



# European Projects at the ADS



ARCHAEOLOGY  
DATA SERVICE

Department of Archaeology  
Research Forum  
3 June, 2016



SEVENTH FRAMEWORK  
PROGRAMME



Culture



European  
Commission

Horizon 2020  
European Union funding  
for Research & Innovation

**Holly Wright**

# ArchAIDE

## Archaeological Automatic Interpretation and Documentation of cEramics

- EU H2020 project under 'Reflective' topic
- Nine partners from five countries - ADS only UK partner
- Three-year project: started 1 June 2016
- Total project budget: €2.6 million
- Ten Workpackages
- Coordinator: University of Pisa



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## ArchAIDE Partners

- Universita di Pisa, Italy
- Consiglio Nazionale delle Ricerche (CNR), Pisa, Italy
- Tel Aviv University, Israel
- University of York, UK
- Universitat de Barcelona, Spain
- Universitaet zu Köln, Germany
- Baraka Arqueologos S.L., Spain
- Elements Centro de Gestio I Difusio de Patrimoni Cultural, Spain
- Inera Srl, Italy

Pottery classification is of fundamental importance for the comprehension and dating of the archaeological contexts, and for understanding production, trade flows and social interactions, but requires complex, time consuming skills.

The objective of ArchAIDE is to support the classification and interpretation work of archaeologists with innovative computer-based tools, with features for the semi-automatic description and matching of potsherds over existing ceramic catalogues.

**Including the development of:**

**An as-automated-as-possible procedure to create digital descriptions from print catalogues, which will form a comparative collection**

**A tool (primarily mobile) supporting recognising and classifying potsherds during excavation and post-ex, with an easy-to-use interface based on algorithms for characterisation, and search and retrieval of visual/geometrical correspondences**

**An automated procedure to create a potsherd's 'identity card' by transforming the data collected into a formatted electronic document, either on-screen or in print**

**A web-based, real-time, data visualisation platform**

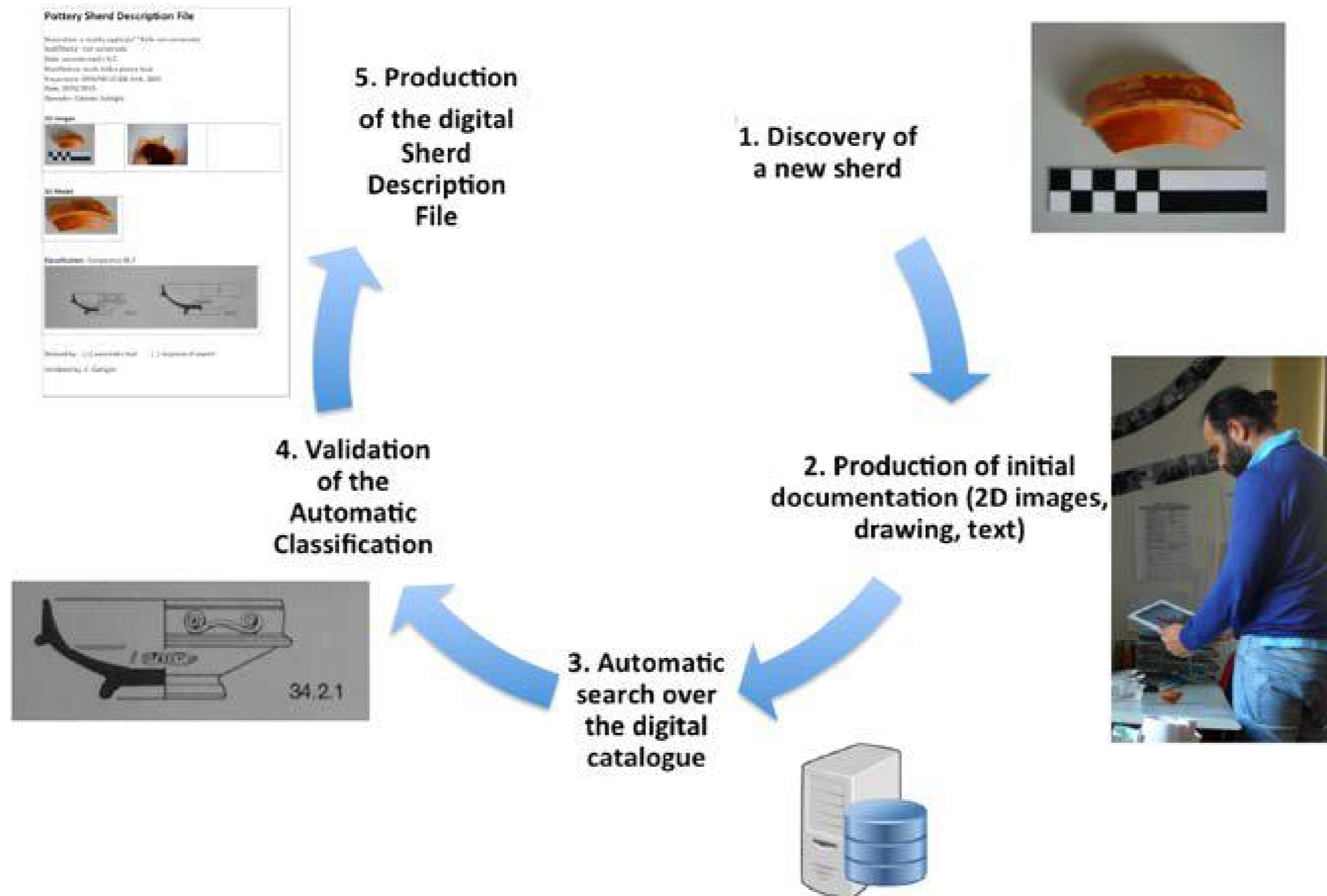
**An archive to allow the re-use of the resulting data**

