

# D2.4 Interim Report on Networking and Integration

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## **1 Executive Summary**

The deliverable D2.4 reports the work done in Tasks 2.1, 2.3, 2.4, 2.5 and 2.6 during the first 36 months of the project, assessing it and planning the related activities for the final period, i.e. months 37-48. Work done under Task 2.2 has been reported in D2.3.

The overall objective of WP2 is to "Extend and Support the ARIADNE community", which is now being achieved through primarily online meetings, training events and conferences. There has been a focus on engaging with new partners to bring them rapidly to the same level of awareness as those who participated in the previous project, and a particular aim to extend our coverage in Central and Southeastern Europe. We are also working with major associations and international bodies, such as the European Archaeological Council (EAC) and European Association of Archaeologists (EAA), to help promote a FAIR approach to archaeological data, and to inform strategic policy making. We are targeting archaeological professionals and heritage managers, who may be less aware of ARIADNE than those working in academic and research institutions, as they are responsible for the creation and curation of large quantities of archaeological data. Finally, we are working with our international partners to extend the reach of ARIADNEplus beyond Europe.

As a result of the COVID-19 pandemic, there has been a reduction in the number of networking opportunities and since M18, nearly all meetings have had to be held online but this has not led to any major deviations from the work plan for WP2, which is on schedule.

Since our initial report at M18, the new portal has allowed us to start to demonstrate the benefits of data aggregation according to the enhanced AO-Cat data model, and this activity will intensify during the final work period:

- Special attention will be dedicated to new communities being incorporated in the ARIADNEplus one, such as palaeoanthropology, bioarchaeology and environmental archaeology.
- Partners will be encouraged to hold national and regional ARIADNEplus promotion and training events in their own countries.
- New partners will be more intensively involved through their data aggregation.
- We will continue to recruit more Associate Partners, particularly in Southern and Eastern Europe.
- We will promote the benefits of ARIADNEplus to heritage agencies, museum curators, heritage managers, professionals and professionals or SMEs working on excavations.

## 2 Introduction and Objectives

The deliverable D2.4 reports the work done in Tasks 2.1, 2.3, 2.4, 2.5 and 2.6 during the first 36 months of the project, assessing it and planning the related activities for the final period, i.e. months 37-48. Work done under Task 2.2 has been reported in D2.3.

The overall objective of WP2 is to "Extend and Support the ARIADNE community". ARIADNE (Archaeological Research Infrastructure for Archaeological Data Networking in Europe) was an infrastructure project funded by the European Commission under Framework 7 for the period 2013-2017.¹ Networking activities raised the awareness of potential users, archaeologists and heritage managers, creating a vibrant transnational community. ARIADNE was praised by archaeological associations and institutions, including the EAA (European Association of Archaeologists) and it led to the establishment of data repositories in several countries. ARIADNE succeeded in building a community of use consisting of about 11,000 archaeologists, corresponding to one third of all European archaeologists and probably more than 50% of those using some computer support in their research. One of the aims of ARIADNEplus is to extend that community, making contact with the majority of all researchers and professionals (which is particularly important in the archaeological domain where research and heritage management often go hand in hand). ARIADNEplus also has a specific goal to broaden its international links with new partners in the USA, Japan, Latin America and Australia. This deliverable reports on steps taken during the first 36 months of the project to meet these objectives.

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<sup>1</sup> http://legacy.ariadne-infrastructure.eu/

# 3 Coordinating and monitoring networking activities Task 2.1 (NA1.1) Task-leader: UoY-ADS

## 3.1 Engagement with archaeological partners

As the lead archaeological partner, UoY-ADS has the task of coordinating the engagement and mobilisation of all archaeological partners in the development of the research infrastructure, coordinating opportunities for discussion, for example around the Special Interest Groups focussed on the development of vocabulary standards and mappings in Task 4.4, and also collaborating with external standards groups, such as the Forum for Information Standards and Heritage (FISH)<sup>2</sup>, and the North Sea Finds recording group.<sup>3</sup>

