Report on Demonstrators. D5.1, 12/2025. Zenodo (deposit/DOI forthcoming)

ATRIUM (2025e) / Gouzi, F., Baillot, A., Tasovac, T., Bénére, S., Delmazo, C., & Garnett, V.: ATRIUM Peer Review Framework, Version 1, 12/2025. Zenodo, <http://doi.org/10.5281/zenodo.17787916>

Baillot, A., Black, M., Carloni, M., Charvát, V. M., Ďurčo, M., & Kurzmeier, M. (2025a): How not to reinvent the wheel – workflows as a leverage from the past to the future. DARIAH Annual Event 2025: The Past (DARIAH AE 2025), Goettingen, Germany. Zenodo, 1 July 2025, <https://doi.org/10.5281/zenodo.15783982>

Baillot, A., Gouzi, F., & Tasovac, T. (2025b): Volume 1: Workflows. In: Transformations. A DARIAH Journal, <https://transformations.episciences.org/volumes/965>

Baillot, A., Gouzi, F., & Tasovac, T. (2025c): Workflows: Introduction (Part 1). In: Transformations. A DARIAH Journal, Volume 1, <https://doi.org/10.46298/transformations.15780>

Barbot, L., Dolinar, M., Gray, E.J., Grisot, C., Illmayer, K., Kurzmeier, M., & McGillivray, B. (2024): Contextualizing Research Tools & Services Through Workflows in the SSH Open Marketplace. In: Journal of Open Humanities Data, Vol. 10, Article 22, <http://doi.org/10.5334/johd.192>

Bekiari, C., Kritsotaki, A., Tsouloucha, E., & Theodoridou, M. (2022): D4.20 SSHOCro (final version)(1.0). Zenodo. <https://doi.org/10.5281/zenodo.6771757>

Bertozzi, A. & De Santis, L. (2025): Boosting data interoperability of GoTriple.eu – Ontology alignment in the ATRIUM project. Presentation at WOOC 2025, Bologna, 29 May 2025. Zenodo. <https://doi.org/10.5281/zenodo.15592039>

Bigelow, S.J. (2024): What are the types of APIs and their differences? In: Techtarget.com, 23 December 2024, <https://www.techtarget.com/searchapparchitecture/tip/What-are-the-types-of-APIs-and-their-differences>

Carloni, M., Ďurčo, M., Charvat, V.M., Goosen, T., Homo, J., Isaac, A., Kurzmeier, M., & Bardi, A. (2025b): MetaCat suite: Towards a systematic analysis of catalogues. Poster. CLARIN Annual Conference 2025, Vienna, Austria. Zenodo, <https://doi.org/10.5281/zenodo.17208781>

Carloni, M., Ďurčo, M., Charvat, V.M., Goosen, T., Homo, J., Isaac, A., Kurzmeier, M., & Bardi, A. (2025a): MetaCat suite: Towards a systematic analysis of catalogues, pp. 76-80, in: CLARIN Annual Conference Proceedings 2025, Vienna, Austria, https://www.clarin.eu/sites/default/files/CLARIN2025_ConferenceProceedings.pdf

Chadere, I. (2025): REST vs. GraphQL vs. gRPC vs. SOAP. In: Apidog blog, 28 July 2025, <https://apidog.com/blog/rest-vs-graphql-vs-grpc-vs-soap/>

De Santis, L. (2024): FAIR as a Journey: Lessons Learned from Building the GoTriple Discovery Platform for Social Sciences and Humanities. In: Publications, 12(3), 26, <https://doi.org/10.3390/publications12030026>

Delmazo, C. (2025): 2nd ATRIUM Researcher Forum: valuable user feedback and expert advice for the CLARIN Transcription Portal. In: ATRIUM website, <https://www.atrium-research.eu/news/2nd-atrium-researcher-forum-valuable-user-feedback-and-expert-advice-for-the-clarin-transcription-portal/>

EOSC - European Open Science Cloud (2025): Enriched EOSC Interoperability Framework, <https://eosc.eu/roadmap/enriched-eosc-interoperability-framework/>

European Commission / DG Research and Innovation (2021): EOSC Interoperability Framework. Report from the EOSC Executive Board Working Groups FAIR and Architecture. Edited by the EOSC Executive Board, Corcho, O. et al., February 2021, EU Publications Office, <http://doi.org/10.2777/620649>

European Commission (2022): Horizon Europe – Work Programme 2023-2024: 3. Research Infrastructures, Topic: Research infrastructure services advancing frontier knowledge, HORIZON-INFRA-2023-SERV-01-02, <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-infra-2023-serv-01-02>

Felicetti, A., Meghini, C., Richards, J., & Theodoridou, M. (2023): The AO-Cat Ontology (1.2). Zenodo, <https://doi.org/10.5281/zenodo.7818375>

Gouzi, F. (2024): Introducing the DARIAH Overlay Journal: an alternative and transparent publishing model. In: DARIAH website, 29 February 2024, <https://www.dariah.eu/2024/02/29/introducing-the-dariah-overlay-journal-an-alternative-and-transparent-publishing-model/>

Gouzi, F., Baillot, A., Bénérière, S., Delmazo, C., & Tasovac, T. (2025): Building a Peer Review Evaluation Framework for Non-Traditional Research Outputs. Poster at DH2025, July 2025, Lisbon, Portugal. Zenodo, <http://doi.org/10.5281/zenodo.15967748>