## **An as-automated-as-possible procedure to create digital descriptions from print catalogues, which will form a comparative collection**

- Focus on technologies for the *digitisation of paper catalogues*, or how best to convert paper documents into a digital format, first solving the easier problems (digitisation, OCR, detection of figures), then focusing on the more complex issue, of how to enable the semi-automatic conversion of raster images into in a *geometric 2D description* of each ceramic class (based on drawings and profiles). This will then be used to build the comparative collection
- Focus on efficient and robust algorithms and data structure for supporting the *search by similarity* of fragments to support the comparative collection

**A tool (primarily mobile) supporting recognising and classifying potsherds during excavation and post-ex, with an easy-to-use interface based on algorithms for characterisation, and search and retrieval of visual/geometrical correspondences**

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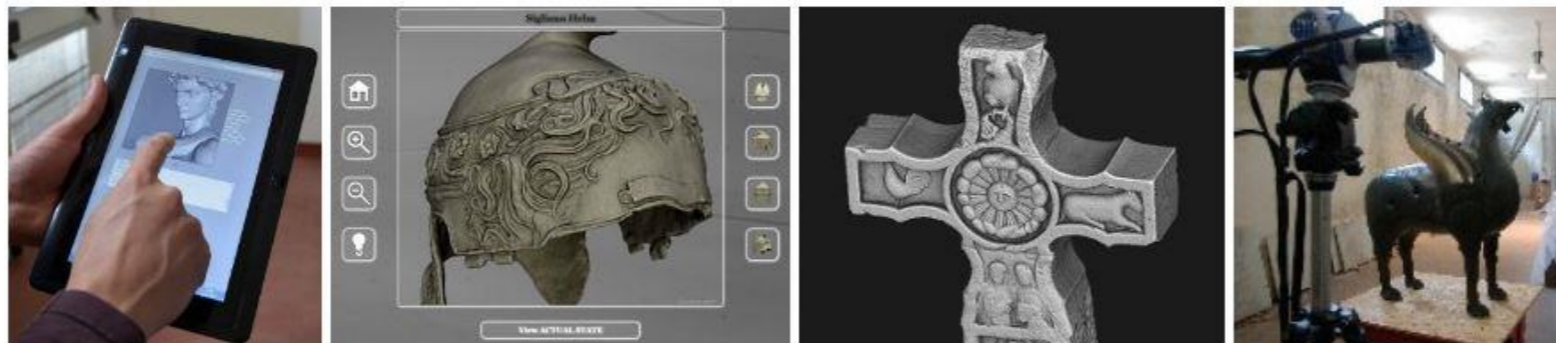




# A web-based, real-time, data visualisation platform

## Visual Computing Lab

people research projects publications software



### Who are we? Where are we going?

The history of the Visual Computing Lab of CNR-ISTI began more than 25 years ago, with the friendship and collaboration of Claudio Montani (formerly CNR-IEI, now CNR-ISTI Director) and Roberto Scopigno (formerly CNR-CNUCE, now head of the VClab).