### 3.1.1 Internal Special Interest Groups

The special interest groups are aligned with the sub-tasks of T4.4, which are charged with surveying, collecting, creating and managing multilingual domain thesauri and vocabularies, as well as developing the ARIADNEplus ontology extensions built in WP14 for specific domains to the real cases presented by partners. The list of sub-domains, with lead partner, is as follows:

- <u>Paleo-anthropology</u> (CENIEH)
- Bio-archaeology and Ancient DNA (FORTH IMBB)
- <u>Environmental Archaeology</u> (SND SEAD)
- <u>Inorganic Materials Study</u> (INFN)
- Dating (INFN)
- Field Survey (**RUG**)
- Archaeological finds made by general public (AU)
- Remote Sensing (ZRC-SAZU)
- <u>Standing Structures</u> (LNEC)
- Spatio-temporal data (ARUP-CAS)
- Maritime and underwater archaeology (DGPC)
- Archaeological fieldwork (PP) having taken over leadership from INRAP
- <u>Inscriptions</u> (PIN) having taken over leadership from UB
- Burials (OEAW)

The groups use Basecamp as a forum for discussion and submit quarterly progress reports under T4.4.

<sup>&</sup>lt;sup>2</sup> http://www.heritage-standards.org.uk

<sup>&</sup>lt;sup>3</sup> https://finds.org.uk/news/story/284

### 3.1.2 External Groups

An important external collaboration has been forged with the COST Action SEADDA (Saving European Archaeology from a Digital Dark Age). SEADDA developed out of a problem identified in the first phase of ARIADNE. Because archaeology has been an early and enthusiastic adopter of a wide variety of digital methods, most archaeological data, the result of decades of research funding, is being lost due to a lack of appropriate persistent repositories with specialist knowledge in most European countries. Fewer than five EU countries have repositories with the required specialist knowledge and mechanisms in place to ensure archaeological data will be freely and openly available for re-use by future generations of researchers. Failure to address this inequality means Europe will be divided into countries and regions whose archaeological research legacy is preserved, and countries and regions where it is irrevocably lost. This lack of equity also hampers participation in research collaboration. While best practice around the preservation and dissemination of archaeological data is well established in a few countries, most do not have persistently available data in interoperable formats.

The aim of SEADDA is, therefore, to help build capacity across Europe and to provide training events and workshops which would enable more countries and organisations to participate fully in ARIADNEplus. The Action began in February 2019, at the same time as ARIADNEplus, and also runs for four years. The Action Chair is Professor Julian Richards, ARIADNE Deputy Coordinator and WP2 task leader, and the Vice Chair is Dr Edeltraud Aspöck from ARIADNEplus partner OEAW. Most ARIADNEplus partners are members of SEADDA allowing for a cost-effective pooling of resources around events and training activities.

### Internet Archaeology: Issue 58 (2021)

Digital Archiving in Archaeology: The State of the Art

Edited by Ulf Jakobsson, David Novák, Julian D. Richards, Benjamin Štular and Holly Wright









This special issue of Internet Archaeology is jointly sponsored by <u>COST Action</u>, <u>SEADDA</u> and the <u>European Archaeological Consilium</u> (EAC). It originated in a SEADDA workshop hosted by the <u>Swedish National Data Service</u> in Gothenburg in November 2019, in which participants presented the current state-of-the-art for digital archiving in their respective countries, with additional contributions from SEADDA members and others invited by the EAC Working Group for Archaeological Archives.

Figure 1: Special issue of Internet Archaeology https://doi.org/10.11141/ia.58.23

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<sup>&</sup>lt;sup>4</sup> https://www.seadda.eu/; https://www.cost.eu/actions/CA18128/

In 2021, SEADDA collaborated with ARIADNEplus partners to create a co-edited special issue of the peer-reviewed e-journal *Internet Archaeology*, entitled "Digital Archiving in Archaeology: The State of the Art". The editors were Ulf Jakobsson (SND), David Novák (ARUP), Benjamin Štular (ZRC-SAZU) and Holly Wright and Julian Richards (UoY-ADS). The publication was jointly sponsored by SEADDA and the European Archaeological Consilium (EAC), which is the umbrella group which represents all European state heritage bodies. 21 contributions, plus an introduction, were published on 31 May 2021, and six additional papers were added in December 2021. The papers include contributions from the majority of ARIADNEplus partners, to which we were also able to add contributions from three ARIADNEplus Associate Partners from Serbia, Slovakia and Portugal. Our international ARIADNEplus partners in the Nara Research Institute (Japan), CONICET (Argentina), and ASU (United States) also provided contributions. The volume provides an important benchmark statement for the current state of data management and preservation across Europe and beyond.