Pajdla, P., Lečbychová, O., Novák, D., Antal, R., Komoróczy, B., Chlup, T., & Mařík, J. (2023): Recording Data from Metal-Detecting Activities in the Czech Republic: The Portal of Amateur Collaborators and Register of Individual Finds (AMCR-PAS). In: Internet Archaeology, 64, <https://doi.org/10.11141/ia.64.13>

Pajdla, P., Novák, D., Harasim, R., Křivánková, D., Straňák, P., Lutsai, K., & Lečbychová, O. (2025): Leveraging AI for Enhanced Archaeological Data Extraction: Workflows for Textual and Image-Based Data. Presentation at the CAA2025: Digital Horizons, Athens, 7 May 2025, <https://doi.org/10.5281/zenodo.15582856>

pubnub / Developer Relations Team (2023): Guide: What are RESTful APIs?, 20 September 2023, <https://www.pubnub.com/guides/restful-apis/>

Scardaci, D., Sciacca, E., Hériché, J.K., Van de Sanden, M., et al. (2023): A landscape overview of the EOSC Interoperability Framework – Capabilities and Gaps. EOSC Task Force on Technical Interoperability of Data and Services. Zenodo, <https://doi.org/10.5281/zenodo.8399710>

Tournoy, R. (2023): Episciences overlay journals: a bridge between scientific publications, open repositories, data and software repositories. Presentation at the 18th Munin Conference on Scholarly Publishing, University of Tromsø, Norway, <https://hal.science/hal-04325981v1>

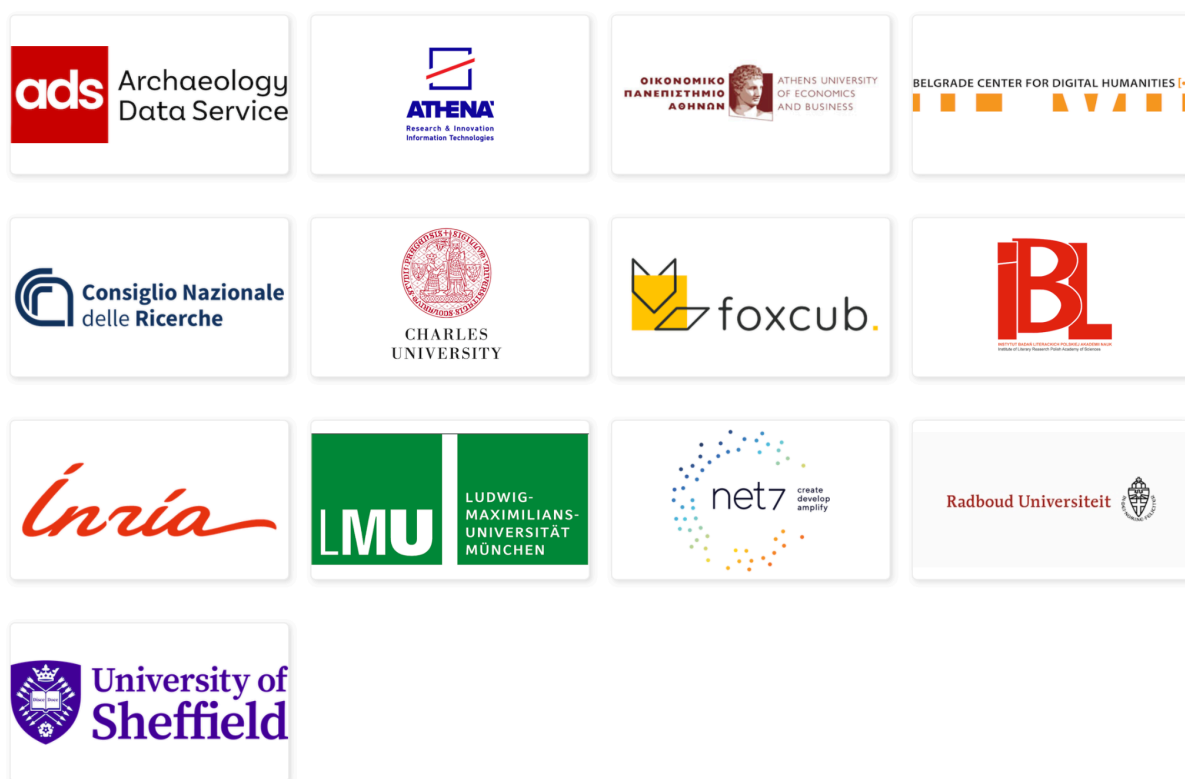
Wilkinson, M.D., Dumontier, M., Aalbersberg, I.J., Appleton, G., et al. (2016): The FAIR Guiding Principles for scientific data management and stewardship. In: Scientific Data 3, 15 March 2016, <http://www.nature.com/articles/sdata201618>

Consortium

Research Infrastructures



Beneficiaries



Affiliated entities



All information provided reflects the status of the ATRIUM project at the time of writing and may be subject to change.

Neither the ATRIUM Consortium as a whole, nor any single party within the ATRIUM Consortium warrant that the information contained in this document is capable of use, nor that the use of such information is free from risk. Neither the ATRIUM Consortium as a whole, nor any single party within the ATRIUM Consortium accepts any liability for loss or damage suffered by any person using the information.

© 2025 by the authors, the ATRIUM consortium. This work is licensed under a "CC BY 4.0" license.



**Funded by
the European Union**

This document does not represent the opinion of the European Community, and the European Community is not responsible for any use that might be made of its content. Funded by the European Union. Grant Agreement number 101132163. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.