We have initially focused on scientific visualization, then moved to geometry processing, multiresolution representation / visualization, deformable models, 3D digitization, texturing and mesh parameterization.

Currently, our main application domain is Cultural Heritage (that is a rather natural choice since we live in Tuscany), including virtual museums, restoration, documentation and rapid reproduction.

Only a minority of the lab members have permanent positions, most of members' salaries are paid by several research projects (EC, Regional and National funds).

Research activity has been recently organized under three main threads:

### News

**We have been nominated TWICE for the 2015 DIGITAL HUMANITIES AWARD !!!**

*Feb 16th, 2016*

We need your help, please vote here: [DH Awards 2015](#).

Category 'Best DH Tool or Suite of Tools' ==> 3DHOP:3D Heritage Online Presenter

Category 'Best Use of DH for Public Engagement' ==> Alchimia di Jackson Pollock / Jackson Pollock: Alchemy in 3D.



## An archive to allow the re-use of the resulting data

The screenshot shows the ADS website homepage. At the top left is the ADS logo and name. To the right is a search bar with a 'SEARCH' button. Below this is a horizontal navigation menu with links: HOME, ARCHSEARCH, ARCHIVES, DEPOSIT, LEARNING, ADVICE, RESEARCH, ABOUT US, BLOG, and LOGIN. On the left side, there are three main sections: 'EXPLORE', 'DISCOVER', and 'DEPOSIT'. Below 'DISCOVER' is a section titled 'INNOVATE' with the text: 'Supporting research, learning and teaching with free, high quality and dependable digital resources'. The main content area features a 'Featured Collection' titled 'Study Group for Roman Pottery Bibliography' with an image of various Roman pottery items. Below this is a section for 'May 2016: Tell us what you think of our design for our NEW ADS Library', which includes a brief description of the library's purpose and a 'Library' icon.

**ads** ARCHAEOLOGY  
DATA SERVICE

SEARCH

HOME ARCHSEARCH ARCHIVES DEPOSIT LEARNING ADVICE RESEARCH ABOUT US BLOG LOGIN

**EXPLORE** **DISCOVER** **DEPOSIT**

**INNOVATE** Supporting research, learning and teaching with free, high quality and dependable digital resources

**Featured Collection**  
Study Group for Roman Pottery Bibliography

May 2016: Tell us what you think of our design for our NEW ADS Library

The ADS Library will bring together bibliographic references and publications from BIAB, the ADS Library of Unpublished Fieldwork Reports, archived journals and research reports as well as references from other sources. The mock up is made up of a series of screen shots of what the new system could look like and the functionality it could include. Please use the comments area to leave any feedback... more

Library

## ADS Role

### WP3: Creation of the Application Database

- Task: Database design
- Task: Incorporation of multi-lingual vocabularies

- **WP10: Archiving and Dissemination**

- Task: Data management
- Task: Data archiving
- Task: Dissemination and promotion



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## NEARCH

# New Scenarios for a Community Involved Archaeology

A five-year **EU Culture Programme** funded project  
**Total budget of five million Euros (50% funded)**  
Coordinated by the Institut national de recherches  
archéologiques preventives (**INRAP**)

The largest and most ambitious European  
programme devoted to archaeology in terms of  
budget, objectives and number of partners in this  
funding stream

[www.nearch.eu](http://www.nearch.eu)