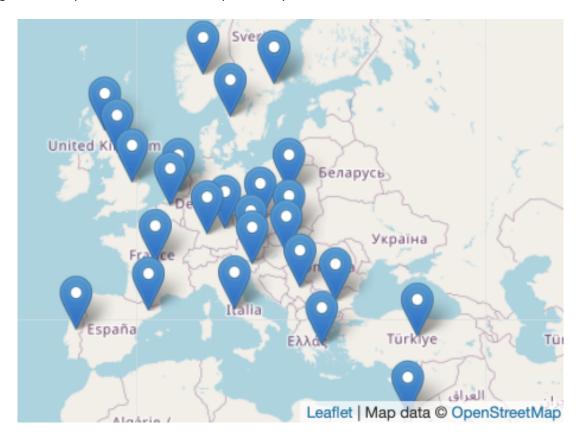


Figure 2: European countries represented in the Internet Archaeology special issue

In addition, the collaboration with SEADDA allowed ARIADNEplus partners to benefit from online "Novice To Know How" training in digital preservation, led by the International Digital Preservation Coalition.

Finally, we have fostered a number of collaborations with external partners which will help extend and embed the work being done in WP4 and WP5. We have good links with the UK's FISH (Forum for Information Standards in Heritage) which has worked on controlled SKOS vocabularies for archaeology for several decades. FISH are keen to extend their work at a European level, and we planned to have a joint workshop with them at CAA Oxford, although this has had to be postponed due to COVID-19. We also share cross-membership with the North Sea and Baltic Finds Recording Group, a loose

collaboration which is keen to work with ARIADNEplus to implement interoperability between public finds databases held in Denmark, Finland, the Netherlands and the UK. This group is working to aggregate these datasets via the ARIADNE portal in T4.4.7. Our connections with the Getty Institute will be important here as our partner USW has agreed to work with the Getty to help extend the Getty's Art and Architecture Thesaurus (AAT) - which provides the backbone of ARIADNE's subject classification - to cover more granular classification for archaeological metalwork categories.

#### 3.2 New communities

Special attention is being paid to new communities being incorporated in ARIADNEplus, such as palaeoanthropology, bioarchaeology and environmental archaeology, with several of the special interest groups chosen according to the new sub-domains which ARIADNEplus wished to extend into. Liaisons are being led by CENIEH for palaeoanthropology, with the collaboration of UNIROMA1; FORTH(IMBB) for bioarchaeology; SND (SEAD) for environmental archaeology; INFN for materials sciences and dating; and LNEC for built structures; and DGPC for maritime and underwater archaeology.

An early success has been a collaboration with the ROCEEH project. The Role of Culture in Early Expansions of Humans (ROCEEH) is an interdisciplinary project of the Heidelberg Academy of Sciences and Humanities. Within the framework of this Research Centre, social scientists and natural scientists study the effect that culture had on the successive expansions of humans out of Africa and across the Old World. The Research Centre is located at the University of Tübingen and the Senckenberg Research Institute in Frankfurt am Main, Germany.<sup>5</sup> The project was initiated in 2008 by the Heidelberg Academy of Sciences and Humanities and is scheduled to continue for 20 years until 2027. At the core of the project is the compilation of data about archaeological and paleoanthropological sites. These data are organized in a multidisciplinary, web-based, geo-relational database known as ROAD (ROCEEH Out of Africa Database) with advanced geographical information system (GIS) functionality.<sup>6</sup> Metadata was aggregated with other resources in ARIADNEplus in September 2021. More than 2,000 prehistoric localities from ROAD are now findable in ARIADNEplus by simply searching for the name of a site (e.g. Olduvai, Dmanisi, Hohle Fels). In addition to the basic information about a site displayed in ARIADNEplus, a user can enter a site name and download a PDF of the "ROAD Summary Data Sheet" directly from ROAD. ROCEEH plans to update the ROAD data in the ARIADNE Portal every six months until 2027.

As an outcome of work done by the Burials sub-group, ARIADNEplus partner ARUP initiated a collaboration with the Austrian project THANADOS.<sup>7</sup>

THANADOS is an aggregator for information about burials. The project comes to an end in 2022 but they have now joined ARIADNE as an Associate Partner and we hope to aggregate their data in the ARIADNEplus portal. Initial meetings have indicated that the data can be mapped to the AO-Cat, and

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<sup>&</sup>lt;sup>5</sup> https://www.hadw-bw.de/en/research/research-center/roceeh/home

<sup>&</sup>lt;sup>6</sup> http://www.roceeh.uni-tuebingen.de/roadweb/smarty road simple search.php

<sup>&</sup>lt;sup>7</sup> https://thanados.net

that it will have a good degree of interoperability with the ARIADNE knowledge base as the data has already been mapped to the Getty AAT and periods are registered in PerioDo.



## The Anthropological and Archaeological Database of Sepultures

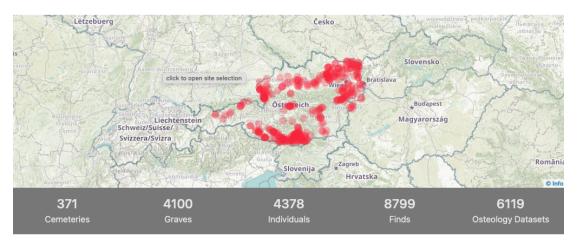


Figure 3: THANADOS web site

Finally, representatives of ARIADNEplus from UoY-ADS and PIN have joined the reference group for project Urdar, a research infrastructure for archaeological excavation data, led by the Swedish National Heritage Board, and funded by a Swedish Riksbankens Jubileumsfond infrastructure grant. The collaboration with ARIADNEplus will ensure that common standards, vocabularies and best practices being developed in Urdar will align with those being fostered in ARIADNEplus.

#### 3.3 International conferences

Rather than organising international conferences ourselves the strategy behind T2.3 is to maximise the opportunities provided by existing international meetings, such as those of the Society of American Archaeology (SAA), the European Archaeological Association (EAA), and the annual conference of the Computer Applications and Quantitative Methods in Archaeology (CAA), to hold internal project meetings and to promote the ARIADNEplus approach.

Since our initial report at M18 most of these conferences have moved online, due to the COVID-19 pandemic, but we have maintained an ARIADNEplus presence. The 2020 EAA Conference, originally planned for Budapest, was held virtually thanks to the enthusiasm and support of EAA members who relocated online enabling the majority of planned sessions and speakers to go ahead. ARIADNEplus held a joint workshop with SEADDA where speakers were invited to discuss the sustainability of archaeological data, provide exemplars of open data and data re-use, and present technologies and initiatives that promote interoperability and persistent resources. As well, papers were invited to

address the challenges associated with the sustainability of archaeological data and to promote a better understanding of working together as a community to address them. In total, eight papers were presented.

UoY-ADS organised an ARIADNEplus round-table discussion at the CAA 2021 Digital Crossroads virtual conference on the subject of *Digital Infrastructures and New (and Evolving) Technologies in Archaeology*. This session focussed on issues of technologies already in use by research infrastructures and requirements and potential benefits of introducing new technologies, such as Linked Data, NLP, Image Recognition and other data processing applications. The roundtable attracted an audience of 49 participants.

The roundtable presenters from ARIADNEplus were:

- 1. Doug Tudhope, University of South Wales.
- 2. Xavier Rodier & Olivier Marlet, CNRS HUMANUM, University of Tours.
- Espen Uleberg, Mieko Matsumoto, Jakob Kile-Vesik, Museum of Cultural History, University of Oslo, Christian-Emil Ore, Department of Linguistics and Scandinavian Studies.
- 4. Valentijn Gilissen, DANS: Netherlands Institute for Permanent Access to Digital Research Resources.