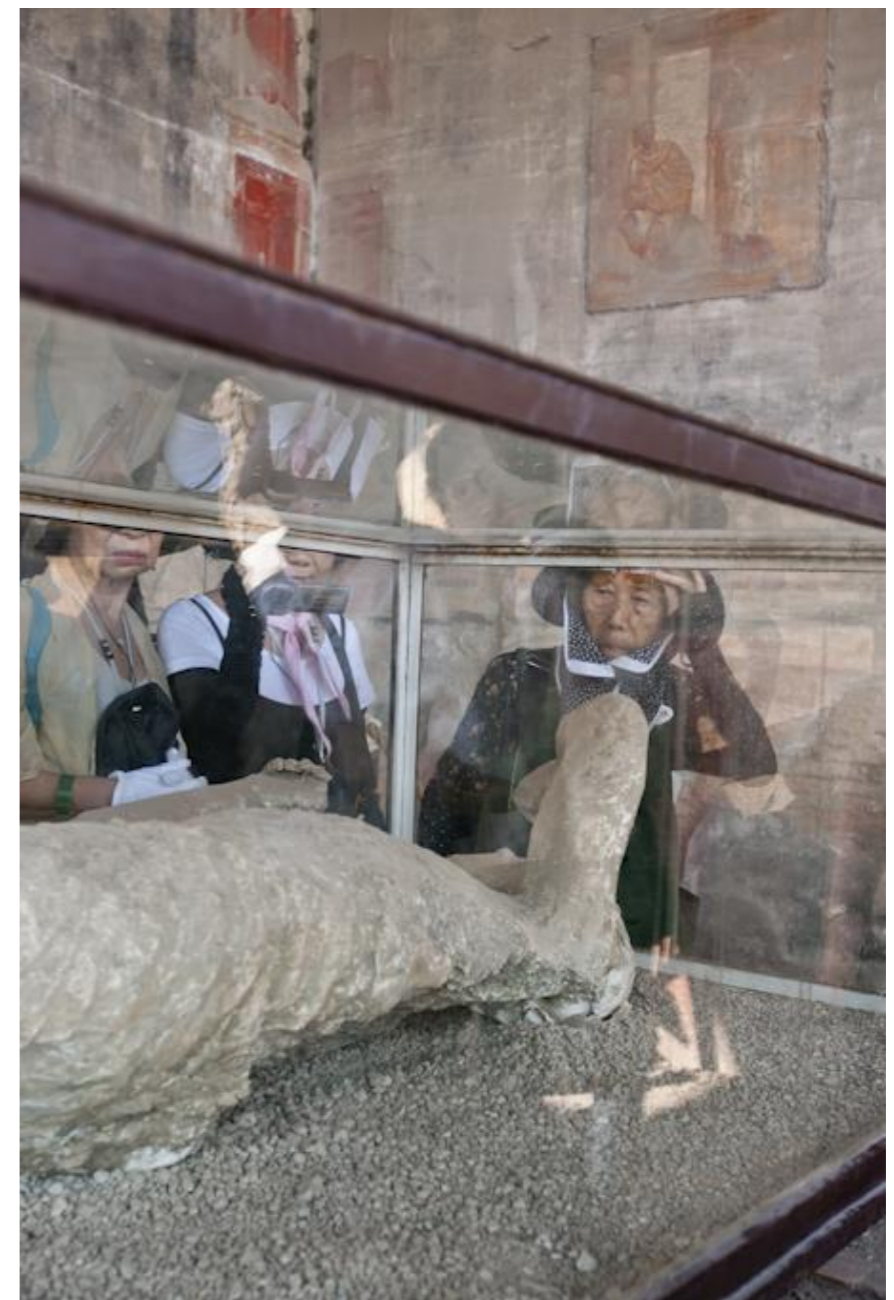
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**NEARCH** follows on directly from the recently completed Archaeology in Contemporary Europe (**ACE**) project, which “identified a cultural crisis and a crisis of values and ideas outlined in the EU agenda *European Modernity*”.



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**NEARCH** aims to assess the implications of the crisis in the fields of Archaeology and Heritage, and to propose new ways of working and interacting. In particular, the project will also explore the different dimensions of public participation.



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**A. Archaeology for the community: informing and involving people**

Re-think and develop ways to communicate and mediate archaeology for various audiences.

**B. Archaeology and the imaginary: crossroads between science and art**

Explore and enhance the relationships between archaeology and artistic creation, by encouraging collaborations between archaeologists and contemporary artists.

**C. Archaeology and knowledge: teaching and sharing information**

Promote new ways of teaching archaeological knowledge and practices to young professionals and sharing archaeological data with various audiences.

**D. Archaeology in a changing economy: towards sustainability**

Shape, through the exchange of experiences and comparative studies, a new economic model for a sustainable practice of archaeology and heritage management.

**E. European archaeology and the world: dependencies and mutual development**

Highlight the societal component of archaeology, considered as the expression of a wider community rather than a restricted academic domain.