In addition, the session attracted an international contribution from Erik Champion, Curtin University, Australia. ARIADNEplus partners were also active in some of the other sessions – Doug Tudhope (USW) and Kate Fernie (CARARE) were both involved in the Paradata Round table, *S1. Paradata to the people! Documenting documentation and more.* 

ARIADNEplus and SEADDA also held a joint session at the September 2021 EAA conference, entitled *Understanding and Expanding Capacity in Archaeological Data Management beyond Western Europe*. The session was co-chaired by Franco Niccolucci, Julian Richards and Holly Wright, and featured papers by ARIADNEplus partners ARUP, NAIM-BAS, University of Oslo, CONICET and Inrap, and Associate Partners from Serbia and Portugal.

Finally, ARIADNEplus is organising a session at the September 2022 EAA conference, which it is hoped will be an in-person meeting in Budapest. Since this will be the last EAA conference held during the duration of the ARIADNEplus project we plan a strong presence, including an ARIADNE booth in the exhibition space.

Members of the consortium were due to speak at a conference on FAIR Heritage which was to have been held in Tours, France, organised by French partner, the CNRS Huma-Num laboratory.<sup>8</sup> This was replaced by a virtual meeting, held June 17-18 2020, and presentations about ARIADNE-related activities were given by Carlo Meghini (CNR), Julian Richards (UoY-ADS) and Doug Tudhope (USW).

<sup>&</sup>lt;sup>8</sup>http://www.lestudium-ias.com/event/fair-heritage-digital-methods-scholarly-editing-and-tools-cultural-and-natural-heritage

The 2020 ROCEEH conference, organised by our Associate Partner, the University of Heidelberg was also held online from July 27-31, 2020, with the theme of **Human Origins - Digital Future.** Franco Niccolucci gave a presentation on ARIADNE and Julian Richards provided a pre-recorded interview on Implementing the FAIR principles.

Our intention was also to make use of national events, sometimes organised by ARIADNEplus partners to provide networking opportunities. CAA, for example, has national chapters, and the Greek Chapter of the CAA organised a CAA-GR 2021 virtual event held on the 16 April 2021 in collaboration with the ARIADNEplus consortium, the SEADDA network and the CARARE association. ARIADNE provided two keynote presentations to an online session on **Open Digital Archaeological Content in the Connected World: Curation and Stewardship** by Kate Fernie (CARARE) and Holly Wright (UoY-ADS).

### 3.4 Internal newsletter



Issue 7 - Febuary 2021



#### Training Hub makeover

The ARIADNEplus Training Hub has had a make-over with the addition of new some resources including a new section on Workshop video recordings. Read more...

#### More Associate Partners join

Three more organisations have joined as Associate Partners - The University of Minho Archaeology Unit (UAUM), Portugal, University College London (UCL) and the British Institute at Ankara (BIAA). Read more...

## Moving towards the next stage



ed on the preparation and aggregation of datasets into the Portal resulting in a further update to the AO-CAT and Aggregation Pipeline User Guide at the end of November. More subject types have been added to take account of the wide variety of data being added to the nev Portal. This is now being tested by the partners before being officially launched. Several new facilities have been added, including a more sophisticated map interface. In the meantime, the partners attention has started turning to the end of the pipeline and how the new Portal data and services can be integrated with VREs to provide researchers with all they need to perform their tasks. This action was kick-started with a workshop which focussed upon geospatial/GIS and mortuary archaeology to analyse the challenges presented by these two domains, their specific requirements and to define a process which would enable appropriate VREs to be created

ARIADNEplus uses Basecamp as its primary communication channel with all partners but given the size of the consortium it was also agreed that there was a need for a regular newsletter to be circulated to all partners by email using Mailchimp software.<sup>9</sup> This draws on the main stories published on the website as a means of keeping everyone abreast with the key developments, and it is also sent to Associate Partners, friends of the project, and the Scientific Advisory Board. There are currently 222 subscribers. Since Deliverable 2.2 five editions have been published: on 4/7/2020, 3/2/2021, 26/5/2021 and 8/10/2021.

<sup>&</sup>lt;sup>9</sup> https://us20.campaign-archive.com/home/?u=247dcb656eaabc04b91db04ab&id=f062d0f16f

# 4 Involving partners in the enhanced ARIADNEplus approach. Task 2.3 (NA1.3) Task-leader: UoY-ADS

Task 2.3 concerns activities targeted at new partners to bring them rapidly to the same level of awareness as those who participated in the previous project. It consists in preparing documentation, seminars etc. to present and explain the way ARIADNE integrates data. Such activities also include the introduction of all partners to the extended and innovative ARIADNEplus approach, such as the deeper integration of data. The ARIADNEplus community is also being informed, involved and trained in the global data strategies concerning data, such as the application of the FAIR principles to the domain and the implementation of the ARIADNEplus Cloud as a thematic cloud within the global EOSC.

Initial meetings were held face-to-face in 2019, as reported in D2.2, but given the impact of the COVID-19 pandemic on travel and physical meetings, the virtual Steering Committee meeting held in April 2020 agreed to move more training activities and discussion meetings online.

One of the highlights of involving partners in the enhanced ARIADNEplus approach in 2021 has been the introduction of VRE use cases workshops, undertaken by SRFG, supported by UoY\_ADS and PIN. The workshops engage partners in the design of the VREs to be delivered in WP15 and WP16. Two workshops have already taken place with participation of partners, affiliates and external experts. These workshops each addressed two of the thematic domains represented in ARIADNEplus: Geospatial and Mortuary Data and Research (January 2021), and Ancient DNA and Environmental Data and Research (May 2021). Two further workshops are planned which will be held in the next work period: Archaeological Sciences (involving domains in addition to aDNA research), and Spatial Applications, in view of ARIADNEplus Pilots in which the spatial dimension plays a particularly important role. The workshops are reported on more extensively in D2.3 Section 5.

One advantage of moving the workshops online was that large numbers of partners were able to attend (with 52 participants at workshop 1 and 22 participants at the more specialised workshop 2). In addition, meetings of the ARIADNEplus Steering Committee have been opened up beyond the Work Package leaders so that all partners have been kept updated on progress with ARIADNE activities.

Meanwhile, there have also been online working group meetings of the specific Special interest Groups (see Section 3.3.1), as they develop application profiles for their sub-domains. Those associated with fieldwork, burials, inorganic materials, dating and bio-archaeology and ancient DNA have been the most active but task leaders from PIN and UoY-ADS have also held over 15 one-to-one online meetings with other partners to provide guidance on data aggregation.

# 4.1 Extending ARIADNEplus in Central and Southeastern Europe. Sub-task 2.3.1 (NA1.3.1) Sub-task leader: CARARE

This task concerns raising awareness of ARIADNEplus amongst the archaeological community in Central and Southeastern Europe including national heritage agencies, museums, and professionals. It is coordinated by the CARARE Association with ZRC-SAZU, IVAP, HNM, ARUP-CAS, AMZ and NIAM-BAS representing the target countries.

The partners have identified contacts within the region and have:

- Introduced as associate partners of ARIADNEplus:
  - o the Monuments Board of the Slovak Republic
  - o Institute of Archaeology in Zagreb, Croatia
  - Directorate for protection of cultural heritage at the Ministry of Culture of Republic of North Macedonia (DPCH)
- Established contact with:
  - o Prof. Dr. Efstathiou, Aristotle University, Thessaloniki, Greece
  - o Professor Tasic, University of Belgrade, Department of Archaeology

CARARE prepared an updated version of the ARIADNEplus Cooperation Agreement (for associate partners) in collaboration with PIN and all partners in this task. The aim of the update was to provide a better introduction to ARIADNEplus within the agreement as an aid for interested parties in communicating the project to their senior management and boards.

In association with T2.5, plans are being drawn up for a series of focus groups to reach out to the archaeological community in Central and Southeastern Europe and in this way to raise awareness of ARIADNEplus, the Portal, Training Hub and other resources.

Finally, Holly Wright spoke at Masaryk University in Brno, Czech Republic on 3 November, 2021 about best practice in the preservation and open dissemination of archaeological data, along the current trends in preservation and dissemination, such as the FAIR Principles, the ARIADNE Portal for archaeological data, and the SEADDA COST Action network.