## **13 core partners, across 10 European countries:**

- Institut national de recherches archéologiques preventives (INRAP) - France
- CentQuatre – France
- Universiteit Leiden, Faculteit De Archeologie – Netherlands
- University of Oxford – UK
- Jan Van Eyck Academie – Netherlands
- Instituto de Ciencias de Patrimonio – CSIC – Spain
- Uniwersytet im. Adama Mickiewicza w Poznaniu – Poland
- Culture Lab – Belgium
- University of Gothenburg – Sweden
- Istituto per i beni artistici culturali e naturali dell’Emilia Romagna – Italy
- Deutsches Archäologisches Institut – Germany
- Aristotle University of Thessaloniki – Greece
- Archaeology Data Service - UK



## **ADS and York involvement in NEARCH:**

### **Archaeology for the community: informing and involving people**

- From 2015-2018, ADS is contributing to the 'Day of Archaeology' to provide both technical support and help in expanding involvement across Europe
- Coordinating with the CDH (and now the DC hub) in the development of a mobile app to allow the public to interact with historic records and resources

### **Thinking and creating together: artists in residence**

- ADS and members of the department all contributed to working with artist Leyla Cardenas. Her work, inspired by her time with us, will feature in the NEARCH exhibition in Maastricht in February, 2017.

### **Archaeology and knowledge: teaching and sharing information**

- Provide archaeological contents and data adapted for various audiences, contributing to the production of digital publications on archaeology. Judith Winters is currently working on a publication around the Star Carr pendant that explores the object from various perspectives for different audiences.

**DAY OF  
ARCHAEOLOGY**

FIND OUT WHAT ARCHAEOLOGISTS  
REALLY DO.

ABOUT THE PROJECT  
TAKE PART IN 2016!  
EXPLORE POSTS  
MAP OF POSTS  
#DAYOFARCH SWAG

Supporters and Credits



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**FRIENDS, ROMANS, COUNTRY CHILDREN**

Friends, Romans, country children... Herefordshire Museum Service is home to considerable archaeological material gathered in the county since 1874. There are five members of Hereford Museum staff with degrees in archaeology so, not surprisingly, we've always been quite good at giving archaeology a healthy profile in all we do: archaeological displays in Hereford Museum and

*Duration - October 4, 2015*



**AN ARCHAEOLOGIST'S HOLIDAY**

When you go on holiday as an archaeologist, you end up finding and visiting the archaeology around your holiday

*Day of Archaeology 2015 - August 5, 2015*



**Photogrammetry session**



**STARTING OVER IN ALBERTA**

*Commercial Archaeology - August 1, 2015*

**LOGIN**

Username  
hollywright

Password  
●●●●●●●●

Remember Me

Login →

[Lost Password](#)

**SEARCH**

Search

**#DAYOFARCH ON TWITTER**

 Kate Ellenberger: Maybe in spirit of #dayofarch actually, with a description of the lesson content or community activity being undertaken cc #pubarch

about 5 days ago

[View all Twitter noise...](#)

**SUPPORTERS**





**Leyla Cárdenas**



**El tiempo lo aguanta todo (Time holds it all)**



**Excision**

***Internet Archaeology*** is using the popular article on the Star Carr pendant to explore adaptation for various audiences:

- Children and young adults
- Artists
- Digital Archaeology

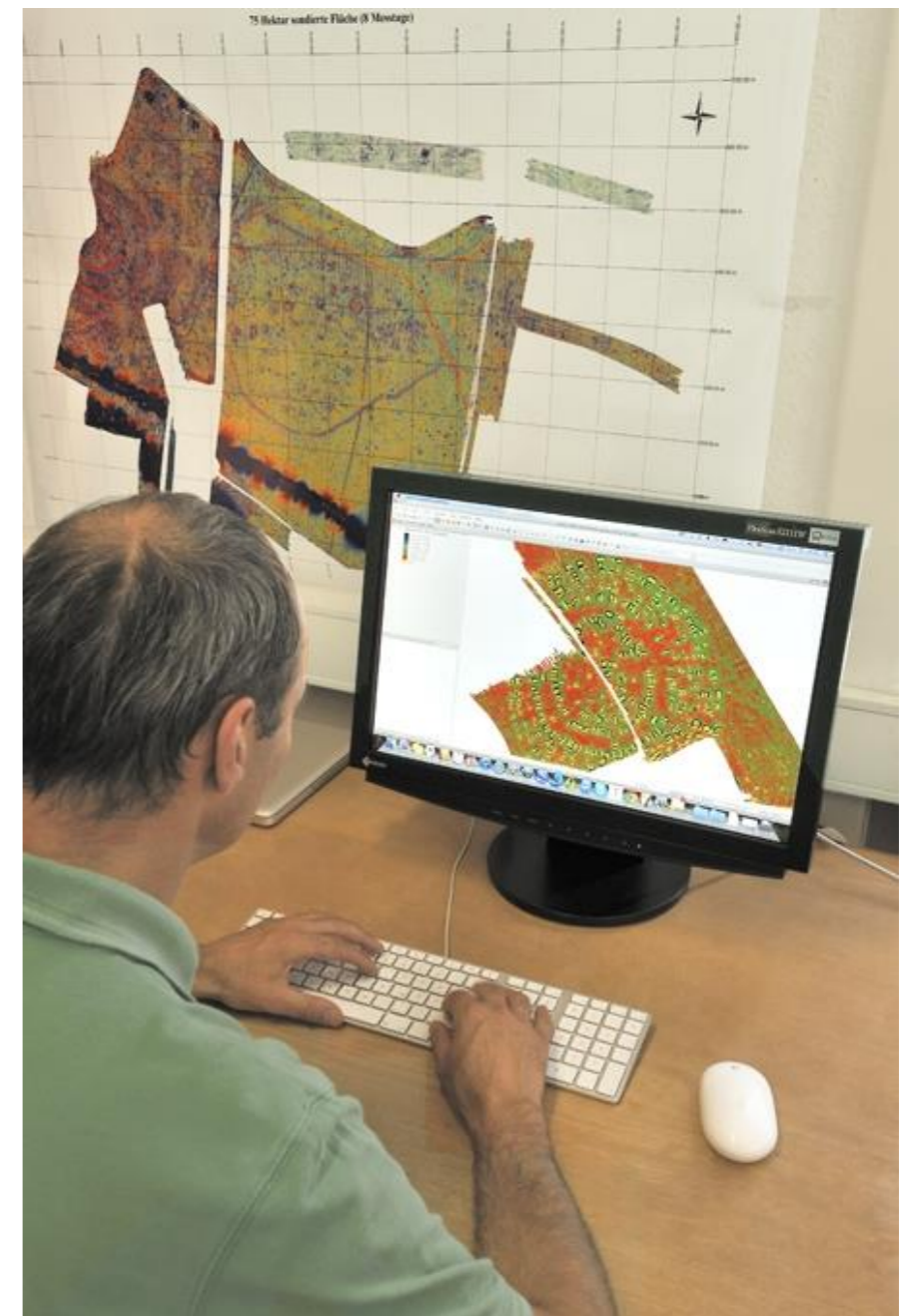




## Advanced Research Infrastructure for Archaeological Dataset Networking in Europe

A proposal to integrate existing archaeological data infrastructures across Europe, so researchers can use the various distributed datasets and new and powerful technologies, to explore new research methodologies.

<http://www.ariadne-infrastructure.eu/>



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- **Contribute to the creation of a new community of researchers ready to exploit the contribution of IT, and incorporate it in the body of established methodology.**
  - **Community Building and Innovation**
  - **Standards and Interoperability**
  - **Good Practices and Dissemination**
- **Enable trans-national access of researchers to data centres, tools and guidance, and the creation of new Web-based services.**

- **Stimulate new research avenues in the field of archaeology, relying on the comparison, re-use and integration into current research, the outcomes of past and on-going field and laboratory activity.**
  - **Linking Archaeological Data**
  - **Data Mining and Natural Language Processing**
  - **Innovation in Archaeological Research Methodology**



- **EU FP7 project under the ‘Infrastructures’ theme, including 24 European partners across 16 countries**
- **Four-year project: started 1 February 2013**
- **Total project budget: €8,413,780**
- **Seventeen Workpackages**
- **Coordinator: PIN Scri - Polo Universitario "Città di Prato" at the University of Florence**
- **Deputy Coordinator: ADS**

**Italy: PIN, CNR, AIAC, MIBAC-ICCU**

**UK: ADS, MDR Partners, USW**

**Netherlands: DANS, LU**

**Germany: DAI**

**Greece: ATHENA-RC, FORTH-ICS**

**Austria: SRFG, OAW**

**Ireland: Discovery Programme**

**Romania: ARHEO**

**Sweden: SND**

**Spain: CSIC**

**Slovenia: ZRC-SAZU**

**Hungary: MNM-NOK**

**Cyprus: CYI-STARC**

**Czech Republic: ARUP-CAS**

**Bulgaria: NAIM-BAS**

**France: INRAP**

<http://portal.ariadne-infrastructure.eu/>

# Thank you!

<http://archaeologydataservice.ac.uk/>



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