# 5 Consolidating the archaeological community around ARIADNEplus. Task 2.4 (NA1.4) Task-leader: PIN

This task continues the positive collaboration established by ARIADNE with major associations and international bodies, notably the European Archaeological Council (EAC)<sup>10</sup> and the European Association of Archaeologists (EAA).<sup>11</sup> The President of EAA and the former President of the EAC both sit on the ARIADNEplus Scientific Advisory Board, ensuring regular dialogue with both organisations. Several ARIADNE partners are also on the EAC Board, including ARUP-CAS, who lead the EAC working group on archiving standards.

The move of EAA to online meetings has prevented the level of in-person engagement with EAA which we intended when we planned to hold our annual General Assembly at the Annual meetings of the EAA, but this will hopefully resume in Budapest in September 2022. We have also welcomed the new President of the EAA, Professor Eszter Banffy. Since 2013, Professor Banffy has been Director of ARIADNEplus German partner: the Romano-Germanic Commission at the German Archaeological Institute (DAI).

<sup>10</sup> https://www.europae-archaeologiae-consilium.org

<sup>11</sup> https://www.e-a-a.org

# 6 Involving archaeological professionals and heritage managers. Task 2.5 (NA1.5) Task-leader: CARARE

This task concerns activities targeted at heritage agencies, museum curators, heritage managers and archaeological professionals (for example archaeologists working in commercial, contract or preventative archaeology) to establish the ways in which ARIADNEplus may provide services for them. It is coordinated by the CARARE Association with PIN, UoY-ADS, MIBACT-ICCU and DGPC.

#### During the period, CARARE:

- Prepared a video presentation, which introduces the project and the opportunities for heritage managers to participate in ARIADNEplus including by sharing data, accessing training, services and the network with a demonstration of the portal.
- Prepared a translation package for partners to record the video in their own languages.
- Presented the heritage manager video to partners during the Steering Committee meeting (14th September 2021). The presentation and translation package were uploaded on D4Science and disseminated to partners via Basecamp.

In association with T2.5, CARARE has drawn up plans for a series of focus groups to reach out to the archaeological community in Europe and in this way to raise awareness of ARIADNEplus, the portal, training hub and other resources. A set of presentation materials has been produced and will be made available for translation into national languages by partners.

#### In addition:

- CARARE delivered the first ARIADNEplus focus group meeting on the 1st December.
- MIBACT-ICCU is planning to run its first ARIADNEplus focus group meeting in Italy and has begun to invite participants. The focus group materials will be translated into Italian.
- Planning is underway for further focus groups which will take place in early 2022.

CARARE is in contact with KNAW-DANS concerning a training event around the FAIR principles, which will take place during early 2022 and should provide an opportunity to disseminate ARIADNEplus to the professional community.

## **6.1 ARIADNE Associate Partners**

A category of ARIADNEplus Associate members, with a dedicated area of the website, <sup>12</sup> is allowing us to reach out to potential supporters beyond the initial consortium, and to extend coverage in existing countries and expand into new ones.

This category of members has increased significantly since D2.3 - and now comprises 14 organisations, variously involved in development and training, data management, or technology development. The table below provides the current list of Associate Partners, and their involvement in ARIADNEplus.

Institution/Project	Topic	Country	Activities
The Role of Culture in Early Expansions of Humans (ROCEEH)	Palaeontology	Germany	Data sharing
The University of Minho Archaeology Unit (UAUM)	Roman Coins	Portugal	Data sharing
IsoArcH	Isotope database bioarchaeologic al samples	France	Data sharing
University College London (UCL)	Natural Language Processing	UK	Entity recognizer for archaeological and dendrochronology named entities in English, Dutch, and Swedish
The British Institute at Ankara (BIAA)	Archaeology project activity	Turkey	Involvement in project activities
British School at Athens (BSA)	Archaeological project data	UK	Data sharing
Institute of Archaeology in Zagreb	Basic and applied archaeological research	Republic of Croatia	Data sharing
Monuments Board of the Slovak Republic (MBSR)	Archaeological sites and fieldworks	Slovak Republic	Involvement in project activities

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<sup>12</sup> https://ariadne-infrastructure.eu/community/

Institution/Project	Topic	Country	Activities
Takin.solutions Ltd.	Information management solutions in the CH sector	Bulgaria	Involvement in project activities
Directorate for Protection of Cultural Heritage (DPCH)	Protection of CH	Republic of Macedonia	Involvement in project activities
University of Innsbruck	Prehistoric copper production in the eastern and central Alps	Austria	Data sharing
Centro Interdipartimentale di Servizi di Archeologia (Università di Napoli L'Orientale)	Archaeology project activity	Italy	Involvement in project activities
DataARC/ipaast	Data standards for aggregation	UK	Involvement in project activities
Natural History Museum in Vienna	THANADOS burials aggregator	Austria	Data sharing

## 7 International collaborations. Task 2.6 (NA1.6) Taskleader: UoY-ADS

International activities aim to strengthen the already established collaborations and to forge new relationships with international partners. Activities are focussed on realising the vision of a global digital research infrastructure for archaeology, and getting more institutions and networks involved in this ambitious project, including national networks, and existing archives outside the EU etc. The Task seeks to address, together with international partners and other world-class institutions, the problems arising from diverse approaches to data management, openness, regulations, etc.

We have worked, in particular, with existing international partners on this Task: Arizona State University (the home of tDAR, the US-based repository), CONICET, which is developing a consortium of Argentinian repositories for archaeology, and the Nara Research Institute, which aggregates tens of thousands of fieldwork reports in Japan, and aggregation of data from each of these international partners is at an advanced stage of development.

ARIADNE has also joined CfAS, the Coalition for Archaeological Synthesis, an international collaboration that "promotes and funds innovative, collaborative synthetic research that rapidly advances our understanding of the past in ways that contribute to solutions to contemporary problems, for the benefit of society in all its diversity. This is accomplished through the analysis and synthesis of existing archaeological and associated data from multiple cultures, at multiple spatial and temporal scales." CfAS promotes large scale collaborative research projects to address major cross-disciplinary research questions which can only be tackled by the aggregation of large data sets as being undertaken in ARIADNEplus. Holly Wright (UoY-ADS) has joined the Board of Directors of CfAS as a representative of ARIADNEplus, and is now contributing directly to the formation of the membership committee, the parameters for membership and opportunities for ARIADNE partners to join.

Finally, UoY-ADS (Julian Richards) has joined the Advisory Board of MAEASaM (Mapping Africa's Endangered Archaeological Sites and Monuments), and is promoting the ARIADNE approach to aggregation, and advising on sustainability, increasing the connections between ARIADNEplus and archaeologists in Africa.

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<sup>13</sup> http://archsynth.org/

# 8 Deviation from work plan

For WP2, and the tasks and activities described in this report, there have been no significant deviations from the work plan as defined in the description of work. ARIADNEplus partners have met regularly online, in the context of general meetings, technical workshops, or training events. We have had to react to external circumstances, notably the COVID-19 pandemic, but this has happened without major disruption and has, indeed, encouraged higher levels of attendance than would have been possible with face-to-face meetings.

Networking activities are also inevitably reactive to new opportunities. We highlighted the collaboration with ROCEEH in our M18 report and over the next 18 months the focus has been on the new collaboration with THANADOS.

Inviting all partners to attend Steering Committee meetings and introduction of the VRE use case workshops have each provided an invaluable means of engaging the large consortium membership with ARIADNEplus. The large interest in engaging with ARIADNE was not anticipated in the initial work plan but has been accommodated through the category of Associate membership.

## 9 Plans for the next period

In the final 12 months of the project we envisage that most of the activities described in this report will be continued and concluded, as envisaged in the work plan. As the new Portal allows us to demonstrate the benefits of data aggregation according to the enhanced AO-Cat data model, as well as new ARIADNEplus services, we anticipate that some activities will also be intensified:

- Special attention will continue to be given to new communities which have been incorporated in ARIADNEplus, such as palaeoanthropology, bioarchaeology and environmental archaeology.
- All partners will be encouraged to hold national and regional ARIADNEplus promotion and training events in their own countries.
- New partners will be intensively involved through their data aggregation.
- We will continue to recruit more Associate Partners.
- We will promote the benefits of ARIADNEplus to heritage agencies, museum curators, heritage managers, professionals and professionals or SMEs working on excavations.